## **ClickShare CS-100 series**

### For CS-100 & CS-100 HUDDLE



Installation manual



#### **Product revision**

Software Revision: 1.10.xx

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| libglib2  | 2.56.4   | http://ftp.gnome.org/pub/gnome/sources/glib/2.56           |
| libffi  | v3.3-rc0 | https://github.com/libffi/libffi/archive/v3.3-rc0          |

| PACKAGE         | VERSION      | SOURCE SITE  |  |
|-----------------|--------------|--|--|
| pcre            | 8.42         | https://ftp.pcre.org/pub/pcre  |  |
| util-linux      | 2.33         | https://cdn.kernel.org/pub/linux/utils/util-linux/v2.33                                    |  |
| readline        | 8.0          | http://ftpmirror.gnu.org/readline  |  |
| libzlib         | 1.2.11       | http://www.zlib.net  |  |
| bc              | 1.06.95      | http://alpha.gnu.org/gnu/bc  |  |
| bluez5_utils    | 5.50         | https://cdn.kernel.org/pub/linux/bluetooth   |  |
| eudev           | 3.2.7        | http://dev.gentoo.org/~blueness/eudev  |  |
| kmod            | 25           | https://cdn.kernel.org/pub/linux/utils/kernel/kmod   |  |
| busybox         | 1.29.3       | http://www.busybox.net/downloads   |  |
| e2fsprogs       | 1.44.5       | https://cdn.kernel.org/pub/linux/kernel/people/tytso/e2fsprogs/<br>v1.44.5                 |  |
| i2c-tools       | 4.1          | https://www.kernel.org/pub/software/utils/i2c-tools  |  |
| ntp             | 4.2.8p13     | https://www.eecis.udel.edu/~ntp/ntp_spool/ntp4/ntp-4.2                                     |  |
| libevent        | 2.1.8-stable | https://github.com/libevent/libevent/releases/download/release-<br>2.1.8-stable            |  |
| libopenssl      | 1.1.1c       | https://www.openssl.org/source   |  |
| c-ares          | 1.15.0       | http://c-ares.haxx.se/download   |  |
| ca-certificates | 20190110     | http://snapshot.debian.org/archive/debian/20190513T145054Z/<br>pool/main/c/ca-certificates |  |
| crda            | 4.14         | https://git.kernel.org/pub/scm/linux/kernel/git/mcgrof/crda.git/<br>snapshot               |  |
| libgcrypt       | 1.8.4        | https://gnupg.org/ftp/gcrypt/libgcrypt   |  |
| libgpg-error    | 1.33         | https://www.gnupg.org/ftp/gcrypt/libgpg-error  |  |
| libnl           | 3.4.0        | https://github.com/thom311/libnl/releases/download/libnl3_4_0                              |  |
| cryptsetup      | 2.0.6        | https://cdn.kernel.org/pub/linux/utils/cryptsetup/v2.0                                     |  |
| json-c          | 0.13.1       | https://s3.amazonaws.com/json-c_releases/releases  |  |
| lvm2            | 2.02.183     | ftp://sources.redhat.com/pub/lvm2  |  |
| libaio          | 0.3.111      | https://releases.pagure.org/libaio   |  |
| popt            | 1.16         | http://rpm5.org/files/popt   |  |
| devmem2         | 1            | http://bootlin.com/pub/mirror  |  |
| dhcp            | 4.3.6        | http://ftp.isc.org/isc/dhcp/4.3.6  |  |
| dnsmasq         | 2.79         | http://thekelleys.org.uk/dnsmasq   |  |
| dropbear        | 2018.76      | https://matt.ucc.asn.au/dropbear/releases  |  |
| ethtool         | 4.19         | https://cdn.kernel.org/pub/software/network/ethtool  |  |
| faad2           | 2.8.8        | http://downloads.sourceforge.net/project/faac/faad2-src/faad2-<br>2.8.0                    |  |
| ffmpeg          | 3.4.6        | http://ffmpeg.org/releases   |  |

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|-------------------------------|---|---|
| fontconfig                    | 2.13.1  | http://fontconfig.org/release   |
| freetype                      | 2.9.1   | http://download.savannah.gnu.org/releases/freetype  |
| libpng                        | 1.6.37  | http://downloads.sourceforge.net/project/libpng/libpng16/1.6.37   |
| lame                          | 3.100   | http://downloads.sourceforge.net/project/lame/lame/3.100  |
| libvorbis                     | 1.3.6   | http://downloads.xiph.org/releases/vorbis   |
| libogg                        | 1.3.3   | http://downloads.xiph.org/releases/ogg  |
| opus                          | 1.3.1   | https://downloads.xiph.org/releases/opus  |
| speex                         | 1.2.0   | https://downloads.xiph.org/releases/speex   |
| file                          | 5.36  | ftp://ftp.astron.com/pub/file   |
| imx-lib                       | 3f777974c0-<br>c146817e2ff5c-<br>b0340ca66a1-<br>f99e57 | https://source.codeaurora.org/external/imx/imx-lib  |
| kernel-module-imx-<br>gpu-viv | bfa78-<br>b095a892705-<br>a09afe9514fc5-<br>d236b3124d2 | https://github.com/Freescale/kernel-module-imx-gpu-viv/archive/<br>bfa78b095a892705a09afe9514fc5d236b3124d2 |
| gnupg2                        | 2.2.17  | https://gnupg.org/ftp/gcrypt/gnupg  |
| libassuan                     | 2.5.2   | ftp://ftp.gnupg.org/gcrypt/libassuan  |
| libksba                       | 1.3.5   | ftp://ftp.gnupg.org/gcrypt/libksba  |
| libnpth                       | 1.6   | https://www.gnupg.org/ftp/gcrypt/npth   |
| libusb                        | 1.0.22  | https://github.com/libusb/libusb/releases/download/v1.0.22  |
| sqlite                        | 3280000   | https://www.sqlite.org/2019   |
| gssdp                         | 1.0.2   | http://ftp.gnome.org/pub/gnome/sources/gssdp/1.0  |
| libsoup                       | 2.62.3  | http://ftp.gnome.org/pub/gnome/sources/libsoup/2.62   |
| libxml2                       | 2.9.9   | http://xmlsoft.org/sources  |
| gst1-plugins-bad              | 1.14.4  | https://gstreamer.freedesktop.org/src/gst-plugins-bad   |
| gst1-plugins-base             | 1.14.4  | https://gstreamer.freedesktop.org/src/gst-plugins-base  |
| gstreamer1                    | 1.14.4  | https://gstreamer.freedesktop.org/src/gstreamer   |
| gst1-plugins-good             | 1.14.4  | https://gstreamer.freedesktop.org/src/gst-plugins-good  |
| pulseaudio                    | 12.2  | http://freedesktop.org/software/pulseaudio/releases   |
| libtool                       | 2.4.6   | http://ftpmirror.gnu.org/libtool  |
| hostapd                       | 2.7   | http://w1.fi/releases   |
| input-event-daemon            | v0.1.3  | https://github.com/gandro/input-event-daemon/archive/v0.1.3   |
| iperf                         | 2.0.13  | http://downloads.sourceforge.net/project/iperf2   |
| iptables                      | 1.8.2   | https://netfilter.org/projects/iptables/files   |
| iw                            | 4.14  | https://cdn.kernel.org/pub/software/network/iw  |

| PACKAGE          | VERSION | SOURCE SITE   |
|------------------|---------|---|
| libjpeg          | 9c      | http://www.ijg.org/files  |
| libarchive       | 3.3.3   | http://www.libarchive.org/downloads                             |
| libbsd           | 0.10.0  | https://libbsd.freedesktop.org/releases                         |
| libcurl          | 7.65.3  | https://curl.haxx.se/download                                   |
| libestr          | 0.1.10  | http://libestr.adiscon.com/files/download                       |
| libevdev         | 1.6.0   | http://www.freedesktop.org/software/libevdev                    |
| libfastjson      | v0.99.8 | https://github.com/rsyslog/libfastjson/archive/v0.99.8          |
| libhttpparser    | v2.9.0  | https://github.com/nodejs/http-parser/archive/v2.9.0            |
| libical          | 1.0.1   | https://github.com/libical/libical/releases/download/v1.0.1     |
| libid3tag        | 0.15.1b | http://downloads.sourceforge.net/project/mad/libid3tag/0.15.1b  |
| libimxvpuapi     | 0.10.3  | https://github.com/Freescale/libimxvpuapi/archive/0.10.3        |
| libinput         | 1.12.5  | http://www.freedesktop.org/software/libinput                    |
| mtdev            | 1.1.4   | http://bitmath.org/code/mtdev                                   |
| liblogging       | 1.0.6   | http://download.rsyslog.com/liblogging                          |
| libmad           | 0.15.1b | http://downloads.sourceforge.net/project/mad/libmad/0.15.1b     |
| libmpeg2         | 0.5.1   | http://libmpeg2.sourceforge.net/files                           |
| libpciaccess     | 0.14    | http://xorg.freedesktop.org/releases/individual/lib             |
| libpthread-stubs | 0.4     | http://xcb.freedesktop.org/dist                                 |
| libqrencode      | 4.0.0   | http://fukuchi.org/works/qrencode                               |
| libsha1          | 0.3     | https://github.com/dottedmag/libsha1/archive/0.3                |
| libuv            | v1.25.0 | https://github.com/libuv/libuv/archive/v1.25.0                  |
| libzip           | 1.5.1   | http://www.nih.at/libzip  |
| lighttpd         | 1.4.53  | http://download.lighttpd.net/lighttpd/releases-1.4.x            |
| Im-sensors       | V3-5-0  | https://github.com/Im-sensors/Im-sensors/archive/V3-5-0         |
| logrotate        | 3.13.0  | https://github.com/logrotate/logrotate/archive/3.13.0           |
| memtester        | 4.3.0   | http://pyropus.ca/software/memtester/old-versions               |
| monit            | 5.25.3  | http://mmonit.com/monit/dist                                    |
| netsnmp          | 5.8     | https://downloads.sourceforge.net/project/net-snmp/net-snmp/5.8 |
| nodejs           | 8.15.1  | http://nodejs.org/dist/v8.15.1                                  |
| pcre2            | 10.32   | https://ftp.pcre.org/pub/pcre                                   |
| php              | 7.3.9   | http://www.php.net/distributions                                |
| protobuf         | v2.6.1  | https://github.com/google/protobuf/archive/v2.6.1               |
| qt5base          | 5.12.4  | https://download.qt.io/archive/qt/5.12/5.12.4/submodules        |
| qt5declarative   | 5.12.4  | https://download.qt.io/archive/qt/5.12/5.12.4/submodules        |

| PACKAGE            | VERSION    | SOURCE SITE  |
|--------------------|------------|--|
| qt5xmlpatterns     | 5.12.4     | https://download.qt.io/archive/qt/5.12/5.12.4/submodules           |
| qt5imageformats    | 5.12.4     | https://download.qt.io/archive/qt/5.12/5.12.4/submodules           |
| qt5multimedia      | 5.12.4     | https://download.qt.io/archive/qt/5.12/5.12.4/submodules           |
| qt5quickcontrols   | 5.12.4     | https://download.qt.io/archive/qt/5.12/5.12.4/submodules           |
| qt5svg             | 5.12.4     | https://download.qt.io/archive/qt/5.12/5.12.4/submodules           |
| qt5websockets      | 5.12.4     | https://download.qt.io/archive/qt/5.12/5.12.4/submodules           |
| rsyslog            | 8.22.0     | http://rsyslog.com/files/download/rsyslog                          |
| tslib              | 1.20       | https://github.com/libts/tslib/releases/download/1.20              |
| tzdata             | 2018e      | http://www.iana.org/time-zones/repository/releases                 |
| wireless-regdb     | 2019.06.03 | https://cdn.kernel.org/pub/software/network/wireless-regdb         |
| wireless_tools     | 30.pre9    | https://hewlettpackard.github.io/wireless-tools                    |
| wpa_supplicant     | 2.7        | http://w1.fi/releases  |
| arphic-uming-fonts | 20080216   | http://archive.ubuntu.com/ubuntu/pool/main/t/ttf-arphic-uming      |
| dejavu-fonts       | 2.34       | http://downloads.sourceforge.net/project/dejavu/dejavu/2.34        |
| sazanami-fonts     | 20040629   | http://sourceforge.jp/projects/efont/downloads/10087               |
| splashutils        | 1.5.4.4    | http://dev.gentoo.org/~spock/projects/gensplash/archive            |
| unfonts            | 1.0        | http://kldp.net/frs/download.php/1425                              |
| uboot              | 2014.04    | http://git.freescale.com/git/cgit.cgi/imx/uboot-imx.git            |
| rockbox            | v3.10      | https://github.com/Rockbox/rockbox/tree/v3.10                      |
| gstreamer-imx      | 0.12.3     | https://github.com/Freescale/gstreamer-imx/releases                |
| libcap             | 2.25       | https://www.kernel.org/pub/linux/libs/security/linux-privs/libcap2 |
| mtd                | 1.5.2      | ftp://ftp.infradead.org/pub/mtd-utils                              |
| procps-ng          | 3.3.12     | http://downloads.sourceforge.net/project/procps-ng/Production      |
| strace             | 4.15       | http://downloads.sourceforge.net/project/strace/strace/4.15        |
| hidapi             | 0.5.2      | https://github.com/signal11/hidapi                                 |
| linux              | 3.1.0      | https://mirrors.edge.kernel.org/pub/linux/kernel/v3.x/             |
| linux              | 4.1.15     | https://mirrors.edge.kernel.org/pub/linux/kernel/v4.x/             |
| rscode             | 1.3        | https://sourceforge.net/projects/rscode/files/rscode/              |

#### EN55032-CISPR32 Class B ITE (Information Technology Equipment)

This is a class B product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

If this equipment does cause interference to radio or television reception, the user may try to correct the interference by one or more of the following measures :

- Re-orientation of the receiving antenna for the radio or television.
- Relocate the equipment with respect to the receiver.

- Plug the equipment into a different outlet so that the equipment and receiver are on different branch circuits.
- Fasten cables connectors to the equipment by mounting screws.

#### Federal Communication Commission Interference Statement

You are cautioned that changes or modifications not expressly approved by the part responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- · Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You may also find helpful the following booklet, prepared by the FCC: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington D.C. 20402.

Changes and Modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commissions rules.

In order to maintain compliance with FCC regulations shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio & television reception.

**FCC RF Radiation Exposure Statement:** This device is capable of operating in 802.11a mode. For 802.11a devices operating in the frequency range of 5.15 - 5.25 GHz, they are restricted for indoor operations to reduce any potential harmful interference for Mobile Satellite Services (MSS) in the US. Wi-Fi Access Points that are capable of allowing your device to operate in 802.11a mode (5 .15 - 5.25 GHz band) are optimized for indoor use only. If your Wi-Fi network is capable of operating in this mode, please restrict your Wi-Fi use indoors to not violate federal regulations to protect Mobile Satellite Services.

- 1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
- This equipment complies with RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

Base Unit FCC ID: 2AAED-R9861510

Button FCC ID (model R9861500D01): 2AAED-R9861500D01

Button FCC ID (model R9861500D01C): 2AAED-R9861500D01

ClickShare Button 2AAED-R9861500D01 has been tested and meets the FCC RF exposure guidelines. The maximum SAR value reported is 0.915W/kg.

#### Canada, Industry Canada (IC) Notices

This device complies with Industry Canada licence-exempt RSS standard (s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

#### Radio Frequency (RF) Exposure Information

The radiated output power of the Barco Wireless Device is below the Industry Canada (IC) radio frequency exposure limits. The Barco Wireless Device should be used in such a manner such that the potential for human contact during normal operation is minimized.

#### Caution: Exposure to Radio Frequency Radiation.

- 1. To comply with the Canadian RF exposure compliance requirements, this device and its antenna must not be co-located or operating in conjunction with any other antenna or transmitter.
- 2. To comply with RSS 102 RF exposure compliance requirements, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons.

Base Unit IC: IC: 21559-R9861580

Button IC (model R9861500D01): 9393B-R9861500D01

Button IC (model R9861500D01C): 9393B-R9861500D01

#### IC Antenna statement

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

This radio transmitter 9393B-R9861510 has been approved by Industry Canada to operate with the antenna types listed below with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Type: PIFA

Maximum Peak Gain: 5.85 dBi

Impedance: 50

#### Canada, avis d'Industry Canada (IC)

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

#### Informations concernant l'exposition aux fréquences radio (RF)

La puissance de sortie émise par l'appareil de sans fil Barco est inférieure à la limite d'exposition aux fréquences radio d'Industry Canada (IC). Utilisez l'appareil de sans fil Barco de façon à minimiser les contacts humains lors du fonctionnement normal.

#### Avertissement: L'exposition aux rayonnements fréquences radio

- 1. Pour se conformer aux exigences de conformité RF canadienne l'exposition, cet appareil et son antenne ne doivent pas être co-localisés ou fonctionnant en conjonction avec une autre antenne ou transmetteur.
- 2. Pour se conformer aux exigences de conformité CNR 102 RF exposition, une distance de séparation d'au moins 20 cm doit être maintenue entre l'antenne de cet appareil et toutes les personnes.
- IC Unité de Base: 9393B-R9861510
- IC Button (modèle R9861500D01): 9393B-R9861500D01
- IC Button (model R9861500D01C): 9393B-R9861500D01

#### Déclaration d'antenne d'Industrie Canada (IC)

Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p. i. r. e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

Le présent émetteur radio 9393B-R9861510 a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés ci-dessous et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

Type: PIFA

Gain maximum: 5.85 dBi Impédance: 50

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### **1.1 Documentation**

#### This guide

Partnumber R5900022 **Description** Installation Guide

Level Installation engineer

This installation guide explains how to install your CS-100, CS-100 HUDDLE in a meeting room, It explains also how to make everything operational. It provides detailed information on how to configure your CS-100, CS-100 HUDDLE.

#### **Available System documentation**

This guide is part of the documentation set describing the CS-100, CS-100 HUDDLE product.

| Guide              | Article number                              |
|--------------------|---|
| User Guide         | R5900024                                    |
| Installation Guide | R5900022                                    |
| Safety Guide       | R5900031 (CS-100), R5900092 (CS-100 HUDDLE) |
| Service Guide      | R5900026                                    |
| Button Guide       | R5900007                                    |
| Recycling Manual   | R5900028                                    |
| API Guide          | R5900018                                    |

A printed copy of the Safety Guide is included in the CS-100, CS-100 HUDDLE box at purchase. User and installation manuals can be downloaded from Barco's website, <u>www.barco.com/clickshare</u>.



Always check for the latest version of the manual on www.barco.com/clickshare

Depending on the CS-100, CS-100 HUDDLE version, some graphics might be different to the ones used in this manual. This however does not have any effect on the functionality.

### **1.2 Symbols and fonts**

#### Symbol overview

The following icons are used in the manual :

| 1  | Caution   |
|--|---|
| 4  | Warning   |
| 0  | Info, term definition. General info about the term        |
|  | Note: gives extra information about the described subject |
| Com and the second seco | Tip: gives extra advice about the described subject       |

#### Font overview

• Buttons are indicated in bold, e.g. OK.

- Menu items are indicated in *italic*.
- Step related notes, tips, warnings or cautions are printed in *italic*.
- Procedure related notes, tips, warnings or cautions are printed in **bold** between 2 lines preceded by the corresponding icon.

Introduction to the Installation Guide

# CS-100, CS-100 HUDDLE Specifications



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#### About this chapter

It gives an overview of the specifications of a CS-100, CS-100 HUDDLE set. and of the different components in the set.

### 2.1 About the CS-100, CS-100 HUDDLE

#### CS-100, CS-100 HUDDLE sets

ClickShare makes connecting to the meeting room's video system a matter of clicking a Button. This CS-100, CS-100 HUDDLE not only helps the presenter get the presentation on-screen in a second, but it also allows the other people in the meeting to participate more actively. The result is enhanced meeting efficiency and better decision-making.

At the moment 4 different sets are available on the market. Each set is sold in its specific region and it can only be used in that specific region because of Wi-Fi regulations.

#### Components CS-100, CS-100 HUDDLE set

A standard CS-100 set consists of a Base Unit and 1 Button. If needed, you can buy additional Buttons and a tray to store the Buttons.

A standard CS-100 HUDDLE set consists of only a Base Unit. You can buy optional Buttons when needed.



| 1 | Base Unit |
|---|-----------|

2 Button (only for CS-100)

#### Accessories included

Depending on the country where you buy the product, the following regionalized accessories can be included in the CS-100, CS-100 HUDDLE box.

| Products for CS-100     |  |
|-------------------------|--|
| R9861510xx <sup>2</sup> |  |

### R9861500D01

R9861500D01C

Products for CS-

R9861510Hxx<sup>2</sup>

Contains

- R9861510
- 1x R9861500D01

1x R9861500D01 1x R9861500D01C

#### Products for CS-100 HUDDLE Contains

R9861510

#### Accessories included

- DC adapter with AC clips type A, C, G, I<sup>3</sup>
- Printed safety manual

#### Accessories included

- DC adapter with AC clips type A, C, G, I<sup>3</sup>
- Printed safety manual

Contact your local sales representative for the correct regional variant to be used in your country.

2: xx=EU, CN, NA, ZH,

<sup>3:</sup> Included AC clips can be different according to the region

### 2.2 CS-100, CS-100 HUDDLE specifications

#### **Base Unit**

| Weight                                   | 600g / 1.32lbs  |
|--|---|
| Dimensions (HxWxD)                       | 205mm x 115mm x 45mm (Min.) / 8.1" x 4.5" x 1.8" (Min.)   |
| Power consumption                        | Operation: 6W (typical) / 18W (max)<br>Standby: 2.6W (ECO standby) / 0.4W (Deep standby)  |
| Operating system                         | Windows 7/8/8.1/10 32 & 64 bit<br>macOS 10.14/10.15 (Catalina)<br>Android 9 & 10 (ClickShare app)<br>iOS 11, 12 & 13 (ClickShare app) |
| Video outputs                            | 1x HDMI 1.2   |
| Output resolution                        | 1920x1080 @60Hz   |
| Audio                                    | Via HDMI, analog via Audio Jack 3.5mm   |
| Frame rate                               | Up to 30 fps*   |
| Number of sources simultaneous on screen | 1   |
| Number of simultaneous connections       | 8   |
| iPad, iPhone and Android compatibility   | Sharing of documents, browser, camera for both Android and iOS devices via ClickShare app   |
| Extended desktop                         | Available for Windows, requires ClickShare Extension Pack.  |
| Authentication protocol                  | WPA2-PSK in stand-alone mode<br>WPA2-PSK or IEEE 802.1X using the ClickShare Button in network<br>integration mode                    |
| Wireless transmission<br>protocol        | IEEE 802.11 a/g/n   |
| Reach                                    | Adjustable with signal strength modulation; max. 30m (100 ft) between ClickShare Button and ClickShare Base Unit                      |
| Frequency band                           | 2.4 GHZ and 5 GHz (DFS channels not supported)  |
| Connections                              | 1x Ethernet LAN 100Mbit<br>1x (back) + 1x (front) USB<br>Audio analog line out on mini jack socket (3.5mm)                            |
| Noise Level                              | Fanless   |
| Temperature range                        | Operating: 0°C to +40°C (+32°F to +104°F)<br>Max: 35°C (95°F) at 3000m<br>Storage: -20°C to +60°C (-4°F to +140°F)                    |
| Humidity                                 | Storage: 0 to 90% relative humidity, non-condensing<br>Operation: 0 to 85% relative humidity, non-condensing                          |
| Anti-theft system                        | Kensington lock   |
| Certifications                           | FCC/CE  |
| Warranty                                 | 3 years standard  |

| Google Cast Support | Google Cast not supported   |
|---------------------|---|
| *Note               | *In optimal WiFi conditions with minimal WiFi interference and as<br>measured during our quality validation. Check Network Deployment Guide<br>for more info on WiFi optimisation and ideal configuration depending on<br>your network environment. |

#### Button<sup>4</sup>

| Weight                            | 75 g/0.165 lb   |
|-----------------------------------|---|
| Frequency band                    | 2.4 GHZ and 5 GHz   |
| Wireless transmission<br>protocol | IEEE 802.11 a/b/g/n   |
| Authentication protocol           | WPA2-PSK in stand alone mode<br>WPA2-PSK or IEEE 802.1X in network integration mode |
| Dimensions (HxWxD)                | 16.3 mm x 59.3 mm x 162.52 mm / 0.64" x 2.335" x 6.398"                             |
| Power consumption                 | Powered over USB-C<br>5V DC<br>350mA Typical<br>500mA Maximum                       |

### 2.3 About the Base Unit



#### **Base Unit**

The Base Unit receives the wireless input from the Buttons and controls the content of the meeting room display and the sound of the meeting room's audio system. The Base Unit can be installed in two different ways.

#### Front and Top layout of the Base Unit

At the front of the Base Unit you can find a power button and a USB Type-A port. Status LED ring is mounted around the standby button of the Base Unit.



- 1 USB Type-A port
- 2 Status LED ring

<sup>4:</sup> No Button available for CS-100 HUDDLE

- 3 Standby Button
- 4 Kensington lock

#### **USB** port

The USB port is used to update the soft- and firmware of both the Base Unit and the Buttons. For more information about software update via USB port, see "*Firmware update*", page 102.

When plugging in the Button into the Base Unit, the Button is paired to the Base Unit. The Base Unit checks whether the Button's software and firmware are up to date. If not, the Base Unit updates the software and/or firmware.

To update the Base Unit software, download the latest version of the software from the Barco website. Copy the file on a USB stick and plug it into the USB port of the Base Unit. Follow the progress and instructions on the display.

#### **Status LED ring**

The color of the LED at the front of the Base Unit give information on the status of the system.

| LEDs behavior   | Explanation  |
|-----------------|--|
| static red      | <ul> <li>receiving content from the Buttons and streaming towards the display.</li> <li>pairing and software update of the Button is done. You can now unplug the Button from the Base Unit.</li> <li>during the first phase of the Base Unit boot process.</li> </ul> |
| blinking white  | <ul> <li>system is starting up (during the second phase)</li> <li>Button pairing is in progress</li> <li>software update of the Base Unit</li> </ul>   |
| breathing white | ECO standby mode   |
| static white    | <ul> <li>awake and ready (i.e. showing the welcome message on the display)</li> <li>pairing is done</li> </ul>   |
| red blinking    | an error occurred  |
| dark            | deep standby/off   |

#### **Power button**

The button at the front of the Base Unit has a standby function once the Base Unit is powered

- When the system is in normal operational mode, a push makes the system goes to the predefined standby mode.
- When the system is in standby mode, a push triggers the system to start up and it goes to the normal operational mode.

#### Back layout of the Base Unit

The connection panel is situated at the back of the Base Unit.

#### CS-100, CS-100 HUDDLE Specifications



#### Image 2–3 Backside Base unit

- 1 Power connection
- 2 Reset button
- 3 LAN Ethernet connection
- 4 HDMI connector
- 5 USB Type-A port
- 6 Audio out port

#### **Mechanical fixture points**

The mechanical fixture points are located at the bottom of the Base Unit

#### Antenna

The antenna is built-in in the CS-100, CS-100 HUDDLE.

#### Bottom layout of the Base Unit

The serial number label containing the Barco part number, the revision number, production date (week-year) and the serial number.

The product label with the applicable certification logos.

The product label contains:

- the Barco logo
- the product name
- the Barco part number
- the power rating
- markings for applicable standards (CE, CCC, UL, ...)
- markings for waste regulation
- "Made in ..."

#### Bluetooth

Bluetooth functionality is currently not available and Bluetooth signal is disabled.

### 2.4 About the Button



Optional for CS-100 HUDDLE.



Button

A Button toggles the sharing of the individual PC or MAC screen on the meeting screen.

#### **Button layout**

A Button consists of three main components.



Image 2-4 Button layout

| 1 | USB connector |
|---|---------------|
| 1 | USB connecto  |

- 2 Button
- 3 LED ring

#### **USB** connector

Using the USB connector the Button can be plugged into a laptop (for sharing your screen) or the Base Unit (for pairing the Button to the Base Unit or updating its software). Button R9861500D1 has a USB Type-A connector, Button R9861500D1C has a USB Type-C<sup>TM</sup> connector. Depending on the type of USB port on your laptop or on the Base Unit a convertor must be use.

#### Button

Click the Button to display the content of the laptop's screen on the meeting room display. Clicking the Button during the meeting will toggle the sharing of the screen.

#### LED ring

The LED ring indicates the current status of your ClickShare.

| LEDs behavior  | Explanation   |
|----------------|---|
| white blinking | <ul> <li>the Button is plugged in the laptop and initializing or waiting for<br/>the user to start the ClickShare application.</li> <li>pairing/software update of the Button in the Base Unit is in<br/>progress.</li> </ul> |
| static white   | <ul> <li>ClickShare is ready to start sharing your screen.</li> <li>pairing is done. You can now unplug the Button from the Base Unit.</li> </ul>   |
| static red     | <ul> <li>sharing your screen with the display.</li> <li>pairing and software update is done. You can now unplug the<br/>Button from the Base Unit.</li> </ul>   |
| red blinking   | an error occurred.  |
| off (no light) | <ul> <li>the Button is not or not properly inserted into the USB port.</li> <li>the Button might be defective.</li> <li>the USB port or computer might be defective.</li> </ul>   |

#### **Button label**

The label at the bottom of the Button contains:

- the Barco logo
- the Barco part number
- the serial number
- the revision number
- markings for applicable standards
- markings for waste regulation
- "Made in..."



Handle the Button cable with care. Rough handling might cause defects.

### 2.5 Mobile Device Support

#### **Overview**

The below list of Apps are supported by ClickShare and can be installed on your mobile device from Google Play or Apple App Store.

Before you can use your mobile device with ClickShare, you have to connect the mobile device Wi-Fi with the ClickShare Base Unit Wi-Fi. Follow the instructions as given in your mobile device user guide.

| Арр            |  |
|----------------|--|
| ClickShare App |  |

Used on iOS Android Logo



### 2.6 Ports used by the CS-100, CS-100 HUDDLE Base Unit

#### **Overview**

| Sender                                    |            | CS-100, CS-100 HUDDLE Base Unit |
|---|------------|---------------------------------|
| ClickShare Button                         | TCP        | 6541; 6542; 6543; 6544; 6545    |
|   | UDP        | 514                             |
| ClickShare Apps                           | TCP        | 6541; 6542; 6543; 6544; 6545    |
| for Windows,<br>MacOS, iOS and<br>Android | UDP        | 5353                            |
| ClickShare REST<br>API & XMS              | TCP<br>UDP | 4000; 4001                      |
| ClickShare<br>Configurator                | TCP        | 80; 443                         |
| Auto-update                               | TCP        | 80; 443                         |
| Button Manager                            | TCP        | 6546                            |



# **Getting started**

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### **3.1 Environmental Condition Check**

#### **Environment condition check**

For installations in environments where the device is subject to excessive dust, then it is highly advisable and desirable to have this dust removed prior to it reaching the device clean air supply. Devices or structures to extract or shield excessive dust well away from the device are a prerequisite; if this is not a feasible solution then measures to relocate the device to a clean air environment should be considered.

It is the customer's responsibility to ensure at all times that the device is protected from the harmful effects of hostile airborne particles in the environment of the device. The manufacturer reserves the right to refuse repair if a device has been subject to negligence, abandon or improper use.

#### Ambient temperature conditions

Max. ambient temperature : +40°C or 104°F Min. ambient temperature: +0°C or 32°F Storage temperature: -10°C to +60°C (14°F to 140°F)

#### **Humidity Conditions**

Storage: 0 to 90% relative humidity, non-condensing

Operation: 0 to 85% relative humidity, non-condensing

#### Environment

Do not install the device in a site near heat sources such as radiators or air ducts, or in a place subject to direct sunlight, excessive dust or humidity. Be aware that room heat rises to the ceiling; check that temperature near the installation site is not excessive.

### **3.2 Basic Workflow**

#### Before using CS-100, CS-100 HUDDLE

1. Unpack the ClickShare components and accessories from the box.

For a detailed overview of the content of the CS-100, CS-100 HUDDLE box, see "About the CS-100, CS-100 HUDDLE", page 26

2. Install the Base Unit in the meeting room using one of the 2 possible installation methods.

For more information on the installing procedures, see "CS-100, CS-100 HUDDLE Installation", page 35

- 3. Connect the video cable between the Base Unit and the display.
- Connect the audio from the Base Unit to the meeting room's sound system (only required for audio via jack).
- 5. If configuration via a network is needed, connect a network cable between the Base Unit and the local network (if not yet done to power the Base Unit).
- 6. Connect the Base Unit to the mains power.

For more information "Power connection", page 43,

7. If desired, configure CS-100, CS-100 HUDDLE via the Configurator.

For more information on the different ways to configure CS-100, CS-100 HUDDLE, see "CS-100, CS-100 HUDDLE Configurator", page 51.



For more information on using CS-100, CS-100 HUDDLE, refer to the CS-100, CS-100 HUDDLE User Guide. This manual can be found on Barco's website <u>www.barco.com/clickshare</u>.

# CS-100, CS-100 HUDDLE Installation

4

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### 4.1 Installation methods for the Base Unit



For optimal performance, install the Base Unit close to the display and avoid obstacles between the Base Unit and the Buttons.



Make sure not to install the Base Unit in a metal enclosure.

#### Introduction to the installation methods

The Base Unit can be installed in different ways in a meeting room.

- Table mount
- Wall mount

A Kensington lock is foreseen on one side of the Base Unit.



WARNING: Ceiling mount is not allowed !

#### Standalone or network integration

The Base Unit can be use as standalone unit or integrated in a corporate network.

- Out-of-the-box use
- Out-of-the-box use with Ethernet link
- Integration in the Enterprise network
- Integration in a dedicated Enterprise network

### 4.2 Table mounting

#### Overview

Put the Base Unit directly on the meeting room table. The total weight of the Base Unit is 600 g.

### 4.3 Wall mounting

#### About wall mounting

No mounting bracket is needed to install the Base Unit on the wall. The Base Unit can be mounted in any position on the wall, but it is preferred to mount it with the connections downwards.

The total weight of the Base Unit is 600 g.

#### **Required tools**

- a drill (type of drill depends on the type of wall)
- · Screwdriver (depending on the used screws)

#### **Required parts**

- 2 mounting screws, maximum head diameter of 6.5 mm
- 2 plugs

#### How to install

 Drill two holes in the wall or ceiling as indicated on the drawing. Horizontal distance : 162 mm,


Image 4–1 Mounting holes

2. Insert a plug in each hole (if needed, depends on the wall or ceiling type) and drive in 2 screws. Do not drive in the screws completely.



*Note:* Mounting screws and plugs are not included in the CS-100, CS-100 HUDDLE box . The type of screws and plugs depend on the type of wall (stone, wood, plasterboard, ...) you are mounting the Base Unit to. Make sure the head of the screw is not larger than the hole in the bottom plate of the Base Unit (< 6.5 mm).

3. Hook the Base Unit on both screw heads and slide the Base Unit downwards until it is fixed.

## 4.4 Video signal connections to the Base Unit

#### About Video signal connection

A single screen can be connected to the Base Unit.

To connect a display, an HDMI connection should be made between the Base Unit and the display.

#### To connect

1. Connect the Base Unit to the display using a display cable.



*Note:* No display cables are included in the ClickShare box at purchase.

When setting up a display configuration, connect the HDMI cable to the display. When necessary, use an adapter piece to connect to a display port or a DVI port on the display side.



Image 4–2 Display connection

## 4.5 Audio connection

#### About audio

The ClickShare Button captures the audio output of the user's laptop and sends it to the Base Unit together with the video signal. The audio will be output at line levels from the mini jack socket (3.5mm) and via the HDMI connector.

It is up to the user to decide whether or not to send the audio signal together with the video signal. The user can decide this by using the same tools as he would to control the laptop's speakers or a headphone: the audio controls of the operating system (eg for Windows: Control Panel > Sounds and audio devices) or the physical buttons on the keyboard of their laptop (mute/unmute, lower volume, higher volume).

There will be synchronization between the audio and video signal.

#### Audio via HDMI

When your display is connected via HDMI and it supports audio, a separate audio connection is not necessary. The audio signal is sent together with the video signal to the display.

#### How to connect separate audio

- 1. Connect an audio cable with mini jack socket (3.5mm) into the audio out of the Base Unit.
- 2. Connect the other side to the meeting room's sound system.

Audio output needs to be selected in the Configurator, for more info, see "Audio settings", page 67

#### Sound is not sent out

In some Windows environments sound is not sent out. This can be solved as follow:

- 1. Right click on the sound icon in the system tray and select *Playback devices*. The Sound window opens.
- 2. Select Speakers ClickShare, select Set default and click Apply.

## 4.6 LAN connection

#### **About LAN connection**

The Base Unit can be connected to a local network or directly to a laptop. For normal operation, a LAN connection is not necessary.

The LAN connection can be used:

- to configure your CS-100, CS-100 HUDDLE Base Unit
- to update the software
- for maintenance purposes

#### How to connect

- 1. Insert a network cable with RJ-45 connector into the LAN port.
- 2. Connect the other side to a LAN.

## 4.7 Out-of-the-box use

#### Overview

In this default mode, the ClickShare Base Unit and Button (s) operate directly out of the box, without any integration in the Enterprise network. Users can connect directly to the Base Unit Wi-Fi via the ClickShare Buttons, using the ClickShare App or with their mobile devices using Airplay or Google Cast.



Note: Using a ClickShare Button allows you to stay connected to the internet. Using the ClickShare App, Airplay or Google Cast will require connecting to the Base Unit directly and will only be able to access the internet if the device supports to use data (3G/4G) at the same time. For an improved user experience, it is highly recommended to connect an Ethernet cable to the Base Unit.

Using the ClickShare Base Unit and Buttons directly out of the box is ideal for temporary setups, visitor centers and small to medium installations without network integration needs or possibilities. This setup requires the least installation effort and keeps any shared data completely separated from your Enterprise network. Updating and configuring the Base Units will need to be done manually.

## 4.8 Out-of-the-box use with Ethernet link

#### Overview

In this extended out-of-the-box mode, an Ethernet connection is made between the ClickShare Base Unit and the corporate network. The ClickShare Base Unit Wi-Fi is kept enabled, ensuring users can still connect directly to the Base Unit Wi-Fi via the ClickShare Buttons, using the ClickShare App, Miracast, Airplay or Google Cast. Employee computers running the ClickShare App and employee mobile devices using Airplay or Google Cast can connect via the corporate LAN.

Note: Using a ClickShare Button allows guests to stay connected to the Guest LAN and thus retain internet connectivity. Guest mobile devices will usually need to connect to the Base Unit directly and will only be able to access the internet if the device supports to use data (3G/4G) at the same time.



Using the ClickShare Base Unit and Buttons directly out of the box is ideal for temporary setups, visitors' centers and small to medium installations without network integration needs. The Ethernet connection allows employees to use the ClickShare App without switching their Wi-Fi network, as well as central management via XMS and for auto-updates. Guest BYOD users will usually not be able to share with the ClickShare Base Unit unless they switch their Wi-Fi connection to the Base Unit SSID.

## 4.9 Integration in the Enterprise network

#### Overview

In this full network integration mode, the ClickShare Base Unit is integrated into the corporate network or guest network via a cabled connection. The Base Unit's wireless access point is typically disabled and all traffic from the Button(s), the ClickShare App, Airplay, Google Cast and Miracast travels via the Enterprise network to the Base Unit. Employees and guests can share directly via the ClickShare Button or when connected with their mobile device to the same Enterprise network. Employees can also share using the ClickShare App (for guest users, a bridge is required between the guest and corporate network).

Note: The ClickShare Buttons are wirelessly connected via the corporate access points (APs) to the corporate LAN. All sharing traffic travels through the LAN to the Base Unit.



This setup is used for large Enterprise installations where ClickShare Units are integrated into a single corporate network, which is used for all devices.

#### Advantages

- · Less Wi-Fi access points allowing to better control the Wi-Fi spectrum.
- Easy installation in your Enterprise network via the ClickShare configurator or via XMS.
- Improved Wi-Fi coverage for theButtons and BYOD<sup>5</sup> devices.
- Employees can keep using their mobile devices on the same Enterprise network while sharing via ClickShare.
- Employees can share using the ClickShare App without switching networks, keeping their internet access over Wi-Fi.
- Guests can share using the ClickShare Button, keeping their internet access over Wi-Fi. When the Base Unit Wi-Fi is enabled, direct connections to the Base Unit are also possible.

#### How to setup via the Configurator

- 1. Connect the Base Unit and browse to the *ClickShare Configurator* and log in.
- 2. Select *Button* in the *System* menu and click Edit settings.

Select *External Access Point* from the drop down menu and select the preferred authentication mode and fill out the details.

Click Save Changes. For more information, see "Buttons", page 91

- 3. Pair the Buttons again with the Base Unit.
- Optionally the Base Unit's Wi-Fi can be set to Access Point or can be set to Off. For more info, "Wi-Fi settings", page 68

#### Setup via XMS

- 1. Log in to XMS and go to the *Base Units* tab.
- In the device list select the Unit(s) for deploying network integration mode and click Edit in the top right menu..

<sup>5:</sup> Bring your own device

- 3. Browse to System > Button Connects To in the configurator.
- 4. Select External Access Point from the drop-down menu.
- 5. Select the preferred authentication mode and fill out the details.
- 6. Click Save Changes when finished.
- **7.** Re-pair the ClickShare Buttons with the updated Base Unit(s) to apply the new configuration For more detailed information on how to use XMS, consult the XMS user guide.

## 4.10 Integration in a dedicated Enterprise network

#### Overview

In this integration mode, the ClickShare Base Unit is connected to a dedicated physical or virtual LAN via a cabled network. The Base Unit's wireless access point function is typically disabled. Corporate users as well as guests share directly via the ClickShare Button, via the ClickShare App and with their mobile devices using Airplay, Google Cast or Miracast if they are connected to the dedicated LAN or Enterprise network. This setup allows for more fine grained access control or to separate the ClickShare network traffic from all other IP traffic to ensure business requirements in terms of bandwidth and latency.

**Note**: The ClickShare Buttons are also connected to the dedicated LAN and all sharing traffic travels through that LAN to the Base Unit. When using a ClickShare Button or ClickShare App for sharing, all users can keep their computers connected to any of the other connected networks and still have corporate and internet access. Mobile users will be able to access the internet on the corporate LAN if the network configuration allows it.



This setup is used to integrate ClickShare into a dedicated network because a connection to an existing network is not required or wanted. It is preferred for large Enterprise installations where security constraints are strict, such as for Banks, Defense industry, Government, etc.

#### Advantages

- Less Wi-Fi access points allowing to better control the Wi-Fi spectrum.
- Eliminates any security risks via ClickShare because all Base Units are in an isolated and separate (virtual) LAN.
- Easy management of all ClickShare Base Units in the separate (virtual) LAN, e.g. through their assigned IP addresses.
- If the network configuration allows it, mobile users remain connected to their current network when sharing
  and have access to corporate environment and the internet. Enterprise network traffic is routed to the
  dedicated ClickShare network for content sharing purposes.

#### How to setup via the Configurator

- 1. Connect the Base Unit and browse to the *ClickShare Configurator* and log in.
- 2. Select Button in the System menu and click Edit settings.

Select *External Access Point* from the drop down menu and select the preferred authentication mode and fill out the details.

Click Save Changes. For more information, see "Buttons", page 91

- 3. Pair the Buttons again with the Base Unit.
- Optionally the Base Unit's Wi-Fi can be set to Access Point or can be set to Off. For more info, "Wi-Fi settings", page 68

#### Setup via XMS

- 1. Log in to XMS and go to the *Base Units* tab.
- 2. In the device list select the Unit(s) for deploying network integration mode and click **Edit** in the top right menu..
- 3. Browse to System > Button Connects To in the configurator.
- 4. Select External Access Point from the drop-down menu.
- 5. Select the preferred authentication mode and fill out the details.
- 6. Click Save Changes when finished.
- Re-pair the ClickShare Buttons with the updated Base Unit(s) to apply the new configuration For more detailed information on how to use XMS, consult the XMS user guide.

## 4.11 Power connection

#### About power

This product is intended to be supplied by a UL Listed Power Unit marked "Class 2" or "LPS" or "Limited Power Source" with output rated 12 VDC 1.5A min.

An external power adapter is delivered with the product.



Once the Base Unit is powered, it starts up. Then the power button can be used to switch on or off.

#### How to connect the external power adapter.

- 1. Plug the barrel connector of the power adapter into the power input of the Base Unit.
- 2. Slide a power input adaptor piece (US, CN, EU or UK) on the power adapter of the ClickShare . Use the one which is applicable in your country.
  - 1. Slide down the button on the adapter (1).
  - 2. Insert the latch (2) of the adapter piece into notch (3)







Image 4–8 Type A

Image 4–7 Mounting adapter piece



Image 4–9 Type A



Image 4–10 Type C



Image 4–11 Type G



Image 4–12 Type I

**3.** Connect the power cable to the wall outlet.

# Preparing the Buttons



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## 5.1 Pairing

#### Pairing of the Buttons with the Base Unit

To be able to use a Button it should be assigned to the Base Unit you are using. This process is called pairing. By default, the Button(s) delivered with the Base Unit are already paired to that specific Base Unit.

In case you buy additional Buttons or when a Button should be assigned to another Base Unit, the Button needs to be paired (again). The Button software update runs in the background and will not impact users while using the system. When downgrading or updating to an older version of the Base Unit software the Buttons need to paired manually to update their software and that only in case the Button update over Wi-Fi is disabled.



A Button can only be paired to one Base Unit at a time. The Button will always make connection to the Base Unit it was last paired to.

Pairing a Button can be done in two ways:

- by plugging the Button to the Base Unit.
- by using the Button Manager application running on your laptop.

#### To pair a Button to the Base Unit by plugging in

1. Insert the Button in one of the USB port available on the Base Unit you are using (image is only given as example, all USB connectors can be used).





Image 5–1 Pair Button

Both the LEDs of the Button and the LEDs of the Base Unit are blinking white. This means pairing is in progress.

The Base Unit automatically checks whether the software of the Button is up to date. If not, the Base Unit updates the Button software. This may take more time.

During the pairing and update process, a small status bar is display. The result of the pairing process can be as follows:

- When the LEDs become static white, the Button is paired to the Base Unit, but no software update was needed. You can unplug the Button from the Base Unit.
- When the LEDs become static red, the Button is paired to the Base Unit and the software update has finished. You can unplug the Button from the Base Unit.
- 2. Unplug the Button from the Base Unit.

The Button is now ready for use.

#### To pair a Button to the Base Unit using the Button Manager

Via the Button Manager client application running on your laptop, up to 4 Buttons can be paired simultaneously to a Base Unit without plugging the Buttons to the Base Unit. The Buttons are plugged in to

your laptop. For more information about the Button Manager, consult the Button Manager's user guide which can be downloaded from Barco's website.

## 5.2 ClickShare Extension Pack

#### About

The ClickShare Extension Pack is a collection of tools to upgrade your ClickShare user experience. This Extension Pack contains the ClickShare Launcher service and a driver to enable the Extended Desktop functionality. Both tools will be installed by default. To change the default behavior of the installer, the installer will need to be executed with command line parameters.

The ClickShare Extension Pack can be installed by the end user manually, pre-installed on your company's laptop image or deployed company-wide with SCCM or other tools.

The ClickShare Extension Pack can be used in combination with a Button and/or with the ClickShare desktop app.

The latest extension pack can be downloaded via http://www.barco.com/en/product/clickshare-extension-pack

## 5.3 ClickShare Extension Pack installer

#### Interactive setup

In this setup, the user runs the installer which will install the ClickShare Extension Pack on his computer after the user accepts the EULA.

After the setup finished, the ClickShare launcher will be started automatically. The Extended desktop driver can only be used after the user reboots his computer.

#### Starting the setup

- Download the ClickShare Extension Pack (download via <u>http://www.barco.com/en/product/clickshare-extension-pack</u>).
- 2. Unzip the downloaded file.
- 3. Click ClickShare-Extension-Pack.msi to start the installation.



Image 5–2

 Click Next, accept the License Agreement and click Next to continue. If necessary, follow the on screen instructions.

#### Silent setup

In this setup, a user or an IT admin can install the ClickShare Extension pack using the Windows command prompt. Following is an example of a silent installation (version numbers are only given as example, always check Barco's web for the latest version):

#### Launcher only install:

msiexec. exe /i ClickShare-Extension-Pack-01.00.02.0003. msi ACCEPT\_EULA=YES
INSTALLFOLDER=C:\LAUNCH APP=YES/qn

#### Extended desktop only install :

msiexec. exe /i ClickShare-Extension-Pack-01.00.02.0003. msi ACCEPT\_EULA=YES
ADDLOCAL=ExtendedDesktopDriverFeature INSTALLFOLDER=C:\LAUNCH\_APP=YES/qn

#### Full install (laucher + extended desktop):

msiexec. exe /i ClickShare-Extension-Pack-01.00.02.0003. msi ACCEPT\_EULA=YES
ADDLOCAL=ALL INSTALLFOLDER=C:\LAUNCH APP=YES/qn



The computer will reboot. This can be suppressed with /norestart. A reboot will be needed afterwards for the extended desktop feature to be working. In case the end-user should decide if they want to reboot, /promptrestart /QB!+ can be used (basic UI, no cancel option, but prompt to reboot)

#### **Parameter Description**

| ACCEPT_EULA        | This parameter shows that the installer accepts the EULA text as is. This parameters must be set to YES in order to continue to the installation.                                   |
|--------------------|---|
| INSTALLFOLD-<br>ER | This parameter specifies the installation directory for ClickShare launcher. If not specified, the default folder will be the Program Files folder.                                 |
| LAUNCH_APP         | The ClickShare launcher application will be started right after the installation finishes if this parameter is set to YES. Otherwise, the launcher application will not be started. |
| /qn                | This parameter indicates that the installation will be done in silent mode, meaning that there will be no visible windows during the installation.                                  |
| ADDLOCAL           | This parameter indicated the type of the installation. No parameter added, installs only the launcher.  |

#### Windows environment variable

The variable to be used is CLICKSHARE\_LAUNCHER\_CLIENT\_PATH. The value should be the path to the client software.

## 5.4 ClickShare Windows Certified driver

#### About

The ClickShare Windows Certified driver is auto-installed when plugging in a Button in a Window PC.

This Windows driver automatically lauches the executable on the Button.

Note that at least version **1.16.0** is required. In case an older version is installed on your PC, start windows update *check for updates* with a button inserted into your PC.

## 5.5 ClickShare Desktop app

#### About the

With the ClickShare desktop app installed on your computer you can enter a meeting room and get on the screen in a few seconds without the need to plug in a Button. The ClickShare app can be used in combination with a Button.

The ClickShare desktop app connects to the meeting room screen in order to share your content. Presence detection technology is used to do so. The ClickShare desktop app uses presence detection technics to determine which meeting room is closest to the user. Just click on your meeting room name. This means you will never have to enter IP addresses or scroll long lists of meeting rooms before being connected to your meeting room.

#### Installation

When the ClickShare desktop app is not pre-deployed in your IT environment, you can download and install the software without administrator rights from <u>www.clickshare.app</u>.

Preparing the Buttons

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Within some menus the *Configurator* is indicated as *WebUI*. E.g. WebUI password, that is the password to enter the Configurator.

## 6.1 Accessing the Configurator

#### **Getting access to the Configurator**

There are three ways to access the Configurator:

- Via the LAN
- Direct Ethernet connection between PC and Base Unit.
- Via the Base Unit's wireless network

When accessing the configurator for the first time, the ClickShare Configuration Wizard starts automatically.

This configuration wizard can be started at any moment to change your configuration instead of using the menus.

#### To access the Configurator via the LAN

1. Open a browser.

Note: Supported browsers are Internet Explorer, Firefox, Google Chrome and Safari.

2. Browse to the IP address of your device.



*Note:* If you do not know the IP address due to *Show network info* is disabled, connect via a direct connection or via a wireless connection to your device to discover the wired IP address.

A login screen appears.

|                                     | ClickShare Configurator  | English <del>-</del> |
|-------------------------------------|--|----------------------|
|                                     |  |                      |
|                                     |  |                      |
|                                     |  |                      |
| Log in to t                         | ne ClickShare Configurator                                       |                      |
| 0                                   | 0  |                      |
| Username:                           | Username   |                      |
| Password                            | Descured   |                      |
| Password.                           | Password   |                      |
|                                     | Remember me  |                      |
|                                     | I have read and accept the <u>EULA</u> and <u>Privacy policy</u> |                      |
|                                     | Log in   |                      |
|                                     |  |                      |
|                                     |  |                      |
|                                     |  |                      |
|                                     | BARCO  |                      |
| © 2019, Barco. All rights reserved. | Bhiles   |                      |
| Image 6–1 Login screen              |  |                      |

**3.** To change the language of the Configurator, click on the drop down next to the current selected language and select the desired language.

| English 🗕 📑                       |
|-----------------------------------|
| العربية                           |
| 简体中文                              |
| 繁體中文                              |
| Dansk                             |
| Nederlands                        |
| Suomi                             |
| Français                          |
| Deutsch                           |
| Italiano                          |
| 日本語                               |
| 한국어                               |
| Norsk                             |
| Português                         |
| Русский                           |
| Español                           |
| Svenska                           |
| Image 6–2 Configurator lanuguages |

The following languages are possible:

- Arabic
- Simplified Chinese
- Traditional Chinese
- Danish
- Dutch
- English
- Finnish
- French
- German
- Italian
- Japanese
- Korean
- Norwegian
- · Portuguese
- Russian
- Spanish
- Swedish

The Configurator language changes to the selected language.

4. Enter the user name 'admin' and the password, read and accept the EULA and the Privacy policy and click OK.

By default, the password is set to 'admin'.

Warning: It is strongly recommended to change the default password into a strong password on first use, to prevent that anyone else accessing the configurator can change the settings of the ClickShare Base Unit. See section "Security, passwords".

The Configurator opens.



The language of the configurator can be changed on any page in the interface.

The screen is split up in 2 panes. Left pane with the selection buttons and a right pane to configure the selected function.

The startup screen itself shows:

- the wired IP address
- the wireless SSID
- the number of Buttons connected
- the system state



If you cannot find the IP address (e.g. there is no screen available) you should connect to the Base Unit directly with your laptop via an Ethernet crossover cable and access the web interface using the fixed IP address 192.168.1.23. Make sure your own LAN adapter is set in the 192.168.1.x range.

#### To access the Configurator via a direct connection.

- 1. Connect the Base Unit to your laptop using an Ethernet cable.
- 2. On your laptop, open a browser.



- Note: Supported browsers are Internet Explorer, Firefox and Safari.
- 3. Browse to <u>http://192.168.1.23</u>.

A login screen appears.

 Enter the user name 'admin' and the password, read and accept the EULA and click OK. By default the password is set to 'admin'.

The configurator opens. The wired IP address is given on the startup page.

#### To access the Configurator via the Base Unit wireless network

1. On your laptop, connect to the Base Unit wireless network.

The default SSID and password to connect to the Base Unit are respectively 'ClickShare-<serial base number>' and 'clickshare'.

2. On your laptop, open a browser.



Note: Supported browsers are Internet Explorer, Firefox and Safari.

3. Browse to <u>http://192.168.2.1</u>.

A login screen appears.

4. Enter the user name 'admin' and the password, read and accept the EULA and click OK.

By default the password is set to 'admin'.

The configurator opens. The wired IP address is given on the startup page.

Older laptops might not support the 5 GHz Frequency Band. If your Base Unit is set to that frequency range, those devices will not be able to connect to the Base Unit via the wireless network.

#### **Overview of functions**

| Group             | Function            |
|-------------------|---------------------|
| Personalization   | On-Screen ID        |
|                   | Wallpaper           |
|                   | Configuration Files |
| Display & Audio   | Display & Audio     |
| Wi-Fi & Network   | Wi-Fi Settings      |
|                   | LAN Settings        |
|                   | Services            |
| Security          | Security levels     |
|                   | Passwords           |
| System            | Base Unit Status    |
|                   | Date & Time         |
|                   | Energy Savers       |
|                   | Buttons             |
| Support & Updates | Firmware            |
|                   | Troubleshoot        |

When a setting is changed, always click Save changes to store the changes.

## 6.2 ClickShare Configuration Wizard

#### About the configuration wizard

During the first start up of the Base Unit, the configuration wizard starts up automatically.

All basic settings necessary to configure the Base Unit are covered by the configuration wizard. Once the configuration wizard is finished, the Base Unit is ready to be used.



| ClickShare Configuration Wizard |             |                    |        |                      |            | 8        |   |                  |              |
|---------------------------------|-------------|--------------------|--------|----------------------|------------|----------|---|------------------|--------------|
| Personalisation                 | >           | <b>Ö</b><br>System | >      | <b>O</b><br>Security | >          | Password | > | <b>R</b> Network |              |
| 💄 P                             | erson       | alisatior          | ١      |                      |            |          |   |                  |              |
| Languag                         | ge for on-s | creen text:        | Englis | ih                   |            |          |   | ¥                |              |
| 1                               | Meeting ro  | oom name:          | Enter  | the name of the      | meeting ro | om       |   |                  |              |
|                                 | Loca        | tion name:         | Enter  | the name of the      | location   |          |   |                  |              |
|                                 | Welcom      | e message:         | Enter  | a welcome mess       | sage       |          |   |                  |              |
|                                 |             |                    |        |                      |            |          |   |                  |              |
|                                 |             |                    |        |                      |            |          |   |                  |              |
|                                 |             |                    |        |                      |            |          |   |                  |              |
|                                 |             |                    |        |                      |            |          |   |                  |              |
|                                 |             |                    |        | BABCO                |            |          |   | Next             | $\mathbf{b}$ |

Image 6–5 Configuration wizard, Personalisation

Fill out the necessary field and click Next to continue.

To return to the previous step, click on **Back**.

For more information about a specific topic, see one of the following topics.

The ClickShare Configuration Wizard can be started at any time to change the configuration just by clicking on **ClickShare Configuration Wizard** at the left bottom of each screen.

| Personalisa-<br>tion | Language on-screen text                              | See "On-Screen Language and Text Size", page 59. |  |  |
|----------------------|--|--|--|--|
|                      | Meeting room name, location name and welcome message | See "Meeting room information", page 61.         |  |  |
| System               | Time zone, manual time setup                         | See "Date & Time setup, manually", page 87.      |  |  |
|                      | Use NTP  | See "Date & Time setup, time server", page 89.   |  |  |
| Security             | Level settings                                       | See "Security, security level", page 82.         |  |  |
| Password             | ClickShare Configurator (WebUI) password             | See "Security, passwords", page 83.              |  |  |
| Network              | Frequency band, channel Wi-Fi passphrase             | See "Wi-Fi settings", page 68.                   |  |  |

| Personalisation   |                               |  |
|---|-------------------------------|--|
| 🖵 Display & Audio   | What do you want to do t      | oday?                                    |
| 🗢 Wi-Fi & Network   |                               |  |
| Security  | Change wallpaper              | View Base Unit status                    |
| System  | View Button status            | Change energy saving settings            |
| Support & Updates   | Download log files            | 💸 Launch configuration wizard            |
|   | 5 GHz: CX-50 demo             | ClickShare-1863550238<br>10.200.20.221   |
|   | SmartCare activated.          | Showing wallpaper<br>0 Buttons connected |
| To update basic settings, run the<br><u>ClickShare Configuration Wizard</u><br>© 2020, Barco. All rights reserved.<br>BARCO | Your Base Unit is up to date. |  |
| Image 6–6 Configuration Wizard  | start                         |  |

## 6.3 On-Screen Language and Text Size

#### About the on-screen language.

The on-screen language can be set independent of the configurator language. The on-screen text size can be changed between small, medium or large.

#### Language selection

- 1. Log in to the Configurator
- **2.** Click Personalisation  $\rightarrow$  On-Screen ID.

| Personalisation  | 💄 On-Scree                       | n ID   |                         |           |
|--|----------------------------------|--|-------------------------|-----------|
| On-Screen ID   |                                  |  | Discard changes Sav     | e changes |
| Wallpaper  |                                  |  |                         |           |
| Configuration Files  | Language for on-<br>screen text: | English  | Ŧ                       |           |
| 🖵 Display & Audio  | Meeting room name:               | test   |                         |           |
| 🗢 Wi-Fi & Network  |                                  | This text is shown on the user's device<br>Button is ready to share ("Ready to sha | when the<br>re on"), on |           |
| Security   |                                  |  | se onit.                |           |
| System   | Location name:                   | Enter the name of the location   |                         |           |
| Support & Updates  | Welcome message:                 | Enter a welcome message  |                         |           |
|  |                                  | ✓ Show meeting room info   |                         |           |
|  |                                  | Show network info  |                         |           |
| To update basic settings, run the                                      |                                  | Show source names  |                         |           |
| ClickShare Configuration Wizard<br>© 2019, Barco. All rights reserved. | On-screen text size:             | Medium   | Ţ                       |           |

Image 6–7 Personalisation, On-Screen ID

3. Select the language of the on-screen text. Click on the drop down box next to Language for on-screen text and select the desired language.

The following languages are possible:

- Arabic
- Simplified Chinese
- Traditional Chinese
- Danish
- Dutch
- English
- Finnish
- French
- German
- Italian
- Japanese
- Korean
- Norwegian
- Portuguese
- Russian
- Spanish
- Swedish

#### Text size

- 1. Log in to the Configurator
- **2.** Click Personalisation  $\rightarrow$  On-Screen ID.
- Click on the drop down box next to *On-screen text size* and select the desired font size. The following sizes are possible:
  - Small
  - Medium
  - Large

## 6.4 Meeting room information

#### About meeting room settings

The following settings are possible:

- Meeting room name
- Meeting room location
- · Welcome message on the ClickShare screen
- Show meeting room info
- Show network info
- Show source names

| Personalisation                  |                                  | On-Screen ID  |   |              |  |
|----------------------------------|----------------------------------|---|---|--------------|--|
| On-Screen ID                     |                                  |   | Discard changes   | Save changes |  |
| Wallpaper                        |                                  |   |   |              |  |
| Configuration Files              | Language for on-<br>screen text: | English   | •   |              |  |
| Display & Audio                  | Meeting room name:               | test  |   |              |  |
| ☞ Wi-Fi & Network                |                                  | This text is shown on the user's devi<br>Button is ready to share ("Ready to s<br>the central screen connected to the | <i>ice when the</i><br><i>share on"), on</i><br><i>Base Unit.</i> |              |  |
| Security                         | Location name:                   | Enter the name of the location  |   |              |  |
| System                           | Location name.                   | Enter the name of the location  |   |              |  |
| Support & Updates                | Welcome message:                 | Enter a welcome message   |   |              |  |
|                                  |                                  | Show meeting room info  |   |              |  |
|                                  |                                  | Show network info   |   |              |  |
| a undate basic settings, sup the |                                  | Show source names   |   |              |  |
| ClickShare Configuration Wizard  | On-screen text size:             | Medium  | ¥   |              |  |
| Brinco                           |                                  |   |   |              |  |

Image 6-8 Personalisation, On-Screen ID

#### Meeting room name, location and welcome message

- 1. Log in to the Configurator.
- **2.** Click Personalisation  $\rightarrow$  On-screen ID.
- 3. Click in the input field next to Meeting room name and enter a name for the meeting room.

This text is shown on the user's device when the Button is ready to share ("Ready to share on..."), on the central screen connected to the Base Unit and in the list of AirPlay receivers on the user's iOS device.

- 4. Click in the input field next to *Location name* and enter the location.
- 5. Click in the input field next to *Welcome message* and enter the desired message.

#### Show on-screen information

- 1. Log in to the Configurator.
- **2.** Click Personalisation  $\rightarrow$  On-screen ID.
- 3. Check the check box in front of Show meeting room info.

Checked: meeting room name, location and welcome message are displayed on-screen when nothing is shared.

Not checked: nothing is shown on-screen.

4. Check the check box in front of Show network info.

Checked: LAN information such as wired IP address, hostname are displayed. Also the Wi-Fi IP address and SSID are displayed.

Not checked: no LAN nor Wi-Fi information is displayed.

5. Check the check box in front of Show source names.

Checked: the source name of the shared content is displayed on the screen.

Not checked: no source info displayed on the screen.

## 6.5 Personalisation, wallpaper

#### About wallpaper

When CS-100, CS-100 HUDDLE starts up, a background (wallpaper) is displayed. The display of this background wallpaper can be disabled.

By default a general ClickShare and a quick start wallpaper are available. The possibility exists to upload personal backgrounds (wallpapers). The default wallpapers cannot be removed from the system.

#### Wallpaper selection

- 1. Log in to the Configurator
- **2.** Click Personalisation  $\rightarrow$  Wallpaper.

| Personalisation   | 💄 Wallpaper  | Discard changes Save changes |
|---|--|------------------------------|
| On-Screen ID<br><b>Wallpaper</b><br>Configuration Files | Show the wallpaper when no one is sharing their screen |                              |
| 🖵 Display & Audio                                       |  |                              |
| 🗢 Wi-Fi & Network                                       | The one that wooder                                    |                              |
| Security  |  | Cidsbare                     |
| System  |  |                              |
| Support & Updates                                       | Choose image   |                              |

Image 6-9 Wallpaper selection

The Wallpaper selection pane is shown. The current selected wallpaper is shown with a red border.

3. Select one of the available wallpapers and click on Save Changes.



They are automatically resized to fit the aspect ratio of the screen.

The selected wallpaper is indicated with a red border.

The message Successfully applied changes appears on top of the wallpaper selection window.



You can also add a personal wallpaper, e.g. your company logo. For more information on adding a new wallpaper to the list, see "*Personalisation, Personalized wallpaper*", page 63.

#### **Download wallpaper**

1. Hoover with your mouse over the wallpaper to download and click on the download symbol on the upper right corner.



Image 6–10 Download wallpaper

The wallpaper is downloaded to your PC.

#### Enable - disable Wallpaper

1. Within the Wallpaper pane, check the check box next to Show the wallpaper when no one is sharing their screen.

Checked: wallpaper will be displayed when no one is sharing content.

Not checked: no wallpaper will be displayed when no one is sharing content. The video output of the Base Unit is disabled when no content is shared. This feature is especially useful when the Base Unit is integrated in a larger AK system

## 6.6 Personalisation, Personalized wallpaper

#### About a personalized wallpaper

Via the Configurator it is possible to upload personalized backgrounds or wallpapers.

The upload file should be a JPEG, PNG, BMP or TIFF format with a maximum size of 2.5MB.

Maximum one custom wallpaper can be uploaded. To upload another, the first uploaded will be overwritten.

#### How to upload

- 1. Log in to the Configurator
- 2. Click Personalisation → Wallpaper.

The Wallpaper selection pane is shown. The current selected wallpaper is shown with a red border.

3. Hoover your mouse over the free place and click on Choose image.

| Personalisation                | 💄 Wallpaper  | Discard changes Save changes |
|--------------------------------|--|------------------------------|
| On-Screen ID                   |  |                              |
| Wallpaper                      | Show the wallpaper when no one is sharing their screen |                              |
| Configuration Files            |  |                              |
| 🖵 Display & Audio              |  |                              |
| 🗢 Wi-Fi & Network              | the one titek worder                                   |                              |
| Security                       |  | Cichar                       |
| System                         |  |                              |
| Support & Updates              |  |                              |
| RARCO                          | Choose image   |                              |
| Image 6–11 Personalized wallpa | aper selection   |                              |

A browser window opens.

4. Browse for the desired image, click Open to load the image.

The content of the file is checked and when valid (format and size), the file is uploaded. The new wallpaper gets a red border.

5. Click on Save changes to apply the personalized wallpaper

The message **Successfully applied changes** is displayed on top of the page.

#### Change personalized image

- **1.** Click Personalisation  $\rightarrow$  Wallpaper.
- 2. Hoover your mouse over the current personalized image and click Change image.

| Personalisation   |  | Discard changes Save changes |
|---|--|------------------------------|
| On-Screen ID  |  |                              |
| Wallpaper   | Show the wallpaper when no one is sharing their screen |                              |
| Configuration Files   |  |                              |
| Display & Audio   |  |                              |
| ♥ Wi-Fi & Network   | The ane dick model                                     |                              |
| Security  |  |                              |
| > System  |  | -                            |
| Support & Updates   | CHILC.   |                              |
| update basic settings, run the<br>ickShare Configuration Wizard | ch   | oose image                   |

Image 6–12 Change image

3. Browse for the desired image, click Open to load the image.

The content of the file is checked and when valid (format and size), the file is uploaded. The new wallpaper gets a red border.

Click on Save changes to apply the personalized wallpaper and replace the previous file.
 The message Successfully applied changes is displayed on top of the page.

#### Remove personalized wallpaper

1. Hoover your mouse over the current image and click on the trash bin to remove the image.



Image 6–13 Remove wallpaper

The personalized wallpaper is removed and the default wall paper is activated.

### 6.7 Manage configuration files

#### About Manage configuration files

A full backup can be downloaded but cannot be used to duplicate configuration settings to other Base Units. Therefore, it is possible to download a Portable version. This portable version can be uploaded via the upload

configuration button on other Base Units (same type). Via the same button, the full backup can be uploaded on the original Base Unit.

A portable backup contains:

- · Wallpapers
- Wallpapers settings
- Logging settings
- · All display settings
- OSD language
- Location
- Welcome message
- Wi-Fi channel
- · Wi-Fi frequency

#### To manage the configuration files

- 1. Log in to the Configurator.
- **2.** Click Personalisation  $\rightarrow$  Configuration Files.

| Personalisation     | Configuration Files        |   |  |  |
|---------------------|----------------------------|---|--|--|
| On-Screen ID        |                            |   |  |  |
| Wallpaper           | Configuration<br>download: | Full backup   |  |  |
| Configuration Files |                            | The full backup contains all settings and   |  |  |
| 🖵 Display & Audio   |                            | history for the Base Unit. It is not useful for<br>duplicating configuration settings to other<br>Base Units. |  |  |
| 🗢 Wi-Fi & Network   |                            | Portable version  |  |  |
| Security            |                            | The portable version is a copy of the   |  |  |
| System              |                            | configuration settings that can be used to<br>duplicate the configuration to other Base<br>Units.             |  |  |
| Support & Updates   | Configuration<br>upload:   | Upload configuration  |  |  |

Image 6–14 Configuration files

3. To download a full backup, click on Full Backup.

An xml file, containing all information and history will be downloaded. This file can be reused on the same Base Unit only.

4. To download a portable version, click on **Portable Version**.

An xml file, containing portable information to duplicate settings on another Base Unit.

5. To upload a configuration, click on Upload Configuration.

A browser window opens. Navigate to the upload file (xml file) and click **Open** to upload.

A full backup can be uploaded on the Base Unit where the backup was created and a portable version can be uploaded on any other Base Unit of the same model.



When uploading a config file, the history of software updates and paired Buttons is lost. Paired Buttons will however remain functional if the Base Unit has not changed from SSID or wireless password.

## 6.8 Display setup

#### Resolution

The output resolution to the display is set on Auto. That means that the CS-100, CS-100 HUDDLE output resolution is automatically adapted to the resolution of the display. For HDMI displays, a hot plug detection is available.

#### Screen saver setup

- 1. Log in to the Configurator.
- **2.** Click Display & Audio  $\rightarrow$  Display & Audio.

| *   | Personalisation   | Display & Audio                      | 205 |
|-----|-------------------|--------------------------------------|-----|
| Q   | Display & Audio   | Discard changes   Save chang         |     |
|     | Display & Audio   | Output                               |     |
| (1: | Wi-Fi & Network   | ouput                                |     |
| 0   | Security          | Resolution: Auto                     |     |
| ¢   | System            | HDMI Hot-Plug display detection      |     |
| ٥   | Support & Updates | Enable audio  Audio output: HDMI     |     |
|     |                   | Screensaver                          |     |
|     |                   | Show screensaver<br>after (minutes): |     |

Image 6–15 Display settings

3. To activate the screen saver, drag the slider bar to the left or to the right until the desired delay time is reached.

When the slider is set completely to the right, the screen saver will never be activated.

## 6.9 Audio settings

#### About the audio settings

The audio functionality can be disabled or enabled. When the enable and/or disable setting is changed, the Buttons must be re-paired before the setting becomes active.

| Personalisation           | 🖵 Display                             | & Audio   | Discard changes | Save changes |
|---------------------------|---------------------------------------|---|-----------------|--------------|
| 🖵 Display & Audio         |                                       |   |                 |              |
| Display & Audio           | Resolution:                           | Auto  | •               |              |
| 🗢 Wi-Fi & Network         |                                       | <ul> <li>HDMI Hot-Plug display determine</li> </ul> | ction           |              |
| Security                  | Show screen saver<br>after (minutes): | Nevent 5 10 15                                      | 30 45 60        |              |
| System                    |                                       | <ul> <li>Enable audio</li> </ul>                    |                 |              |
| Support & Updates         | Audio output:                         | Jack<br>Jack<br>HDMI                                | Ţ               |              |
| Image 6–16 Audio settings |                                       |   |                 |              |



Audio disabling or enabling will require a repairing of the Buttons used with this Base Unit.

#### How to change

- **1.** Log in to the *Configurator*.
- **2.** Click Display & Audio  $\rightarrow$  Display & Audio.
- Check or uncheck the check box next to Enable Audio.

Checked: audio is enabled.

Unchecked: audio is disabled.

- To select the audio output, click on the drop down box and select the desired audio output.
   Jack: audio output via jack.
   HDMI: audio output via HDMI.
- 5. Click on Save changes to apply the new settings.

## 6.10 Wi-Fi settings

WARNING: It is not allowed to operate the Base Unit outside its intended geographical region.

#### About Wi-Fi

A connection with the Base Unit can be made via a wireless connection. A fixed wireless IP address is used to establish the connection.

The transmission power of the wireless signal can be reduced.

An overview of the current settings is given when *Wi-Fi Settings* is selected and operational mode is *Access Point*.

| ÷                            | Personalisation  | 🛜 Wi-Fi Settin                                  | gs                                | Edit settings |
|------------------------------|--|---|-----------------------------------|---------------|
| Ţ                            | Display & Audio  |   |                                   |               |
| ¢                            | Wi-Fi & Network  | Operation Mode:                                 | Access Point                      |               |
|                              | Wi-Fi Settings   | Access Point Mode Settings                      |                                   |               |
|                              | LAN Settings   | Broadcast SSID:                                 | Yes                               |               |
|                              | Services   | Signal strength (%):                            | 100                               |               |
|                              | Cocurity   | ClickShare Configurator<br>available via Wi-Fi: | Yes                               |               |
| V                            | Security   | Frequency band:                                 | 5 GHz                             |               |
| ¢                            | System   | Channel:  | 36                                |               |
| 0                            | Support & Updates  |   | ✓ Sufficient bandwidth available. |               |
|                              |  | SSID:   | ClickShare-1872115810             |               |
|                              |  | MAC address:                                    | 28:24:FF:46:77:B6                 |               |
|                              |  | IP Settings                                     |                                   |               |
|                              |  | IP address:                                     | 192.168.2.1                       |               |
|                              |  | Subnet mask:                                    | 255.255.255.0                     |               |
| To u<br><u>Click</u><br>© 20 | pdate basic settings, run the<br><u>Share Configuration Wizard</u><br>019, Barco. All rights reserved. |   |                                   |               |
| Bf                           | ARCO-  |   |                                   |               |

Image 6–17 Wi-Fi settings

When operational mode is set to *Off.* The following info is given: "The wireless interface is disabled. Buttons must be configured to connect to another Wi-Fi access point. Click *here* to go to the Button configuration page".

Click on here to start the Button configuration. For more info, see "Buttons", page 91.

To change any Wi-Fi-setting, click on **Edit settings**. The view depends on the previous selected operational mode. Here given with Access Point selected.

| •                   | Personalisation   | 奈 Wi-Fi Settir               | ngs                 |                  |         | Cancel | Save changes |
|---------------------|---|------------------------------|---------------------|------------------|---------|--------|--------------|
|                     | Display & Audia   |                              |                     |                  |         |        |              |
| Ŷ                   | Display & Audio   | Operation Mode:              | Access Po           | int              |         | •      |              |
| Ş                   | Wi-Fi & Network   |                              |                     |                  |         |        |              |
|                     | Wi-Fi Settings  | Access Point Mode Settings   |                     |                  |         |        |              |
|                     | LAN Settings  |                              |                     |                  |         |        |              |
|                     | Services  | New Wi-Fi passphrase:        | Enter a ner         | w passphrase     |         |        |              |
| 0                   | Security  | Confirm Wi-Fi<br>passphrase: | Confirm th          | e passphrase     |         |        |              |
| ¢                   | System  |                              | Broadcas            | t SSID           |         |        |              |
| ٥                   | Support & Updates   | Signal strength (%):         | 25                  | 50               | 75      | 100    |              |
|                     |   | Frequency band:              | ✓ WebUI av<br>5 GHz | ailable via Wi-F | 1       | ¥      |              |
|                     |   | Channel:                     | 36                  |                  |         | ¥      |              |
|                     |   |                              | ✓ Sufficient        | bandwidth ava    | ilable. |        |              |
|                     |   | SSID:                        | ClickShare          | -1872115810      |         |        |              |
|                     |   | MAC address:                 | 28:24:FF:46:7       | 77:B6            |         |        |              |
| To u<br><u>Clic</u> | ipdate basic settings, run the<br>kShare Configuration Wizard | IP Settings                  |                     |                  |         |        |              |
| © 2                 | 019, Barco. All rights reserved.                              | IP address:                  | 192.168.2.          | 1                |         |        |              |
| Bf                  |   | Subnet mask:                 | 255.255.25          | 55.0             |         |        |              |
| lma                 | ge 6–18 Wi-Fi settings,                                       | edit                         |                     |                  |         |        |              |



Changing the IP address will require a repairing of the Buttons used with this Base Unit.

#### Change operational mode

- 1. Log in to the Configurator.
- 2. Click Wi-Fi & Network → Wi-Fi Settings.
- 3. Click Edit settings.
- 4. Click on the drop down box next to Operational Mode and select the desired mode.

The following options are possible:

- Access Point: continue with the next blocks in this topic.
- Wireless Client (only for CSE-200+)
- Off

#### About frequency band & channel selection

In an ideal setup, overlapping channels should not be used for two ClickShare Base Units within range of each other. As the channels in the 2.4 GHz band overlap with each other, best practice is to use channels 1, 6 and 11 on a single floor. On floors above and below, the channel pattern will be shifted to avoid overlap between floors, e.g. by placing channel 6 at the center of the illustrated pattern.



Image 6–19

To limit the effect of overlapping networks, it is highly recommended to reduce the signal strenght (standard range of about 30m) of the ClickShare Base Units. Reducing the signal strenght to its minimal value will reduce the actual range of the ClickShare to about 10m. By doing so, the size of coverage overlapping area will shrink and the risk for quality degradation will decrease or even disappear.

The 5 GHz channels do not overlap with each other and are less used by non-Wi-Fi devices than the 2.4 GHz channels. Moreover, 5 GHz signals are more rapidly damped than 2.4 GHz signals. Therefore, the use of a 5 GHz channel is recommended. This will limit the impact of a ClickShare system on other installed ClickShare units and on other WLAN users.

#### Frequency band & channel selection

1. Select the wireless connection channel by clicking on the drop down box and selecting the desired channel.

The channels available in the list vary according to the regional version of your Base Unit. Re-pairing the Buttons is not required when changing the frequency band or wireless connection channel.

Ideally, the ClickShare channel is selected after conducting a wireless site survey. A site survey maps out the sources of interference and the active RF systems. There are several Wi-Fi survey tools available on the market. Based on the results from a site survey, the least occupied channel can be found and selected for each meeting room.

2. Select the wireless connection frequency band: 2.4 GHz or 5 GHz by clicking on the drop down box and selecting the correct band.

Below the channel selection pane, an indication is given of the available bandwidth of the current channel. To see if sufficient bandwidth is available in a different channel, select the channel in the drop down and save the changes. The page will reload with the new settings and an indication of the channel fit will be given after approximately 1 minute. There is no need to reload the page to see the result.

The channels available in the list vary according to the regional version of your Base Unit. Re-pairing the Buttons is not required when changing the frequency band or wireless connection channel.

When Intense use, change to another Wi-Fi channel is displayed, change to another channel. The page will reload after approximately 1 minute.

#### SSID & passphrase

1. Enter a public name (SSID) for the wireless network.

The default SSID is ClickShare-<serial number Base Unit>.

- 2. If you want to broadcast this SSID, check the checkbox before Enable SSID broadcast.
- 3. Enter a new Wi-Fi passphrase and confirm that passphrase.



**CAUTION:** It is strongly recommended to change the Wi-Fi passphrase on first use to prevent anyone else accessing the Wi-Fi network.

#### Signal strength

1. Select the Signal Strength. Click on the slider and reduce the broadcasted power (signal strength) until the desired strength is obtained.



*Note:* Too low power and interference by others might lead to connection issues. If so, increase again the signal strength until the issues are solved.

By default the strength is set to 100%.

Reducing the signal strength limits the effect of overlapping networks in the 2.4 GHz channels. Not necessary for the 5 GHz channels as their is no overlap.

#### ClickShare Configurator (WebUI) access via Wi-Fi

1. To allow access to the configurator via Wi-Fi, check the check box in front of *WebUI available via Wi-Fi*.

Checked: Configurator accessible via Wi-Fi.

Not checked: access to the configurator via Wi-Fi is blocked.

#### IP address & subnet mask

- 1. Log in to the Configurator.
- 2. Click Wi-Fi & Network → Wi-Fi Settings.
- To change the IP address or subnet mask, click in the input field and enter the 4 octets of the new IP address or subnet mask.
  - Note: This must NOT be 0.0.0.0 for static IP-Address assignment.

## 6.11 LAN settings

#### About LAN network settings

A network connection can be configured through DHCP or by manually entering a fixed IP address.

#### DHCP



Dynamic host configuration protocol. DHCP is a communications protocol that lets network administrators manage centrally and automate the assignment of IP addresses in an organization's network. Using the Internet Protocol, each machine that can connect to the Internet needs a unique IP address. When an organization sets up its computer users with a connection to the Internet, an IP address must be assigned to each machine. Without DHCP, the IP address must be entered manually at each computer and, if computers move to another location in another part of the network, a new IP address must be entered. DHCP lets a network administrator supervise and distribute IP addresses from a central point and automatically sends a new IP address when a computer is plugged into a different place in the network.

#### Hostname & method

- 1. Log in to the Configurator.
- 2. Click Wi-Fi & Network → LAN Settings.
| *                            | Personalisation  | 奈 LAN Setting                   | S                           | Discard changes | Save changes |
|------------------------------|--|---------------------------------|-----------------------------|-----------------|--------------|
| Ţ                            | Display & Audio  |                                 |                             |                 |              |
| ¢                            | Wi-Fi & Network  | LAN Hostname Settings           |                             |                 |              |
|                              | Wi-Fi Settings   | Hostname:                       | ClickShare-Malta            |                 |              |
|                              | LAN Settings   |                                 |                             |                 |              |
|                              | Network Integration  | Primary Interface               |                             |                 |              |
|                              | Services   |                                 |                             |                 |              |
| Ø                            | Security   | Method:                         | Automatic (DHCP)            | Ŧ               |              |
| ¢                            | System   | IP address:                     | 10.201.114.70               |                 |              |
| ٢                            | Support & Updates  | Subnet mask:                    | 255.255.255.192             |                 |              |
|                              |  | Default gateway:                | 10.201.114.65               |                 |              |
|                              |  | MAC address:                    | 00:01:29:75:11:74           |                 |              |
|                              |  | DNS servers:                    | 10.197.192.11,10.193.251.11 |                 |              |
|                              |  | Wired Authentication<br>Status: | Disabled state.             |                 |              |
| To u<br><u>Click</u><br>© 20 | pdate basic settings, run the<br><u>Share Configuration Wizard</u><br>)19, Barco. All rights reserved. | LAN Proxy Settings              | Setup wired authentication  |                 |              |
| Bf                           | ARCO-  |                                 | Use a proxy server          |                 |              |

Image 6–20 LAN settings

3. Click in the input field next to Hostname and enter a host name for the Base Unit.

The default host name is ClickShare-<serial number Base Unit>.

4. To select the method, click on the drop down box next to Method and select the Automatic (DHCP) or Manual.

When Automatic (DHCP) is selected, the IP address, subnet mask and default gateway fields are grayed out but the currently used settings are filled out.

5. Click Save changes to apply the settings.

#### Manual (fixed) IP address

1. Click on the drop down box next to *Method* and select *Manual*.

The IP address, subnet and gateway input fields are activated.

2. Click in the input field of the IP address and fill out the 4 octets.

Note: This must NOT be 0.0.0.0.

Note: An address contains 4 octets with a maximum value of 255.

This must NOT be 0.0.0.0 for static IP-Address assignment

- 3. Click in the Subnet mask input fields and fill out the 4 octets as appropriate for the local subnet.
- Click in the *Default Gateway* input fields and fill out the 4 octets. Set the Default-Gateway to the IP-Address of the router (MUST be on the local subnet!).



If there is no router on the local subnet then just set this field to any IP-Address on the subnet.

- 5. Click in the DNS Servers input field and fill out the preferred DNS servers (maximum 5) in a comma separated list.
- 6. Click Save changes to apply the settings.



Do not use IP address 192.168.2.x for a Subnet mask 255.255.255.0 and IP address 192.168.x.x for a Subnet mask 255.255.0.0

#### Use a proxy server

This setting is important for the auto-update feature of the Base Unit, which require internet access.

1. Check the check box next to Use a proxy server.

|                            | <ul> <li>Use a proxy server</li> </ul> |
|----------------------------|--|
| Server address:            |  |
| Server port<br>(optional): |  |
| User name<br>(optional):   |  |
| Password<br>(optional):    | Enter a password                       |

Image 6-21 Proxy settings

The proxy settings become available.

- Enter the proxy server address. Enter the IP address or hostname.
   Some proxy servers need a port number, user name and password, for others is this optional.
- 3. Optionally, enter the used server port.
- **4.** Optionally, enter the user name.
- **5.** Optionally, enter the password.
- 6. Click Save changes to apply the settings.

## 6.12 LAN Settings, Wired Authentication

#### How to setup

1. Click on Setup wired authentication....

| *                   | Personalisation  | 穼 LAN Setting                   | 5                           | Discard changes | Save changes |
|---------------------|--|---------------------------------|-----------------------------|-----------------|--------------|
| Ţ                   | Display & Audio  |                                 |                             |                 |              |
| Ş                   | Wi-Fi & Network  | LAN Hostname Settings           |                             |                 |              |
|                     | Wi-Fi Settings   | Hostname:                       | ClickShare-Malta            |                 |              |
|                     | LAN Settings   |                                 |                             |                 |              |
|                     | Network Integration  | Primary Interface               |                             |                 |              |
|                     | Services   |                                 |                             | _               |              |
| Ø                   | Security   | Method:                         | Automatic (DHCP)            | •               |              |
| ¢                   | System   | IP address:                     | 10.201.114.70               |                 |              |
| ٩                   | Support & Updates  | Subnet mask:                    | 255.255.255.192             |                 |              |
|                     |  | Default gateway:                | 10.201.114.65               |                 |              |
|                     |  | MAC address:                    | 00:01:29:75:11:74           |                 |              |
|                     |  | DNS servers:                    | 10.197.192.11,10.193.251.11 |                 |              |
|                     |  | Wired Authentication<br>Status: | Disabled state.             |                 |              |
|                     |  |                                 | Setup wired authentication  |                 |              |
| To u<br><u>Clic</u> | pdate basic settings, run the<br><u>Share Configuration Wizard</u> | LAN Provy Sottings              |                             |                 |              |
| © 2                 | 019, Barco. All rights reserved.                                   | LAW FIOXY Settings              |                             |                 |              |
| Bf                  | ARCO-  |                                 | Use a proxy server          |                 |              |
| Ima                 | ge 6–22 Wired authenti   | cation                          |                             |                 |              |

The setup wizard starts.

2. Select the authentication method. Click on the drop down and select the desired method.

The following methods are available:

- No authentication: no authentication mechanism will be applied to the wired interface.
- EAP-TLS
- EAP-TTLS
- PEAP

## 6.13 LAN Settings, EAP-TLS security mode

#### About EAP-TLS

EAP-TLS (Transport Layer Security) is an EAP method based on certificates which allows mutual authentication between client and server. It requires a PKI (Public Key Infrastructure) to distribute server and client certificates. For some organizations this might be too big of a hurdle, for those cases EAP-TTLS and PEAP provide good alternatives. Even though a X.509 client certificate is not strictly required by the standard it is mandatory in most implementations including for ClickShare. When implemented using client certificates, EAP-TLS is considered one of the most secure EAP methods. The only minor disadvantage, compared to PEAP and EAP-TTLS, is that the user identity is transmitted in the clear before the actual TLS handshake is performed. EAP-TLS is supported via SCEP or manual certificate upload.

#### How to setup EAP-TLS

1. Select Authentication Mode EAP-TLS.

|                              | ClickShare Wired Authentication Wizard   | 8 |
|------------------------------|--|---|
| Authentication Mode:         | EAP-TLS Y  | ] |
| Domain:                      |  |   |
| Identity:                    |  |   |
|                              |  |   |
| Provide certificate:         | Manually provide Client & CA certificates  |   |
| Upload client certificate:   | Bestand kiezen<br>Allowed file formats: .pfx (PKCS=12), .p12 (Base64 encoded DER). File should at least include the client<br>certificate and corresponding private key. |   |
| Client certificate Password: |  |   |
| Upload CA certificate:       | Bestand kiezen<br>Allowed file formats: .pem, .cer, .crt, .p7b (Base64 encoded DER). File should at least contain the root CA<br>certificate for your domain.            |   |
|                              |  |   |
|                              | Save<br>configuration  |   |

Image 6-23 EAP-TLS

- 2. Fill out the Domain and Identity.
- 3. Select the certification method. Click on the drop down box and select the desired method.
  - Manually provide Client & CA certificates
  - Auto enrollment via SCEP

#### Manually providing certificates

1. Upload client certificate. Click on Choose file and browse to the desired file.

Allowed file formats:

- .pfx (PKCS#12)
- .p12 (Base64 encoded DER)

The should at least include the client certificate and corresponding private key.

- 2. Enter the Client certificate Password.
- 3. Upload CA certificate. Click on Choose file and browse to the desired file.

The following formats are allowed:

- .pem
- .cer
- .crt
- .pb7 (Base64 encoded DER)

File should at least contain the root CA certificate for your domain.

4. Save configuration

#### Using SCEP

The Simple Certificate Enrolment Protocol (SCEP) is a protocol which enables issuing and revoking of certificates in a scalable way. SCEP support is included to allow a quicker and smoother integration of the ClickShare Base Unit and Buttons into the corporate network. Since most companies are using Microsoft Windows Server and its active directory (AD) to manage users and devices our SCEP implementation is specifically targeted at the Network Device Enrolment Service (NDES) which is part of Windows Server 2008 R2 and Windows Server 2012. Initial support for other generic servers is available by extending the possible parameters to use for NDES/SCEP enrolment.

| (                         | lickShare Wired Authentication Wizard | 8                     |
|---------------------------|---------------------------------------|-----------------------|
|                           |                                       |                       |
| Authentication Mode:      | EAP-TLS                               | ¥                     |
| Domain:                   |                                       |                       |
| Identity:                 |                                       |                       |
|                           |                                       |                       |
| Provide certificate:      | Auto enrollment via SCEP              | Ŧ                     |
| SCEP server:              | http://                               | /CertSrv/mscep_admin/ |
| SCEP username:            |                                       |                       |
| SCEP password:            |                                       |                       |
|                           |                                       |                       |
|                           |                                       |                       |
|                           |                                       | $\sim$                |
|                           |                                       | Save<br>configuration |
|                           | BARCO                                 |                       |
| Image 6–24 EAP-TLS — SCEP |                                       |                       |

| SCEP ServerIP/<br>hostname | This is the IP or hostname of the Windows Server in your network running the NDES service. By default HTTP is used.<br>E.g.: http://myserver or http://10.192.5.1   |
|----------------------------|---|
| SCEP User name             | This is a user in your Active Directory which has the required permission to access the NDES service and request the challenge password. To be sure of this, the user should be part of the CA Administrators group (in case of a stand-alone CA) or have enroll permissions on the configured certificate templates. |
| SCEP Password              | The corresponding password for the identity that you are using to authenticate on the corporate network. Per Base Unit, every Button uses the same identity and password to connect to the corporate network.   |

Click on Save configuration to save the settings.

## 6.14 LAN Settings, EAP-TTLS security mode

#### About EAP-TTLS

EAP-TTLS (Tunneled Transport Layer Security) is an EAP implementation by Juniper networks. It is designed to provide authentication that is as strong as EAP-TLS, but it does not require each user to be issued a certificate. Instead, only the authentication servers are issued certificates. User authentication is performed by password, but the password credentials are transported in a securely encrypted tunnel established based upon the server certificates.

User authentication is performed against the same security database that is already in use on the corporate LAN: for example, SQL or LDAP databases, or token systems. Since EAP-TTLS is usually implemented in corporate environments without a client certificate we have not included support for this. If you prefer using client certificates per user we suggest using EAP-TLS.

#### How to setup EAP-TTLS

1. Select Authentication Mode EAP-TTLS.

|                                   | ClickShare Wired Authentication Wizard  | 8 |
|-----------------------------------|---|---|
| Authentication Mode:              | EAP-TTLS •  | ] |
| Domain:                           |   |   |
| Identity:                         |   |   |
| Password:                         |   |   |
| Upload CA certificate (optional): | Bestand klezen<br>Allowed file formats: .pem, .eer, .crt, .p7b (Base64 encoded DER). File should at least contain the root CA<br>certificate for your domain. |   |
|                                   |   |   |
|                                   |   |   |
|                                   |   |   |



Image 6-25 EAP-TTLS

2. Fill out the Domain and Identity.

| Domain   | The company domain for which you are enrolling, should match with the one defined in your Active Directory.                            |
|----------|--|
| Identity | Identity of the user account in the Active Directory which will be used by the ClickShare Buttons to connect to the corporate network. |

3. Enter the Password.

The corresponding password for the identity that you are using to authenticate on the LAN network. Per Base Unit each Button will use the same identity and password to connect to the corporate network.

4. Optionally, upload the CA certificate.

The following formats are allowed:

- .pem
- .cer
- .crt
- .pb7 (Base64 encoded DER)

File should at least contain the root CA certificate for your domain.

5. Click Save configuration.

## 6.15 Services, mobile devices

#### ClickShare app

This function enables the possibility to connect with a mobile device using the ClickShare app to connect to the Base Unit.

It is enabled by default. When the Base Unit is integrated in the corporate network, it may be required to disable content sharing from the ClickShare app.

#### How to enable

**1.** Log in to the *Configurator*.

| ÷                    | Personalisation   | 🛜 Services           |  | Discard changes | Save changes |
|----------------------|---|----------------------|--|-----------------|--------------|
| Ţ                    | Display & Audio   |                      |  |                 |              |
| Ģ                    | Wi-Fi & Network   | Mobile Devices       |  |                 |              |
|                      | Wi-Fi Settings  |                      |  |                 |              |
|                      | LAN Settings  |                      |  |                 |              |
|                      | Network Integration   |                      | Sharing via ClickShare app   |                 |              |
|                      | Services  | Passcode type:       | No passcode  | •               |              |
| 0                    | Security  | ClickShare API       |  |                 |              |
| ¢                    | System  |                      |  |                 |              |
| ٥                    | Support & Updates   |                      | Remote control via API<br>You can change the password for the<br>Passwords section (click here). | API in the      |              |
|                      |   | XMS/CMGS Integration |  |                 |              |
| To u<br><u>Click</u> | pdate basic settings, run the<br>Share Configuration Wizard |                      |  |                 |              |
| © 20                 | 019, Barco. All rights reserved.                            |                      | ✓ Enable   |                 |              |
| BF                   | RCO   | Server:              | 10.200.20.149  |                 |              |
| ma                   | ae 6–26. Services, mobi                                     | e devices            |  |                 |              |

**2.** Click Wi-Fi & Network  $\rightarrow$  Services.

3. To allow sharing content via ClickShare app, check the check box in front of Sharing via ClickShare app.

**4.** To add a passcode, click on the drop down and select the desired passcode.

The following options are possible:

- No passcode
- Numeric passcode
- 5. Click Save changes to apply this setting.

Access via the ClickShare app is activate.

## 6.16 Service, ClickShare API, remote control via API

#### **About API settings**

The API can be enabled or disabled, that means that the access to the unit from an external device can be allowed or can be blocked.

This functions in enabled by default.

#### How to enable

ClickShare API

- 1. Log in to the Configurator.
- **2.** Click Wi-Fi & Network  $\rightarrow$  Services.

| Remote control via API                         |
|--|
| You can change the password for the API in the |
| Passwords section (click here).                |

Image 6–27 ClickShare API setting

3. Check the check box in front of *Remote control via API* to enable this function.

Checked: remote control via API is allowed. A password can be used to protect the access.

Not checked: no remote control via API allowed.

## 6.17 XMS Server Integration

#### About the XMS Server integration

The CS-100, CS-100 HUDDLE Base Unit can be integrated within the company network and controlled via the XMS server application depending on the user rights.

#### How to integrate

- **1.** Log in to the *Configurator*.
- 2. Click Wi-Fi & Network → Services.

| XMS/CMGS Integration |              |
|----------------------|--------------|
|                      | Enable       |
| Server:              | 10.200.20.59 |

Image 6–28 XMS Server integration

- 3. Click in the XMS Server input field and enter the IP address or hostname of the XMS server.
- 4. Click Save changes to apply the settings.

## 6.18 Services, SNMP

#### About SNMP

Simple Network Management Protocol (SNMP) is an internet standard protocol for collecting and organizing information about managed devices on IP networks and for modifying that information to change device behaviour. In general a SNMP management suite (running on a server) communicates with an SNMP agent (running on the device). The SNMP agent collects and exposes device information in the form of variables according a MIB (Management Information Base). SNMP management suites will be able to approach ClickShare devices via SNMP protocol for requesting device information.

SNMPv3 is supported.

#### How to enable

- 1. Log in to the Configurator.
- **2.** Click Wi-Fi & Network  $\rightarrow$  Services.
- 3. Scroll to SNMP.

| SNMP              |                          |
|-------------------|--------------------------|
|                   | ✓ Enable                 |
| Engine ID:        | 0x80001c90030004A50F503D |
|                   | ✓ Use default Engine ID  |
| SNMP Manager:     | snmpnmanager             |
| Username:         | someone                  |
| New password:     | Enter a new password     |
| Confirm password: | Confirm the password     |

Image 6-29 Service, SNMP

**4.** Check the check box in front of *Enable*. The configuration fields become available.

#### How to configure

- 1. When using the default *Engine ID*, make sure the check box before *Use default Engine ID* is checked. The default engine ID is a combination of the Barco Enterprise Number with the MAC-address (eth0).
- 2. Fill out the SNMP Manager address.

That is the host address which will receive the TRAP events/messages. Possible traps can be:

- Alarm CPU temperature trap which indicates that CPU temperature exceeds the threshold.
- Alarm Case Fan Speed trap which indicates the case fan is spinning too slow.
- Alarm Process Not Running trap which indicates one of the monitored processes is not running.
- 3. Enter the Username.
- 4. Enter a new password and confirm that password.

## 6.19 Services, Remote Button Pairing

#### About remote Button pairing

When using ClickShare Button Manager, a stand alone software application on your computer, you can manage your Buttons on most of the types of ClickShare Base Units. Your computer can pair up to four Buttons at once with a known Base Unit. It is not necessary anymore to physically connect the Button with the Base Unit to pair it. This functionality makes it easy to use any Button with any Base Unit. Before you can use the ClickShare Button Manager a password must be configured on each Base Unit.

#### How to setup

- 1. Log in to the Configurator.
- 2. Click Wi-Fi & Network → Services.
- 3. Scroll to Remote Button Pairing.

|          | <ul> <li>Enable remote Button pairing</li> </ul> |
|----------|--|
| Password | Enter a password                                 |

Image 6–30 Service, Remote Button pairing

4. Check the checkbox in front of Enable remote Button pairing.

Checked: remote Button pairing is activated. A password should be entered to start the remote pairing from the Button Manager.

Not checked: remote Button pairing is deactivated.

- 5. Click in the input field next to Password and enter a password.
- 6. Click Save changes to apply the settings.

## 6.20 Security, security level

#### About security levels

For the use of the ClickShare system, a security level can be set. By default, level 1 is activated. A security level is a predefined set of settings which are automatically set when a level is selected.

Level 1 : offers support for normal day-to-day operations in any organization.

Level 1 contains the standard security options and encryption of audio and video data.

The standard security options are:

- · PIN code activation for mobile apps and Buttons,
- · ClickShare Configurator (WebUI) access via HTTPS with login management,
- no wireless ClickShare Configurator (WebUI) access,
- SSID of Wi-Fi network is hidden.

Level 2 : this level offers a higher degree of security, fit for organizations that are more sensitive to security matters.

Level 2 contains the level 1 security and a mandatory PIN code for mobile devices. Alphanumeric PIN codes for mobile apps and Buttons and the Buttons require a certificate for pairing.

Level 3 : this level is used for organizations that have extremely strict requirements with regards to security.

Level 3 contains the level 2 security extended with blocking of mobile apps, downgrading firmware not possible and no wireless access to the Configurator (WebUI).

When a security level is set, the individual items included in that security level can be changed using the individual item in the Configurator. When changing an individual item the security level indication will be adapted accordingly, but no other settings will be changed automatically.

E.g. when level 3 is set and you change mobile app blocking to allowed, then the security level indication will change to level 2. But all other items initially in level 3 remains in the level 3 state.



To reset your individual changes, select the desired security level and click Save changes.



Changing the security level will require a re-pairing of the Buttons.

Changing the security level from 1 to a higher level will change the compatibility setting for Buttons with certificate (R9861006D01). They cannot re-pair as long as the security setting is higher than level 1.

#### How to set the security level

- 1. Log in to the Configurator.
- 2. Click Security → Security Level.

| ÷   | Personalisation   | 😯 Security Level   |                 |                |              |
|-----|-------------------|--|-----------------|----------------|--------------|
| Q   | Display & Audio   |  |                 |                |              |
| (1: | Wi-Fi & Network   |  | $\bigcirc$      | 2              | 3            |
| 0   | Security          | Activate passcode for mobile apps & Buttons  | تے<br>*         | ~              | ~            |
|     | Security Level    | Web UI: HTTPS, Log-in management, disable wireless access  | ~               | ~              | ~            |
|     | Passwords         | Hide the SSID of the Wi-Fi network   | ~               | ~              | ~            |
| ¢   | System            | Mandatory passcode for mobile apps & services <sup>2</sup>   |                 | ~              | N/A          |
|     |                   | Mobile apps & services are blocked   |                 |                | ~            |
| Φ   | Support & Updates | Firmware downgrade not possible  |                 |                | ~            |
|     |                   | No wireless access to Web UI   |                 |                | ~            |
|     |                   | No remote Button pairing support   |                 |                | ~            |
|     |                   | Remarks:<br><sup>1</sup> Changing the security level will require Button re-pairing.<br><sup>2</sup> Google Cast does not support a passcode. You can disable Google C<br>here). | Tast through th | he Services se | ction (click |

Image 6–31 Security levels

- 3. Select the desired security level icon.
- 4. Click Save changes to apply the setting.

## 6.21 Security, passwords

#### About passwords

To access the ClickShare Configurator (WebUI) a user name and password is needed. That password can be changed at any time to protect the *ClickShare Configuration* settings.

The ClickShare API access is password protected. That password can be changed in the ClickShare Configurator.

#### Changing the ClickShare Configurator password

- 1. Log in to the Configurator.
- **2.** Click Security  $\rightarrow$  Passwords.

| Personalisation          | Passwords               |   | Discard changes | Save changes |
|--------------------------|-------------------------|---|-----------------|--------------|
| 🖵 Display & Audio        |                         |   |                 |              |
| 🗢 Wi-Fi & Network        | WebUI Password          |   |                 |              |
| Security                 | Old password:           | Enter your old password   |                 |              |
| Security Level Passwords | New password:           | Enter a new password  |                 |              |
| 🌣 System                 | Confirm password:       | Confirm the password  |                 |              |
| Support & Updates        | ClickShare API Password |   |                 |              |
|                          | New password:           | Enter a new password  |                 |              |
|                          | Confirm password:       | Confirm the password  |                 |              |
|                          | HTTP Encryption         |   |                 |              |
|                          | HTTP Encryption:        | HTTP communication is currently encryp<br>self-signed certificate.<br>Setup HTTP encryption | ted using a     |              |

Image 6–32 Passwords

- 3. Click in the WebUI Password pane in the input field next to Old password and enter the old password.
- 4. Click in the input field next to New password and enter a new password.
- 5. Click in the input field next to Confirm password and enter the new password again.
- 6. Click Save changes to apply.

#### Changing the ClickShare API Password

- 1. Log in to the Configurator.
- **2.** Click Security  $\rightarrow$  Passwords.
- Click in the ClickShare API Password pane in the input field next to New password and enter the new password.
- 4. Click in the input field next to Confirm password and enter the new password again.
- 5. Click Save changes to apply.

## 6.22 Security, HTTP Encryption

#### About HTTP encryption

Custom certificates for HTTPS can be uploaded to the ClickShare Base Unit. Custom certificates can as such replace the default self-signed ClickShare certificates for better compliance with company policies and have the advantage that privacy errors when browsing to the ClickShare Configurator can be avoided.

#### How to create a custom certificate

- 1. Log in to the Configurator.
- **2.** Click Security  $\rightarrow$  Passwords and scroll to HTTP Encryption.
- 3. Click Setup HTTP encryption....

|                          | Passwords               |   |                 |              |
|--------------------------|-------------------------|---|-----------------|--------------|
| Personalisation          |                         |   | Discard changes | Save changes |
| 🖵 Display & Audio        |                         |   |                 |              |
| 🗢 Wi-Fi & Network        | WebUI Password          |   |                 |              |
| Security                 | Old password:           | Enter your old password   |                 |              |
| Security Level Passwords | New password:           | Enter a new password  |                 |              |
| System                   | Confirm password:       | Confirm the password  |                 |              |
| Support & Updates        | ClickShare API Password |   |                 |              |
|                          | New password:           | Enter a new password  |                 |              |
|                          | Confirm password:       | Confirm the password  |                 |              |
|                          | HTTP Encryption         |   |                 |              |
|                          |                         | HTTP communication is currently encrypted<br>self-signed certificate. | using a         |              |
|                          | HTTP Encryption:        | Setup HTTP encryption   |                 |              |

Image 6-33 HTTP Encryption

4. Choose the HTTP Encryption Mode. Check the corresponding radio button.

#### Choose HTTP Encryption Mode

Upload Certificate
 Create Certificate Signing Request
 Generate ClickShare Self Signed Certificate

Image 6-34 HTTP encryption mode

The following modes are possible:

- Upload Certificates
- Create Certificate Signing Request
- Generate ClickShare Self Signed Certificate
- 5. To create a certificate signing request, check the corresponding radio button and click Next (right arrow).
- 6. Enter the necessary details to create a Certificate Signing Request.

#### Create Certificate Signing Request

| Domain Name:      | Enter a domain name              |
|-------------------|----------------------------------|
| Common Name:      | ClickShare-Iceland-CSE-800.      |
| Organization:     | Optional enter organization      |
| Department:       | Optional enter department        |
| City:             | Optional enter city              |
| State / Province: | Optional enter state or province |
| Country:          | Optional enter country           |

Image 6–35 Certificate signing request

The following items are possible:

- · Domain name.
- Organization.
- Department.
- City.
- State / Province
- Country
- 7. Click Next (right arrow)

A CRS is created and can be downloaded.

8. Click Download CSR.

#### Upload a certificate

- 1. Click Security → Passwords and scroll to HTTP Encryption.
- 2. Click Setup HTTP encryption....
- 3. Choose Upload Certificate.

#### Upload certificate

| Passphrase:         | Enter your passphrase   |  |
|---------------------|---|--|
| Upload certificate: | Upload certificate  |  |
|                     | Allowed file formats:<br>.pfx/.p12 (PKC5#12)<br>.pem (Base64 encoded) |  |

Image 6–36

The Upload certificate window opens.

4. Enter your passphrase and click Upload certificate... .

A browse window opens.

5. Browse to the certificate file and click **Open**.

A certificate can have the following formats:

- .pfx/.p12 (PKC#12)
- .pem (Base64 encoded)

6. Click Finish configuration.

## 6.23 Status information Base Unit

#### **Status information**

The following information can be found:

- · Model information, name and part number
- Serial number
- Firmware version
- First used
- Last used
- Current uptime: time since last startup
- Lifetime uptime: time used since first startup
- Overall status

#### **Base Unit restart**

- 1. Log in to the Configurator.
- **2.** Click Support  $\rightarrow$  Base Unit Status.

| +    | Personalisation   | Base Unit Status  |   |  |  |  |  |  |  |
|------|-------------------|-------------------|---|--|--|--|--|--|--|
| Ţ    | Display & Audio   |                   |   |  |  |  |  |  |  |
| ((1- | Wi-Fi & Network   | Model:            | CH-10.0988-1-201                                  |  |  |  |  |  |  |
| 0    | Security          | Product:          | 0.0   |  |  |  |  |  |  |
| 0    | System            | Serial number:    | 100200210   |  |  |  |  |  |  |
|      | Base Unit Status  | Firmware version: | 02.05.91.0002                                     |  |  |  |  |  |  |
|      | Date & Time       |                   |   |  |  |  |  |  |  |
|      | Energy Savers     | First used:       | 2019-09-27T02:48:08                               |  |  |  |  |  |  |
|      | Buttons           | Current uptime:   | 4 days, 16 hours, 15 minutes, 5 seconds           |  |  |  |  |  |  |
| _    | XMS               | Lifetime uptime:  | 3 months, 4 days, 10 hours, 3 minutes, 42 seconds |  |  |  |  |  |  |
| ٢    | Support & Updates |                   |   |  |  |  |  |  |  |
|      |                   | Overall status:   | All processes are running                         |  |  |  |  |  |  |
|      |                   |                   | Restart Base Unit                                 |  |  |  |  |  |  |
|      |                   |                   |   |  |  |  |  |  |  |

Image 6–37

3. To restart the Base Unit, click on Restart Base Unit.

A ClickShare system reboot message with progress bar is displayed while rebooting takes place. When the reboot is finished, a re-login is necessary.

## 6.24 Date & Time setup, manually

#### About Date & Time setup

The date and time can be set manually using the time zone indication or using at least one NTP servers.

#### How to setup

- 1. Log in to the Configurator.
- **2.** Click System  $\rightarrow$  Date & Time.

| +    | Personalisation   | 🗘 Date & Tir          | Discard changes                       | Save changes |  |
|------|-------------------|-----------------------|---------------------------------------|--------------|--|
| Ţ    | Display & Audio   |                       |                                       |              |  |
| ((t- | Wi-Fi & Network   | Current time:         | Mon, Sep 7, 2020 8:57 AM UTC (+00:00) |              |  |
| 0    | Security          | Time zone:            | Please select a time zone             | ~            |  |
| ¢    | System            | Mode for setting date | Set date and time manually            |              |  |
|      | Base Unit Status  | and time:             | ○ Use NTP                             |              |  |
|      | Date & Time       | Date:                 | 2020-09-07                            |              |  |
|      | Energy Savers     | Time                  | 9:57:40                               |              |  |
|      | Buttons           | nine.                 | 0.37.49                               |              |  |
|      | XMS               |                       |                                       |              |  |
| ٥    | Support & Updates |                       |                                       |              |  |

Image 6-38 Manual time & date update

The current time is indicated next to Current time.

- 3. Select your time zone. Click on the drop down box next to *Time zone* and select the corresponding time zone.
- 4. Check the radio button in front of Set time and date manually.
- 5. To change the date, click in the input field next to Date.

A calendar window opens. The current date is indicated with a red background.

| ** | P  | November 2015 |    |    |    |    | t  |
|----|----|---------------|----|----|----|----|----|
| Su | Мо | Tu            | We | Th | Fr | Sa |    |
| 25 | 26 | 27            | 28 | 29 | 30 | 31 |    |
| 1  | 2  | 3             | 4  | 5  | 6  | 7  |    |
| 8  | 9  | 10            | 11 | 12 | 13 | 14 | n, |
| 15 | 16 | 17            | 18 | 19 | 20 | 21 |    |
| 22 | 23 | 24            | 25 | 26 | 27 | 28 |    |
| 29 | 30 | 1             | 2  | 3  | 4  | 5  |    |

Image 6–39 Date selection

6. To change the month, click on the left or right arrows next the month name until the desired month and year are obtained.

Click on a number in the number field to setup the day.

7. To change the time, click in the time field next to Time.

A window with 3 scroll counters open.

| ^     | ^    |     | ^  |
|-------|------|-----|----|
| 15    | : 45 | : 0 | 01 |
| *     | ~    | •   | ~  |
| 15:45 | :01  |     |    |

Image 6-40 Time setup

- 8. Click on the up down arrow of each scroll counter until the correct hour, minutes and seconds are obtained.
- 9. Click Save changes to apply.

## 6.25 Date & Time setup, time server

#### About using NTP server

The clock is continuously synchronized with an external time server and the deviation is in the order of milliseconds. Extra time servers can be added.

As long as there is no synchronization with a time server the status is indicated as disabled.

#### How to setup

- 1. Log in to the Configurator.
- **2.** Click System  $\rightarrow$  Date & Time.

| *    | Personalisation   | 🗘 Date & Time         |  | Discard changes | Save changes |
|------|-------------------|-----------------------|--|-----------------|--------------|
| Ţ    | Display & Audio   |                       |  |                 |              |
| ((1- | Wi-Fi & Network   | Current time:         | Mon, Sep 7, 2020 9:22 AM UTC (+00:00)          |                 |              |
| 0    | Security          | Time zone:            | Please select a time zone                      | ~               |              |
| ¢    | System            | Mode for setting date | <ul> <li>Set date and time manually</li> </ul> |                 |              |
|      | Base Unit Status  | and time:             | Use NTP  |                 |              |
|      | Date & Time       | Status:               | <b>O</b> isabled                               |                 |              |
|      | Energy Savers     | NTP servers:          | nto barco com                                  |                 |              |
|      | Buttons           |                       | Enter a comma-separated list of at most i      |                 |              |
|      | XMS               |                       | servers, in order of precedence.               |                 |              |
| ٥    | Support & Updates |                       |  |                 |              |

Image 6-41 Time server setup

The current time is indicated next to Current time.

- 3. Check the radio button next Use NTP.
- Enter a NTP server address next to NTP servers. Enter the IP address or server name.
   Note: Multiple servers (maximum 5) can be added, separated by a comma.
- 5. Click Save changes to apply.

A synchronization with the NTP server takes place. The status field indicates the progress.

## 6.26 Energy savers

#### About standby

**Standby after (minutes)**: If there is no client connection detected during the standby timeout period, the Base Unit will enter the selected standby mode.

Default setting: Time to standby: 10 min, the Base Unit will enter the Eco standby mode.

#### Eco standby

When the Base Unit enters ECO standby mode, it will disable the HDMI output signal and go in low power mode. The Base Unit's LEDs will be breathing white to indicate the ECO standby mode.

Power consumption in Eco standby: 2.6W

The Base Unit will wake up with one of the following actions:

- · Button or app connecting with the Base Unit
- Press the standby button on the Base Unit
- "Wake up" signal over the network
- · Pairing a Button on the Base Unit's USB port
- Detection of display hot plug

#### Deep standby

When the Base Unit goes in Deep standby mode, it will shut down all processes, including the Wi-Fi access point and the (secondary) LAN connection.

For devices with two LAN interfaces (e.g. CSE-800), when there is an active network connected to the primary LAN connection and Corporate network is enabled, the primary LAN interface will remain active and the Base Unit's LEDs will be breathing white to indicate this standby mode. Otherwise, The Base Unit's LEDs will be dark.

Power consumption in Deep standby: 0.4W

The Base Unit will wake up when the standby button on the Base Unit is pressed, or

when the primary LAN interface remains active, a detection of HDMI input hot plug or Button or app connecting with the Base Unit's primary LAN interface.



#### How to change the display timeout and standby mode

**1.** Log in to the *Configurator*.

- 2. Click System → Energy Savers.
- To set a display time out, move the slider to the left or to the right until the desired standby timeout is reached.
- 4. To select a standby mode, select the radio button before *Eco standby* or *Deep standby*.

## 6.27 Buttons

#### About Buttons

The Button page indicates to which Base Unit the Buttons are connected. It indicates also the current state.

All Buttons used with the Base Unit are indicated in the Buttons List. The list contains the state, the signal strength, the serial number, the firmware version, the number of connections and last connection.

It is possible to update the software of the Buttons over Wi-Fi.

#### To edit the settings

- 1. Log in to the *Configurator*.
- Click System → Buttons.

| *    | Personalisation                 | Ф В                                    | uttons                              | S                |                   |                 |                           | Edit s     | ettings           |
|------|---------------------------------|--|-------------------------------------|------------------|-------------------|-----------------|---------------------------|------------|-------------------|
| Ţ    | Display & Audio                 |  |                                     |                  |                   |                 |                           |            |                   |
| ((1: | Wi-Fi & Network                 | Button                                 | Buttons connect to: Home Sweet Home |                  |                   |                 |                           |            |                   |
| Ø    | Security                        | current state. composition of funning, |                                     |                  |                   |                 |                           |            |                   |
| ¢    | System                          | Select all                             | Select                              | none             |                   |                 |                           |            | Remove            |
|      | Base Unit Status<br>Date & Time | Select                                 | Signal                              | Serial<br>number | MAC address       | Article<br>code | Firmware                  | Connection | s Last connection |
|      | Energy Savers                   |  | X                                   | 1872583944       | 88:DA:1A:36:67:6C | R9861500D01     | 02.10.00.2019.06-<br>0006 | 0          | Never             |
| 0    | Support & Updates               |  |                                     |                  |                   |                 |                           |            |                   |

Image 6-43 Buttons overview

The current state is indicated and the list of Buttons is given.

- 3. Click Edit settings.
- Select to which access point the Buttons are connected. Click on the drop down list next to Buttons connect to and select the desired point.

Depending on the selection, internal access point or external access point, settings should be filed out. For an internal access point, no settings are needed.

### 6.28 Buttons, External access point

#### **Overview**

The selection of a security mode for the connection between the Buttons and the corporate access points can be done in the ClickShare Configurator. When configuring the Buttons to connect to an 'External Access Point', the authentication mode can be selected:

- Security mode EAP-TLS, see "Buttons, External access point, mode EAP-TLS", page 92.
- Security mode EAP-TTLS, "Buttons, External access point, mode EAP-TTLS", page 93.
- Security mode PEAP, "Buttons, External access point, mode PEAP", page 94.
- Security mode WPA2-PSK, "Buttons, External access point, mode WPA2-PSK", page 95.

## 6.29 Buttons, External access point, mode EAP-TLS

#### How to fill out

1. Fill out a Corporate SSID.

| Buttons                         |  | Cancel | Save changes |
|---------------------------------|--|--------|--------------|
| Buttons connect to:             | External Access Daint  |        |              |
| buttons connect to.             | External Access Point  |        |              |
| External Access Point Setti     | ngs  |        |              |
| Authentication Mode:            | EAP-TLS ¥  | ]      |              |
| Corporate SSID:                 | Home Sweet Home  |        |              |
| Domain:                         |  |        |              |
| Identity:                       |  |        |              |
| Provide certificate:            | Manually provide Client & CA certificates  |        |              |
| Upload client<br>certificate:   | Bestand kiezen Geen bestand gekozen<br>Allowed file formats: .pfx (PKC5#12), .p12 (Base64 encoded DER<br>File should at least include the client certificate and<br>corresponding private key. | ).     |              |
| Client certificate<br>Password: |  |        |              |
| Upload CA certificate:          | Bestand kiezen<br>Allowed file formats: ,pem, .cer, .crt, .p7b (Base64 encoded DER )<br>File should at least contain the root CA certificate for your<br>domain.                               | l.     |              |

Image 6-44 Buttons, External access point, mode EAP-TLS

The SSID of your corporate wireless infrastructure to which the ClickShare Buttons will connect.

- 2. Fill out the *Domain* and *Identity*.
- 3. Select the certification method. Click on the drop down box and select the desired method.
  - Manually provide Client & CA certificates
  - Auto enrollment via SCEP

#### Manually providing certificates

1. Upload client certificate. Click on Choose file and browse to the desired file.

Allowed file formats:

- .pfx (PKCS#12)
- .p12 (Base64 encoded DER)

The should at least include the client certificate and corresponding private key.

- 2. Enter the Client certificate Password.
- Upload CA certificate. Click on Choose file and browse to the desired file. The following formats are allowed:
  - .pem
  - .cer
  - .crt

.pb7 (Base64 encoded DER)

File should at least contain the root CA certificate for your domain.

4. Save Changes

#### **Using SCEP**

The Simple Certificate Enrolment Protocol (SCEP) is a protocol which enables issuing and revoking of certificates in a scalable way. SCEP support is included to allow a quicker and smoother integration of the ClickShare Base Unit and Buttons into the corporate network. Since most companies are using Microsoft Windows Server and its active directory (AD) to manage users and devices our SCEP implementation is specifically targeted at the Network Device Enrolment Service (NDES) which is part of Windows Server 2008 R2 and Windows Server 2012. Initial support for other generic servers is available by extending the possible parameters to use for NDES/SCEP enrolment.

| Provide certificate: | Auto enrollment via SCEP |                       | Auto enrollment via SCEP |  |
|----------------------|--------------------------|-----------------------|--------------------------|--|
| SCEP server:         | http://                  | /CertSrv/mscep_admin/ |                          |  |
| SCEP username:       |                          |                       |                          |  |
| SCEP password:       |                          |                       |                          |  |

Image 6-45 Buttons, EAP-TLS, SCEP

| SCEP ServerIP/<br>hostname | This is the IP or hostname of the Windows Server in your network running the NDES service. By default HTTP is used.<br>E.g.: http://myserver or http://10.192.5.1   |
|----------------------------|---|
| SCEP User name             | This is a user in your Active Directory which has the required permission to access the NDES service and request the challenge password. To be sure of this, the user should be part of the CA Administrators group (in case of a stand-alone CA) or have enroll permissions on the configured certificate templates. |
| SCEP Password              | The corresponding password for the identity that you are using to authenticate on the corporate network. Per Base Unit, every Button uses the same identity and password to connect to the corporate network.   |

Click **Save Changes** to save the settings.

## 6.30 Buttons, External access point, mode EAP-TTLS

#### How to fill out the settings

1. Fill out a Corporate SSID.

| Buttons                              |   | Cancel | Save changes |
|--------------------------------------|---|--------|--------------|
| Buttons connect to:                  | External Access Point   |        |              |
| External Access Point Settin         | gs  |        |              |
| Authentication Mode:                 | EAP-TTLS .  | •      |              |
| Corporate SSID:                      | Home Sweet Home   |        |              |
| Domain:                              |   |        |              |
| Identity:                            |   |        |              |
| Password:                            |   |        |              |
| Upload CA certificate<br>(optional): | Bestand kiezen Geen bestand gekozen<br>Allowed flie formats: .pem, .cer, .p7b (Base64 encoded DER<br>Flie should at least contain the root CA certificate for your<br>domain. | ).     |              |

Image 6–46 Buttons, External access point, mode EAP-TTLS

The SSID of your corporate wireless infrastructure to which the ClickShare Buttons will connect.

- 2. Fill out the *Domain* and *Identity*.
- 3. Enter a Password.
- **4.** Upload CA certificate. Click on Choose file and browse to the desired file. The following formats are allowed:
  - .pem
  - .cer
  - .crt
  - .pb7 (Base64 encoded DER)

File should at least contain the root CA certificate for your domain.

5. Click Save Changes to save the settings.

## 6.31 Buttons, External access point, mode PEAP

#### How to fill out the settings

1. Fill out a Corporate SSID.

| Buttons                              |   | Cancel | Save changes |
|--------------------------------------|---|--------|--------------|
| Buttons connect to:                  | External Access Point   |        |              |
| External Access Point Setti          | ngs   |        |              |
| Authentication Mode:                 | PEAP  |        |              |
| Corporate SSID:                      | Home Sweet Home   |        |              |
| Domain:                              |   |        |              |
| Identity:                            |   |        |              |
| Password:                            |   |        |              |
| Upload CA certificate<br>(optional): | Bestand kiezen<br>Allowed file formats: .pem, .cer, .crr, .p7b (Base64 encoded DER,<br>File should at least contain the root CA certificate for your<br>domain. | j.     |              |

Image 6-47 Buttons, External access point, mode PEAP

The SSID of your corporate wireless infrastructure to which the ClickShare Buttons will connect.

- 2. Fill out the Domain and Identity.
- 3. Enter a Password.
- **4.** Upload CA certificate. Click on Choose file and browse to the desired file. The following formats are allowed:
  - .pem
  - .cer
  - .crt
  - .pb7 (Base64 encoded DER)

File should at least contain the root CA certificate for your domain.

5. Click Save Changes to save the settings.

## 6.32 Buttons, External access point, mode WPA2-PSK

#### How to fill out the settings

1. Fill out a Corporate SSID.

| Suttons                      |                       | Cancel | Save changes |
|------------------------------|-----------------------|--------|--------------|
| Buttons connect to:          | External Access Point | ¥      |              |
| External Access Point Settin | gs                    |        |              |
| Authentication Mode:         | WPA2-PSK              | ¥      |              |
| Corporate SSID:              | Home Sweet Home       |        |              |
| Passphrase:                  |                       |        |              |

Image 6-48 Buttons, External access point, mode WPA2-PSK

The SSID of your corporate wireless infrastructure to which the ClickShare Buttons will connect.

2. Fill out Passphrase.

The key used in WPA2-PSK to authenticate onto the wireless infrastructure. This can be a string of 64 hexadecimal digits or a passphrase of 8 to 63 printable ASCII characters.

3. Click Save changes to save the settings.

## 6.33 Firmware Update

#### About Firmware update

The firmware of the Base Unit can be updated via the web interface. The latest version of the firmware is available on Barco's website.

| ÷    | Personalisation   | G Firmware Update              |  | Discard changes        | Save changes |
|------|-------------------|--------------------------------|--|------------------------|--------------|
| Q    | Display & Audio   |                                |  |                        |              |
| ((1: | Wi-Fi & Network   | Firmware status                |  |                        |              |
| 0    | Security          |                                | Currently on v01.07.00.develop-0402 and up to  | o date.                |              |
| ¢    | System            | Updates                        |  |                        |              |
| Ф    | Support & Updates |                                |  |                        |              |
|      | Firmware Update   | Automatic Firmware<br>updates: | Automatic  | T                      |              |
|      | Troubleshoot      |                                | We will automatically keep the system up to date<br>Updates are installed when the unit has not been<br>for 8 hours. | e for you.<br>n in use |              |
|      |                   | Manual Firmware Updates        | You can get the latest firmware on   |                        |              |
|      |                   |                                | www.barco.com/clicksharesetup  |                        |              |
|      |                   | Firmware update:               | Firmware update: Upload firmware   |                        |              |
|      |                   |                                | Allow firmware downgrade   |                        |              |

Image 6-49 Firmware update

#### About automatic firmware updates

There are 3 ways to configure automatic updates:

- Automatic: The system will automatically detect firmware updates and install them for you when it's not in use.
- Notify: The system will automatically detect firmware updates and notify you on the web interface dashboard and firmware page. The update can then be initiated via the Support & Updates > Firmware page
- Off: The system will not detect firmware updates and will not notify you.

#### Manual firmware update

- 1. Download the latest version of the firmware from Barco's website.
- 2. Log in to the Configurator.
- **3.** Click Support & Updates  $\rightarrow$  Firmware.
- 4. To upload a firmware version, click on Upload firmware...
  - A browser window opens.
- 5. Browse to the file with the new firmware and click **Open** to start the upload.
  - Note: This should be an .enc file. You might have to unzip the file downloaded from Barco's website.



*Note:* Updating the software to the Base Unit takes several minutes. Progress can be followed on the meeting room display.

The Base Unit software is updated.



If a firmware downgrade is required on the Base Unit, check the check box in front of Allow firmware downgrade.

#### Firmware update without using the Configurator

Next to using the configurator to upgrade the firmware, the following ways are also possible:

 When your device is connected to a network and managed via the XMS (Cloud) management platform, the firmware can be upgrade via this Management solution. For more information on upgrading firmware in this way, consult Barco's web pages on XMS (

https://www.barco.com/en/page/xms-cloud-management-platform).

 Download the firmware on a USB stick and plug in this USB in your device. For more information, see "Firmware update", page 102

## 6.34 Support & Updates, Troubleshoot, log settings

#### About logging

Both Button and Base Unit log data is saved in log files on the Base Unit. These log files can contain debugging information. They can be downloaded on a local computer and cleared on the Base Unit. Debug logging covers only a few hours before it will be overwritten. Therefore, it is important if you discover a problem with your system to download the logging immediately.

#### How to use

- **1.** Log in to the *Configurator*.
- **2.** Click Support & Updates  $\rightarrow$  Troubleshoot.

| Personalisation   | Troubleshoot   |  |  |
|-------------------|--|--|--|
| 🖵 Display & Audio |  |  |  |
| 🗢 Wi-Fi & Network | Logging  |  |  |
| Security          | Enable debug logging   |  |  |
| System            | Download logs  |  |  |
| Support & Updates | Clear logs   |  |  |
| Firmware Update   |  |  |  |
| Troubleshoot      | Factory Defaults   |  |  |
|                   | Reset to factory defaults  |  |  |
|                   | The Base Unit can be reset to factory defaults<br>by plugging in the power cable while pressing<br>the reset button. |  |  |

Image 6–50 Troubleshoot, logging

- 3. To create a debug log, check the check box next to Enable debug logging.
- 4. Reproduce the issue you want to report.
- 5. To download the current log file, click on **Download logs**.

6. To clear the current log file, click Clear logs.

## 6.35 Factory defaults

#### About default settings

The ClickShare Base Unit can return to the factory default settings.

The following settings are the defaults:

- Meeting room identification info is cleared.
- Language is set to English.
- Custom wallpapers are removed and the default wallpaper is restored.
- Standby timer is reset to 10 min.
- Hostname and SSID is set to *clickshare-serialnumber*.
- The SSID is broadcasted
- Wi-Fi password is reset to clickshare.
- The default Wi-Fi channel is set back to frequency 5 GHz, channel 36.
- · The update history is cleared.
- The table with the associated Buttons is cleared.
- The admin password is reset to admin.
- · Debug logging and remote logging are disabled.

Restoring to factory defaults will require a repairing of the Buttons used with this Base Unit and the setup flow has to be redone.

#### How to restore factory defaults

- 1. Log in to the Configurator.
- **2.** Click Support & Updates  $\rightarrow$  Troubleshoot.

| Personalisation              | Troubleshoot   |  |
|------------------------------|--|--|
| 🖵 Display & Audio            |  |  |
| 🗢 Wi-Fi & Network            | Logging  |  |
| Security                     | Enable debug logging   |  |
| System                       | Download logs  |  |
| Support & Updates            | Clear logs   |  |
| Firmware Update Troubleshoot | Factory Defaults   |  |
|                              | Reset to factory defaults  |  |
|                              | The Base Unit can be reset to factory defaults<br>by plugging in the power cable while pressing<br>the reset button. |  |

Image 6-51 Troubleshoot, factory defaults

#### 3. Click Reset to factory defaults.

The following message is displayed: "This action will remove all settings of the Base Unit and replace them with the default settings. Are you sure you want to continue?"

4. If you want to continue, click Yes, remove all settings otherwise click No, I changed my mind.

When yes is clicked, the system starts a reboot.



Alternative way: The Base Unit can be reset to factory defaults by plugging in the power cable while pressing the reset button.

# Firmware updates

## 7.1 Firmware update



#### About Firmware updates

There are different ways to update the Base Unit software:

- via the Configurator, for more information, see "Firmware Update", page 96.
- automatic update when connected to the network together with the central management via XMS solution.
- by copying the software on a USB stick.
- automatic update when connected in network together with the central management via XMS (only for CSE devices). For more information consult the XMS's user guide which can be downloaded from Barco's website (<u>www.barco.com/clickshare</u>).

#### To update the Base Unit software by copying the software on a USB stick

- Download the latest version of the firmware from Barco's website, <u>www.barco.com/clickshare</u>. Click on Support and select the update firmware button of your device type.
- 2. Unzip the zip file.
- 3. Copy the ENC file to a USB stick.

You can have multiple firmwares for multiple device types on the same stick.

- 4. Insert the USB stick into the USB port at the front of the Base Unit.
- 5. Follow the instructions on the meeting room screen.
- 6. When the on-screen message indicates that the process is finished, remove the USB stick. The Base Unit reboots.



## Troubleshooting

## 8.1 Troubleshooting list

#### **Problem solving**

Locate the problem you are experiencing in the table below and apply the solution.

| Problem  | Cause   | Solution  |
|--|---|---|
| Quality of the image on the meeting room display is not satisfactory   | The quality or length of the cable<br>between the Base Unit and the<br>display or the connection between<br>these two.  | <ul><li>Replace the cable.</li><li>Use another cable.</li></ul>   |
| Users have a bad wireless<br>connection. The connection from<br>the Button to the Base Unit keeps<br>falling away. | Wireless congestion   | • Use a Wi-Fi scanner to find a free wireless channel and select it via the web interface. You can use commercial as well as free online tools such as inSSIDer or Xirrus for this.   |
|  | Low signal strength   | <ul> <li>Put the Base Unit closer to the meeting room table.</li> <li>Remove or limit as much as possible all obstructions between the Buttons and the Base Unit.</li> </ul>  |
| Configurator is not accessible   | Browser   | <ul><li>Use another browser (version).</li><li>Check the browser settings.</li></ul>  |
|  | No connection   | <ul> <li>There are three methods to<br/>access the web interface.<br/>Refer to the corresponding<br/>chapter of the documentation.</li> <li>Check the proxy settings</li> </ul>   |
| Users do not get a ClickShare<br>drive when inserting the Button in<br>their laptop.                               | <ul> <li>No automatic refresh of drives</li> <li>Windows tries to assign the<br/>ClickShare drive to an already<br/>reserved drive letter</li> </ul>  | <ul> <li>Refresh your view on the laptop.</li> <li>Use Microsoft Windows Disk Management to assign it to a free drive letter.</li> </ul>  |
|  | Bad connection at USB port on the laptop  | <ul><li>Reconnect to the USB port.</li><li>Try another USB port.</li><li>Reboot the laptop.</li></ul>   |
|  | <ul> <li>Some types of USB devices<br/>might be blocked as a<br/>company policy.</li> <li>USB port settings on the laptop<br/>might limit the usage of high<br/>power USB devices when on<br/>battery power.</li> </ul> | If possible, change the USB port policy on the laptop.  |
| Low video performance  | Laptop performance  | <ul> <li>Lower the screen resolution of the laptop.</li> <li>Disable the hardware acceleration for video.</li> <li>Use only a part of the display to show the video.</li> <li>Right click ClickShare icon in system tray and click on Capture mode to toggle the</li> </ul> |

current setting ...

| Problem  | Cause  | Solution   |
|--|--|--|
|  | Wireless connectivity  | See "Users have bad connectivity"  |
| Video is not shown on screen   | Player uses overlays   | Disable the usage of overlays in the preferences of the video player.  |
| Some programs of Windows are not shown on the display  | Use of overlays, 3D or hardware acceleration in the GPU  | <ul> <li>Disable overlays or hardware acceleration in the GPU.</li> <li>Disable AeroGlass in Windows 7</li> <li>Upgrade the Base Unit to the latest software version.</li> </ul>         |
| When using Windows 7 the<br>following message about the<br>Windows Aero color scheme<br>appears: "Windows has detected<br>your computer's performance is<br>slow. This could be because there<br>are not enough resources to run<br>the Windows Aero color scheme.<br>To improve". | ClickShare uses resources from<br>the GPU. In combination with<br>other programs which do so,<br>Windows 7 sometimes shows this<br>message suggesting to disable<br>Aero to improve the performance<br>of your laptop. | It is safe to ignore this message<br>and choose 'Keep the current<br>color scheme'.  |
| Your screen is not shown on the display when pressing the Button   | You are the second person that wants to share content. Only one screen can appear simultaneously   | Click and hold the button for 2 seconds to use the Show me full screen function.   |
|  | The ClickShare software is not running.  | Go to the ClickShare drive and run the software.   |
| Your content is removed from the display and the LEDs on the button are blinking white   | Connection to the Base Unit is lost.   | ClickShare tries to restore the<br>connection automatically. If it fails,<br>the LEDs on the Button start<br>blinking red.<br>Unplug the button from your laptop<br>and try a new button |
| Nothing is shown on the displays   | The displays are switched off.   | Switch on the displays.  |
| at all.  |  |  |
|  | The display cable is not correctly connected   | Insert the display cable to the display and the Base Unit.   |
|  | The display does not recognize or<br>is not able to display the Base Unit<br>output resolution.  | Change the corresponding setting via the web interface.  |
|  | The Base Unit is in standby mode   | Briefly push the standby button on<br>the Base Unit or insert a button<br>and run the ClickShare software.   |
| Bad Wi-Fi connectivity   | Congestion of the wireless channel   | Use wireless network scan tools to look for free or the least congested channels.  |
|  | Metal cabinets, walls, construction<br>elements, can cause reflections<br>deteriorating the wireless signal.<br>Obstructions between Buttons and<br>Base Unit cause lowering of the                                    | Move the Base Unit to another place in the room.   |
|  | wireless strength and quality.   |  |
|  |  | Avoid placing it inside cabinets,<br>false ceiling, below the table,<br>behind a wall, in another room,  |

#### Troubleshooting

| Problem  | Cause                           | Solution  |
|--|---------------------------------|---|
|  |                                 | Check out the ClickShare White paper on Wi-Fi See <u>www.barco.com/clickshare</u> .                                   |
| Configurator shows error in the processes "Wi-Fi Access Point Daemon" and/or "DHCP Server" | Configuration file is corrupted | In the Configurator, goes to<br>Support & Updates, click on<br>Troubleshoot and press "Reset to<br>factory defaults". |
| ClickShare Base Unit does not start up correctly   | Configuration file is corrupted | In the Configurator, goes to<br>Support & Updates, click on<br>Troubleshoot and press "Reset to<br>factory defaults". |
| No LAN connection with the Base<br>Unit  | Wrong IP address                | IP address is not within your LAN range.  |
|  |                                 | DHCP is not enabled.  |
| No Wi-Fi connection with Base<br>Unit  | SSID not correct                | Enter the correct SSID  |

#### Barco knowledge base and YouTube videos

Go to the product page on Barco's website and select in the right column **Support**. You will get access to Barco's *Knowledge base* and *Latest tutorial videos*. For more YouTube videos, consult <u>https://www.youtube.com/user/barcoTV</u> and select ClickShare.

# Environmental information



## 9.1 Disposal information

#### **Disposal Information**

Waste Electrical and Electronic Equipment



This symbol on the product indicates that, under the European Directive 2012/19/EU governing waste from electrical and electronic equipment, this product must not be disposed of with other municipal waste. Please dispose of your waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources.

For more information about recycling of this product, please contact your local city office or your municipal waste disposal service.

For details, please visit the Barco website at: http://www.barco.com/AboutBarco/weee

#### Disposal of batteries in the product



This product contains batteries covered by the Directive 2006/66/EC which must be collected and disposed of separately from municipal waste.

If the battery contains more than the specified values of lead (Pb), mercury (Hg) or cadmium (Cd), these chemical symbols will appear below the crossed-out wheeled bin symbol.

By participating in separate collection of batteries, you will help to ensure proper disposal and to prevent potential negative effects on the environment and human health.

## 9.2 Rohs compliance

#### **Turkey RoHS compliance**



Türkiye Cumhuriyeti: AEEE Yönetmeliğine Uygundur.

[Republic of Turkey: In conformity with the WEEE Regulation]

#### 中国大陆 RoHS – Chinese Mainland RoHS

根据中国大陆《电器电子产品有害物质限制使用管理办法》(也称为中国大陆RoHS),以下部分列出了 Barco产品中可能包含的有毒和/或有害物质的名称和含量。中国大陆RoHS指令包含在中国信息产业部MCV标 准:"电子信息产品中有毒物质的限量要求"中。

According to the "Management Methods for the Restriction of the Use of Hazardous Substances in Electrical and Electronic Products" (Also called RoHS of Chinese Mainland), the table below lists the names and contents of toxic and/or hazardous substances that Barco's product may contain. The RoHS of Chinese Mainland is included in the MCV standard of the Ministry of Information Industry of China, in the section "Limit Requirements of toxic substances in Electronic Information Products".

| 零件项目(名称)       | 有毒有害物质或元素                        |      |      |        |       |        |
|----------------|----------------------------------|------|------|--------|-------|--------|
| Component Name | Hazardous Substances or Elements |      |      |        |       |        |
|                | 铅                                | 汞    | 镉    | 六价铬    | 多溴联苯  | 多溴二苯醚  |
|                | (Pb)                             | (Hg) | (Cd) | (Cr6+) | (PBB) | (PBDE) |
|                |                                  | -    |      | _      | _     | _      |
| 印制电路配件         | Х                                | 0    | Х    | 0      | 0     | 0      |
| Printed Circuit<br>Assemblies<br>电(线)缆 | x | 0 | x | 0 | 0 | 0 |
|--|---|---|---|---|---|---|
| Cables<br>底架                           | x | 0 | x | 0 | 0 | 0 |
| Chassis<br>电源供应器                       | x | 0 | x | 0 | 0 | 0 |
| Power Supply Unit<br>文件说明书             | 0 | 0 | 0 | 0 | 0 | 0 |

Paper Manuals

本表格依据SJ/T 11364的规定编制

This table is prepared in accordance with the provisions of SJ/T 11364.

O: 表示该有毒有害物质在该部件所有均质材料中的含量均在 GB/T 26572 标准规定的限量要求以下.

O: Indicates that this toxic or hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement in GB/T 26572.

X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 标准规定的限量要求.

X: Indicates that this toxic or hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement in GB/T 26572.

在中国大陆销售的相应电子信息产品(EIP)都必须遵照中国大陆《电子电气产品有害物质限制使用标识要 求》标准贴上环保使用期限(EFUP)标签。Barco产品所采用的EFUP标签(请参阅实例,徽标内部的编号使 用于指定产品)基于中国大陆的《电子信息产品环保使用期限通则》标准。

All Electronic Information Products (EIP) that are sold within Chinese Mainland must comply with the "Marking for the restriction of the use of hazardous substances in electrical and electronic product" of Chinese Mainland, marked with the Environmental Friendly Use Period (EFUP) logo. The number inside the EFUP logo that Barco uses (please refer to the photo) is based on the "General guidelines of environment-friendly use period of electronic information products" of Chinese Mainland.



Image 9–1

## 限用物質含有情況標示聲明書 (Declaration of the Presence Condition of the Restricted Substances Marking) — Taiwan RoHS compliance

設備名稱: 影音共享控制中心, 型號(型式): CS-100 Equipment name: wireless presentation system, Type designation: CS-100

|                                   | 限用物質及其化學符號<br>Restricted substances and its chemical symbols |                      |                      |   |  |  |  |
|-----------------------------------|--|----------------------|----------------------|---|--|--|--|
| 單元<br>Unit                        | 鉛<br>Lead<br>(Pb)  | 汞<br>Mercury<br>(Hg) | 鎘<br>Cadmium<br>(Cd) | 六價鉻<br>Hexavalent<br>chromium<br>(Cr6+) | 多溴聯苯<br>Poly-<br>brominat-<br>ed<br>biphenyld<br>(PBB) | 多溴二苯醚<br>Poly-<br>brominated<br>diphenyl<br>ethers<br>(PBDE) |  |
| 電路板<br>Printed Circuit Assemblies | _  | 0                    | _                    | 0                                       | 0  | 0  |  |

| 電(線)纜<br>Cables            | _ | 0 | — | 0 | 0 | 0 |
|----------------------------|---|---|---|---|---|---|
| 機箱<br>Chassis              | — | 0 | _ | 0 | 0 | 0 |
| 電源供應器<br>Power Supply Unit | — | 0 | 0 | 0 | 0 | 0 |

備考1. "超出0.1 wt %"及 "超出0.01 wt %" 係指限用物質之百分比含量超出百分比含量基準值。

Note 1 : "Exceeding 0.1 wt %" and "exceeding 0.01 wt %" indicate that the percentage content of the restricted substance exceeds the reference percentage value of presence condition.

備考2. "〇" 係指該項限用物質之百分比含量未超出百分比含量基準值。

Note 2 : " $\bigcirc$ " indicates that the percentage content of the restricted substance does not exceed the percentage of reference value of presence.

備考3. "—"係指該項限用物質為排除項目。

Note 3 : The "---" indicates that the restricted substance corresponds to the exemption.

## 9.3 Importers contact information

## Contact

To find your local importer, contact Barco directly or one of Barco's regional offices via the contact information given on Barco's web site, <u>www.barco.com</u>.



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