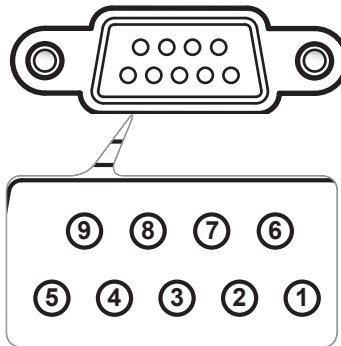


RS232 Commands and Protocol Function List

RS232 Pin Assignments



Pin no.	Spec. (from projector side)
1	N/A
2	RXD
3	TXD
4	N/A
5	GND
6	N/A
7	N/A
8	N/A
9	N/A

Appendices

RS232 Protocol Function List

Baud Rate : 9600
 Data Bits : 8
 Parity : None
 Stop Bits : 1
 Flow Control : None
 UART16550 FIFO: Disable

Projector Return (Pass): P
 Projector Return (Fail): F
 XX=00-99, projector's ID,
 XX=00 is for all projectors
 There is a <CR> after all ASCII commands.
 0D is the HEX code for <CR> in ASCII code.

-	X	X	X	X	X	space	n	CR	
	Projector ID		Command ID				variable	carriage return	
Power/ Re-sync		Function	Cmd/Off			ASCII	Pass	Fail	
						Hex/Hex & 2			
Direct Source Commands		HPM1				m1	P	F	
		VGA Component				m1	P	F	
		Component RCA				m1	P	F	
		HEM2				m1			
Display Mode		Cinema				m1	P	F	
		Film				m1			
		Bright				m2			
		Photo				m3			
		Reference				m4			
		User				m5			
		ISP Day				m7			
		ISP Night				m8			
		3D				m9			
		Brightness				m50 +50	-X021 n	P	F
	Contrast				m50 +50	-X022 n	P	F	
	Sharpness				m0 +15	-X023 n	P	F	
	Tint				m50 +50	-X044 n	P	F	
	Color				m50 +50	-X045 n	P	F	
Color Settings		RGB Gain/Bias	Red Gain			m50 +50	-X045 n		
	Green Gain				m50 +50	-X046 n			
	Blue Gain				m50 +50	-X047 n			
	Red Bias				m50 +50	-X028 n			
	Blue Bias				m50 +50	-X029 n			
		Color Temperature	Reset			m1	-X033 n		
			D50			m1	-X0310 n		
			D65			m2	-X0310 n		
			D93			m4	-X0310 n		
			D63			m5	-X0310 n		
		Color Gamut	Reset			m1	-X0210 n		
			Native			m1	-X0210 n		
			Adobe			m5	-X0211 n		
			D1 P. Gamma			m5	-X0211 n		
			HDTV			m5	-X0211 n		
		CMS	Reset			m1	-X0211 n		
			Red			m1	-X0212 n		
			Green			m2	-X0212 n		
			Blue			m3	-X0212 n		
			Cyan			m4	-X0212 n		
	Yellow				m5	-X0212 n			
	Magenta				m5	-X0212 n			
	x offset		-50 ~ 50			m50 +50	-X0213 n		
	y offset		-50 ~ 50			m50 +50	-X0214 n		
	Brightness		-50 ~ 50			m50 +50	-X0217 n		
	Reset			m1	-X0215 n				
Advanced		Film	Reset			m1	-X035 n	P	F
			Curve Type	Film/Video/Graphics/1/8 1/1.92/0.2/1.2/2/3/2.4/2.5/2.6		m-5 +6	-X0182 n		
			Offset			m5 +5	-X0183 n		
		Video	Reset			m1	-X035 n		
			Curve Type	Film/Video/Graphics/1/8 1/1.92/0.2/1.2/2/3/2.4/2.5/2.6		m-5 +6	-X0184 n		
			Offset			m5 +5	-X0185 n		
		Gamma	Reset			m1	-X035 n		
			Graphics			m3	-X035 n		
			Curve Type	Film/Video/Graphics/1/8 1/1.92/0.2/1.2/2/3/2.4/2.5/2.6		m-5 +6	-X0186 n		
		Standard	Reset			m1	-X035 n		
			Curve Type	Film/Video/Graphics/1/8 1/1.92/0.2/1.2/2/3/2.4/2.5/2.6		m-5 +6	-X0188 n		
			Offset			m5 +5	-X0187 n		
		Color Space	Reset			m1	-X0207 n		
			Auto			m1	-X021 n	P	F
			RGB (0-255)	* RGB (0-255) supports when HDMI is detected		m5	-X0208 n		
	RGB (16 ~ 235)	* RGB (16 ~ 235) supports when HDMI is detected		m5	-X0209 n				
	Noise Reduction	YUV			m0 n 10	-X0186 n	P	F	
		PureMotion	OFF		m2	-X0186 n			
			LOW		m1	-X0180 n			
	PureEngine		HIGH		m2	-X0180 n			
			UltraDetail		m5	-X0180 n			
			ON		m1	-X041 n			
			OFF		m2	-X041 n			
			PureColor		m5	-X042 n			
			1		m1	-X042 n			
			2		m2	-X042 n			
			3		m3	-X042 n			
			4		m4	-X042 n			
			5		m5	-X042 n			
		PureFrame Demo			m1	-X049 n			
	LED Brightness	Power	100%/95%/90%/85%/80%/75%/70%/65%/60%/50%		m0/m1/m2/m3/m4/m5/m6/m7/m8/m9	-X0026 n	P	F	
		DynamicBack 1			m2	-X0181 n	P	F	
		DynamicBack 2			m2	-X0181 n	P	F	
		DynamicBack 3			m3	-X060 n	P	F	
Format		3:1			m1	-X060 n	P	F	
		16:9			m2	-X060 n	P	F	
		LBX	Don't support when Anamorphic lens is fixed		m5	-X060 n	P	F	
		Native	Don't support when Anamorphic lens is motorized or fixed		m5	-X060 n	P	F	
		AutoZIS			m5	-X060 n	P	F	
		AutoZIS_Side	Supporting! When Anamorphic lens is fixed or motor		m1	-X060 n	P	F	
		SuperWide	Don't support when Anamorphic lens is motorized or fixed		m5	-X060 n	P	F	
	Edge masking				m0.5	-X061 n	P	F	

Appendices

	X	X	X	X	X	n	CR			
	Projector ID			Command ID		variable	carriage return			
DISPLAY	Zoom				m0-10	-XX62 n	P	F		
	H Image Shift				m-100 + 100	-XX63 n	P	F		
	V Image Shift				m-100 + 100	-XX64 n	P	F		
	V Keystone				m-30 + 30	-XX66 n	P	F		
		3D->2D	3D / L / R	2D->2D; 3D->3D / 3D->L; 3D->R		m1m2m3	-XX400 n	P	F	
			Auto	Decoding HDMI.3		m0	-XX405 n	P	F	
			SBS	3D timing		m1	-XX405 n	P	F	
			Top and Bottom			m2	-XX405 n	P	F	
			Frame Sequential			m3	-XX405 n	P	F	
			2D->3D			m4	-XX405 n	P	F	
SYSTEM		3D Format			m5	-XX405 n	P	F		
			3D Sync. Invert	On/Off		m0(m1)	-XX231 n			
	Menu Location					m1	-XX72 n	P	F	
		Top Left				m2				
		Top Right				m3				
		Centre				m4				
		Bottom Left								
		Bottom Right								
	LED Hours					m1	-XX108 n	Okxxxx	return LED hour	
	Projection					m1	-XX71 n	P	F	
	Front-Desktop				m2					
	Rear-Desktop				m3					
	Front-Ceiling				m3					
	Rear-Ceiling				m4					
Test Pattern		None / Grid / White Pattern			m0(m1)m2	-XX195 n				
Background Color					m1	-XX194 n	P	F		
	Blue				m2					
	Black				m3					
	Gray				m4					
IR Function		All/None/Top			m0 m1 m2	-XX111 n	P	F		
12V Trigger A		Off/On			m0(m1)	-XX192 n				
12V Trigger B		Off/On/Auto/35/Auto 3D			m0(m1)m2m3	-XX193 n				
	4.3		4.3 check			-XX205 0				
			4.3 uncheck			-XX205 1				
			16:9 check			-XX205 2				
			16:9 uncheck			-XX205 3				
		Letter Box	letter box check			-XX205 4				
			letter box uncheck			-XX205 5				
		Native	native check			-XX205 6				
			native uncheck			-XX205 7				
		Est								
SETUP	Language					m1	-XX70 n	P	F	
		English				m2				
		German				m3				
		French				m4				
		Italian				m5				
		Spanish				m6				
		Portuguese				m7				
		Potah				m8				
		Dutch				m9				
		Swedish				m10				
		Norwegian/Danish				m11				
		Finnish				m12				
		Greek				m13				
		Traditional Chinese				m14				
		Simplified Chinese				m15				
		Japanese				m16				
		Russian				m17				
		Hungarian				m18				
		Czech				m19				
		Arabic				m20				
		Thai				m21				
		Luxembourg				m22				
	Input Source Filters						m1	-XX39 n	P	F
		HDMI 1				m7				
		HDMI 2				m5				
	VGA				m8					
	3 x RCA Component				m10					
	Video				m10 & 2	-XX100 n	P	F		
Source Lock		On/Off			m10 & 2	-XX101 n	P	F		
High Altitude		On/Off			m10 & 2	-XX102 n	P	F		
Information Hole		On/Off			m0-180	-XX106 n	P	F		
Auto Power Off (min)					m1(m0)	-XX61 n				
	Automatic	Enable/Disable			m0-100	-XX73 n	P	F		
	Frequency/Tracking				m-50 + 50	-XX74 n	P	F		
	Phase				m-50 + 50	-XX75 n	P	F		
	H. Position				m-50 + 50	-XX76 n	P	F		
	V. Position				m-50 + 50	-XX78 n	P	F		
	White level				m-50 + 50	-XX200 n				
	Black level				m-50 + 50	-XX201 n				
	Saturation				m-50 + 50	-XX202 n				
	Hue				m-50 + 50	-XX203 n				
	IRE	0 IRE / 7.5 IRE			m1(m0)	-XX204 n				
Reset		Yes			m1	-XX112 n	P	F		
		No			m2					
Information from Projector Automatically when										
Standby Mode					a=0	INFOa				
Warming up					a=1	INFOa				
Cooling Down					a=2	INFOa				
Out of Range					a=3	INFOa				
LED Fail					a=4					
Thermal Switch Error					a=5					
Fan Lock					a=6					
Over Temperature					a=7					
Lamp Hours Running Out					a=8					
READ/Return information from projector										
Information						-XX190 n	Okabbbbbbccdddee			
a = Power State		Off/On			m1					
b = LED Hour					a=01					
c = Input Source Commands		None			bbbbb					
		VGA			c=00					
					c=02					
		Video			c=05					
		HDMI1			c=07					
		HDMI2			c=08					
d = Firmware Version					ddd					
e = Display mode		None			e=0					
		Cinema			e=1					
		Bright			e=2					
		Film			e=11					
		Photo			e=3					
		Reference			e=4					
		User			e=5					
		ISF Day			e=7					
		ISF Night			e=8					
		3D			e=9					
Model Name		Depends			a=0/1/2	-XX151 n	Ok			

Appendices

-	X	X	X	X	X	n	CR
	Projector ID		Command ID		space	variable	carriage return
RS232 Version No.				m=1	-XX152 n	Oka	
		Depends		a=7???			
Input Source Commands		None/VGA/Video/HDMI1/ HDMI2/Component		m=1	-XX121 n	Oka	a=0/21/5/7/8/11
Software Version				m=1	-XX122 n	Oka886	
Display Mode		None/Cinema/Bright/Photo/ Reference/User/ISF Day/ ISF Night/3D/Film		m=1	-XX123 n	Oka	a=0/1/2/3/4/5/7/8/9/11
Power State		ON/Off		m=1	-XX124 n	Oka	a=1/0
Brightness				m=1	-XX125 n	Oka	
Contrast				m=1	-XX126 n	Oka	
Aspect Ratio		4:3/16:9/LBxNative/235/ Auto235_Subtitle		m=1	-XX127 n	Oka	a=1/2/5/6/8/9/11 for 4:3/16:9/LBx/ Native/235/ Auto235_Subtitle
Color Temperature		D50/D65/D70/D75/D83/D99/ Native		m=1	-XX128 n	Oka	a=1/2/3/4/6/8/7
Projection Mode		Front-Desktop Rear-Desktop Front-Ceiling Rear-Ceiling		m=1	-XX129 n	Oka	a=0/1/2/3 for Front- Desktop/Rear-Desktop /Front-Ceiling/Rear- Ceiling
Remote Control							
	Up			m=10	-XX140 n		
	Left			m=11			
	Enter			m=12			
	Right			m=13			
	Down			m=14			
	Menu			m=20			
	Re-sync			m=41			