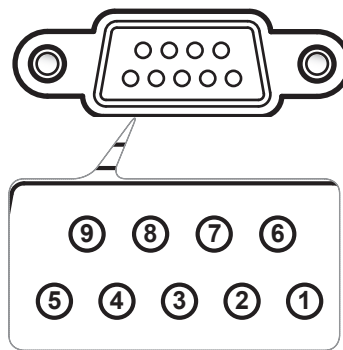


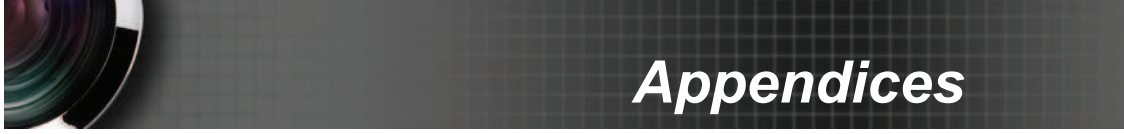
Appendices

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	X	n	CR	
	Projector ID		Command ID		space	variable	carriage return		
Power	Power	On/Off			m=0 & 2	-XX00 n	P	F	
	Re-sync					-XX01 n	P	F	
	Direct Source Commands	MEMI 1				n15	-XX02 n	P	F
		VGA				n16	-XX03 n	P	F
		VGA Component				n17	-XX04 n	P	F
		Video				n18	-XX05 n	P	F
		Component RCA				n19	-XX06 n	P	F
		HDMI 1				n20	-XX07 n	P	F
	Display Mode	MEMI 2				n11	-XX08 n	P	F
		CFRm3				n12	-XX09 n	P	F
Film					n13	-XX10 n	P	F	
Bright					n14	-XX11 n	P	F	
Private					n15	-XX12 n	P	F	
Reference					n16	-XX13 n	P	F	
User					n17	-XX14 n	P	F	
ISP Day					n18	-XX15 n	P	F	
ISP Night					n19	-XX16 n	P	F	
3D					n20	-XX17 n	P	F	
Brightness	Brightness				m=50 +50	-XX21 n	P	F	
	Contrast				m=50 +50	-XX22 n	P	F	
	Sharpness				m=50 +50	-XX23 n	P	F	
	Test				m=50 +50	-XX24 n	P	F	
	Color	RGB Gain/Bias	Red Gain			m=50 +50	-XX25 n	P	F
			Green Gain			m=50 +50	-XX26 n	P	F
			Blue Gain			m=50 +50	-XX27 n	P	F
			Red Bias			m=50 +50	-XX28 n	P	F
			Green Bias			m=50 +50	-XX29 n	P	F
			Blue Bias			m=50 +50	-XX30 n	P	F
Color Settings		Color Temperature	Reset			n11	-XX31 n		
			D00			n12	-XX32 n		
			D05			n13	-XX33 n		
			D15			n14	-XX34 n		
Color Gamut	Name	D00			n15	-XX35 n			
		D05			n16	-XX36 n			
		D15			n17	-XX37 n			
		D30			n18	-XX38 n			
CMS	Red	Reset			n11	-XX39 n			
		SMP1_C			n12	-XX40 n			
		Blue			n13	-XX41 n			
		Green			n14	-XX42 n			
		Cyan			n15	-XX43 n			
		Yellow			n16	-XX44 n			
		Magenta			n17	-XX45 n			
		x offset	-50 - 50			m=50 +50	-XX46 n		
		y offset	-50 - 50			m=50 +50	-XX47 n		
		Brightness	-50 - 50			m=50 +50	-XX48 n		
Advanced	Gamma	Film			n11	-XX49 n	P	F	
		Reset			n12	-XX50 n			
		Curve Type	Film/Video/Graphics 1/8			m=5 + +6	-XX51 n		
		Offset	1/1.92/0.2/1.2/2/3/2.4/2.5/2.6			m=5 + +5	-XX52 n		
		Video				n13	-XX53 n		
		Reset				n14	-XX54 n		
		Curve Type	Film/Video/Graphics 1/8			m=5 + +6	-XX55 n		
		Offset	1/1.92/0.2/1.2/2/3/2.4/2.5/2.6			m=5 + +5	-XX56 n		
		Graphics				n15	-XX57 n		
		Reset				n16	-XX58 n		
Color Space	Standard	Curve Type	Film/Video/Graphics 1/8			m=5 + +6	-XX59 n		
		Offset	1/1.92/0.2/1.2/2/3/2.4/2.5/2.6			m=5 + +5	-XX60 n		
		Reset				n17	-XX61 n		
		Curve Type	Film/Video/Graphics 1/8			m=5 + +6	-XX62 n		
		Offset	1/1.92/0.2/1.2/2/3/2.4/2.5/2.6			m=5 + +5	-XX63 n		
		Reset				n18	-XX64 n		
		Curve Type	Film/Video/Graphics 1/8			m=5 + +6	-XX65 n		
		Offset	1/1.92/0.2/1.2/2/3/2.4/2.5/2.6			m=5 + +5	-XX66 n		
		Reset				n19	-XX67 n		
		Auto				n20	-XX68 n	P	F
Noise Reduction	Auto	RGB (0-255)*	* RGB (0-255) supports when MEMI is detected			n11	-XX69 n		
		WOB (0 - 255)	WOB (0 - 255) supports when HDMI is detected			n12	-XX70 n		
		YUV				n13	-XX71 n	P	F
		Reset				m=0 - 10	-XX72 n		
		PureMotion	OFF			n14	-XX73 n		
		LOW				n15	-XX74 n		
		HIGH				n16	-XX75 n		
		UltraDetail	OFF			n17	-XX76 n		
		PureColor	ON			n18	-XX77 n		
		OFF				n19	-XX78 n		
LED Brightness	PureEngine	1			n11	-XX79 n			
		2			n12	-XX80 n			
		3			n13	-XX81 n			
		4			n14	-XX82 n			
		5			n15	-XX83 n			
		OFF			n16	-XX84 n			
		PureEngine Demo	OFF			n17	-XX85 n	P	F
		H Spd				n18	-XX86 n	P	F
		V Spd				n19	-XX87 n	P	F
		Reset				n20	-XX88 n	P	F
DISPLAY	Format	Power	100%/95%/80%/60%/75%/70%/65%/60%/50%			m=0n=1,m=2n=3n=4 m=5n=6n=7n=8n=9	-XX89 n	P	F
		DynamicBack 1				n11	-XX90 n	P	F
		DynamicBack 2				n12	-XX91 n	P	F
		DynamicBack 3				n13	-XX92 n	P	F
		4:3				n14	-XX93 n	P	F
		16:9				n15	-XX94 n	P	F
		LEA	Don't support when Anamorphic lens is fixed			n16	-XX95 n	P	F
		Native	Don't support when Anamorphic lens is motorized or fixed			n17	-XX96 n	P	F
		Auto235	Supporting! When Anamorphic lens is fixed or motor			n18	-XX97 n	P	F
		Auto235_Split	Supporting! When Anamorphic lens is fixed or motor			n19	-XX98 n	P	F
SuperWide	Don't support when Anamorphic lens is motorized or fixed			n20	-XX99 n	P	F		
Edge masking					m=0-5	-XX01 n	P	F	

Appendices

	X	X	X	X	X	n	CR		
	Projector ID		Command ID		space	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	3D->2D		3D / L / R	2D->2D; 3D->3D / 3D->L; /3D->R		m1m2m3	P	F
		3D Format	Auto		Auto		m0	P	F
			SBS		Decoding HDMI1.3		m1	P	F
			Top and Bottom		3D timing		m2	P	F
			Frame Sequential		Low		m3	P	F
		3D Sync. Invert		2D->3D	Mid		m4	P	F
			High		m5	P	F		
			On/Off		m6	P	F		
				m0m1		--XX231 n			
SYSTEM	Menu Location		Top Left			m1	--XX72 n	P	F
			Top Right			m2			
			Centre			m3			
			Bottom Left			m4			
			Bottom Right			m5			
	LED Hours				m1	--XX108 n	Okommm	return LED hour	F
	Projection	Front-Desktop				m1	--XXF1 n	P	F
		Rear-Desktop				m2			
		Front-Ceiling				m3			
	Test Pattern	Rear-Ceiling				m4			
		None / Grid / White Pattern				m0m1m2	--XX195 n		
	Background Color	Blue				m1	--XX194 n	P	F
		Black				m2			
		Gray				m3			
	IR Function		All/Off/Top		m0, m1 / m2		--XX11 n	P	F
	12V Trigger A		Off/On		m0m1		--XX192 n		
	12V Trigger B		Off/On/Auto/35-Auto 3D		m0m1m2m3		--XX193 n		
			4-3 check				--XX205 0		
			4:3 uncheck				--XX205 1		
			16:9	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			
		Ext							
SETUP	Language		English			m1	--XX70 n	P	F
			German			m2			
			French			m3			
			Italian			m4			
			Spanish			m5			
			Portuguese			m6			
			Polish			m7			
			Dutch			m8			
			Swedish			m9			
			Norwegian/Danish			m10			
			Finnish			m11			
			Greek			m12			
			Traditional Chinese			m13			
			Simplified Chinese			m14			
			Japanese			m15			
		Korean			m16				
		Russian			m17				
		Hungarian			m18				
		Czech			m19				
		Arabic			m20				
		Thai			m21				
		Turkish			m22				
	Input Source Filters	HDMI 1				m1	--XX39 n	P	F
		HDMI 2				m7			
		VGA				m5			
3 x RCA Component					m8				
Source Lock		On/Off		m10					
High Altitude		On/Off		m1m0 & 2		--XX100 n	P	F	
Information Help		On/Off		m1m0 & 2		--XX101 n	P	F	
Auto Power Off (min)		On/Off		m1m0 & 2		--XX102 n	P	F	
Signal	Automatic	Enable/Disable		m1m0		--XX91 n			
	Frequency/Tracking			m0		--XX73 n	P	F	
	Phase			m -50 +50		--XX74 n	P	F	
	H. Position			m -50 +50		--XX75 n	P	F	
	V. Position			m -50 +50		--XX76 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			m1m0		--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				m1		--XX150 n	Okabbbbccccdddde		
a = Power State		Off/On		a=01					
b = LED Hour				a=00		99999			
c = Input Source Commands		None		c=00					
		VGA		c=02					
		Video		c=03					
		HDMI1		c=07					
		HDMI2		c=08					
d = Firmware Version				d=00					
e = Display mode		None		e=0					
		Cinema		e=1					
		Single		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=012		--XX151 n	Ok		



Appendices

-	X	X	X	X	n	CR
	Projector ID		Command ID	space	variable	carriage return
RS232 Version No.		Depends		m=1 a=777	--XX152 n	Oka
Input Source Commands	None/VGA/Video/HDMI1 HDMI2/Component			m=1	--XX121 n	Oka a=0/2/5/7/8/11
Software Version				m=1	--XX122 n	Okssss
Display Mode	None/Cinema/Single/Photo/ Reference/User/ISF Day/ ISF Night/3D/Film			m=1	--XX123 n	Oka a=01/2/3/4/5/7/8/9/11
Power State	On/Off			m=1	--XX134 n	Oka a=1/0
Brightness				m=1	--XX125 n	Oka
Contrast				m=1	--XX126 n	Oka
Aspect Ratio	4:3/16:9/LBX/Native/Auto235/ Auto235_Subtitle			m=1	--XX127 n	Oka aa=1/2/5/6/8/9/11 for 4.3/16.9/LBX/ Native/Auto235/ Auto235_Subtitle
Color Temperature	D50/D65/D70/D75/D83/D93/ Native			m=1	--XX128 n	Oka a=1/2 /3/4/5/6/7
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=1		



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