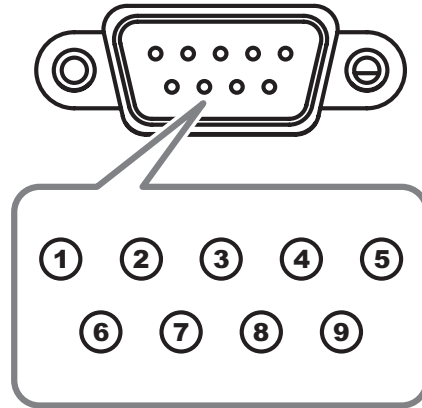


RS232 Commands

RS232 Connector



Pin No	Specification
1	N/A
2	RXD
3	TXD
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	N/A

Touchboards

205 Westwood Ave, Long Branch, NJ 07740
Phone: 866-94 BOARDS (26273) / (732)-222-1511
Fax: (732)-222-7088 | E-mail: sales@touchboards.com

RS232 Protocol Function List

RS232 Commands

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

Note : There is a <CR> after all ASCII commands
 0D is the HEX code for <CR> in ASCII code

XX=01-99, projector's ID, XX=00 is for all projectors

SEND to projector

232 ASCII Code	HEX Code	Function	Description
-XX00 1	7E 30 30 30 30 20 31 0D	Power ON	
-XX00 0	7E 30 30 30 30 20 30 0D	Power OFF	(0/2 for backward compatible)
-XX00 1 ~nnnn	7E 30 30 30 30 20 31 20 a 0D	Power ON with Password	~nnnn = ~0000 (a=7E 30 30 30 30) ~9999 (a=7E 39 39 39 39)
-XX01 1	7E 30 30 30 31 20 31 0D	Resync	
-XX02 1	7E 30 30 30 32 20 31 0D	AV Mute	On
-XX02 0	7E 30 30 30 32 20 30 0D		Off (0/2 for backward compatible)
-XX03 1	7E 30 30 30 33 20 31 0D	Mute	On
-XX03 0	7E 30 30 30 33 20 30 0D		Off (0/2 for backward compatible)
-XX04 1	7E 30 30 30 34 20 31 0D	Freeze	
-XX04 0	7E 30 30 30 34 20 30 0D	Unfreeze	(0/2 for backward compatible)
-XX05 1	7E 30 30 30 35 20 31 0D	Zoom Plus	
-XX06 1	7E 30 30 30 36 20 31 0D	Zoom Minus	
-XX12 1	7E 30 30 31 32 20 31 0D	Direct Source Commands	HDMI
-XX12 2	7E 30 30 31 32 20 32 0D		DVI-D
-XX12 4	7E 30 30 31 32 20 34 0D		BNC
-XX12 5	7E 30 30 31 32 20 35 0D		VGA1
-XX12 6	7E 30 30 31 32 20 36 0D		VGA 2
-XX12 8	7E 30 30 31 32 20 38 0D		VGA1 Component
-XX12 9	7E 30 30 31 32 20 39 0D		S-Video
-XX12 10	7E 30 30 31 32 20 31 30 0D		Video
-XX12 13	7E 30 30 31 32 20 31 33 0D		VGA 2 Component
-XX12 14	7E 30 30 31 32 20 31 34 0D		Component
-XX12 20	7E 30 30 31 32 20 32 30 0D		DisplayPort
-XX20 1	7E 30 30 32 30 20 31 0D	Display Mode	Presentation
-XX20 2	7E 30 30 32 30 20 32 0D		Bright
-XX20 3	7E 30 30 32 30 20 33 0D		Movie
-XX20 4	7E 30 30 32 30 20 34 0D		sRGB
-XX20 5	7E 30 30 32 30 20 35 0D		User
-XX20 7	7E 30 30 32 30 20 37 0D		Blackboard
-XX20 13	7E 30 30 32 30 21 33 0D		DICOM SIM.
-XX20 9	7E 30 30 32 30 20 39 0D		3D
-XX21 n	7E 30 30 32 31 20 a 0D	Brightness	n = -50 (a=2D 35 30) ~ 50 (a=35 30)
-XX22 n	7E 30 30 32 32 20 a 0D	Contrast	n = -50 (a=2D 35 30) ~ 50 (a=35 30)
-XX23 n	7E 30 30 32 33 20 a 0D	Sharpness	n = 1 (a=31) ~ 15 (a=31 35)
-XX44 n	7E 30 30 34 34 20 a 0D	Tint	n = -50 (a=2D 35 30) ~ 50 (a=35 30)
-XX45 n	7E 30 30 34 35 20 a 0D	Color	n = -50 (a=2D 35 30) ~ 50 (a=35 30)
-XX327 n	7E 58 58 33 32 37 20 a 0D	Color Matching	Red Hue n=-127(a=2d 31 32 37)~127(a=31 32 37)
-XX328 n	7E 58 58 33 32 38 20 a 0D		Green Hue n=-127(a=2d 31 32 37)~127(a=31 32 37)
-XX329 n	7E 58 58 33 32 39 20 a 0D		Blue Hue n=-127(a=2d 31 32 37)~127(a=31 32 37)
-XX330 n	7E 58 58 33 33 30 20 a 0D		Cyan Hu n=-127(a=2d 31 32 37)~127(a=31 32 37)
-XX331 n	7E 58 58 33 33 31 20 a 0D		Yellow Hue n=-127(a=2d 31 32 37)~127(a=31 32 37)
-XX332 n	7E 58 58 33 33 32 20 a 0D		Magenta Hue n=-127(a=2d 31 32 37)~127(a=31 32 37)
-XX333 n	7E 58 58 33 33 33 20 a 0D		Cyan Hue n=-127(a=2d 31 32 37)~127(a=31 32 37)
-XX333 n	7E 58 58 33 33 33 20 a 0D		Red Saturation n=-127(a=2d 31 32 37)~127(a=31 32 37)
-XX334 n	7E 58 58 33 33 34 20 a 0D		Green Saturation n=-127(a=2d 31 32 37)~127(a=31 32 37)
-XX335 n	7E 58 58 33 33 35 20 a 0D		Blue Saturation n=-127(a=2d 31 32 37)~127(a=31 32 37)
-XX336 n	7E 58 58 33 33 36 20 a 0D		Cyan Saturation n=-127(a=2d 31 32 37)~127(a=31 32 37)
-XX337 n	7E 58 58 33 33 37 20 a 0D		Yellow Saturation n=-127(a=2d 31 32 37)~127(a=31 32 37)
-XX338 n	7E 58 58 33 33 38 20 a 0D		Magenta Saturation n=-127(a=2d 31 32 37)~127(a=31 32 37)
-XX339 n	7E 58 58 33 33 39 20 a 0D		Red Gain n=-127(a=2d 31 32 37)~127(a=31 32 37)
-XX340 n	7E 58 58 33 34 30 20 a 0D		Green Gain n=-127(a=2d 31 32 37)~127(a=31 32 37)
-XX341 n	7E 58 58 33 34 31 20 a 0D		Blue Gain n=-127(a=2d 31 32 37)~127(a=31 32 37)
-XX342 n	7E 58 58 33 34 32 20 a 0D		Cyan Gain n=-127(a=2d 31 32 37)~127(a=31 32 37)
-XX343 n	7E 58 58 33 34 33 20 a 0D		Yellow Gain n=-127(a=2d 31 32 37)~127(a=31 32 37)
-XX344 n	7E 58 58 33 34 34 20 a 0D		Magenta Gain n=-127(a=2d 31 32 37)~127(a=31 32 37)
-XX345 n	7E 58 58 33 34 35 20 a 0D		White/R n = -50 (a=2D 35 30) ~ 50 (a=35 30)
-XX346 n	7E 58 58 33 34 36 20 a 0D		White/G n = -50 (a=2D 35 30) ~ 50 (a=35 30)
-XX347 n	7E 58 58 33 34 37 20 a 0D		White/B n = -50 (a=2D 35 30) ~ 50 (a=35 30)
-XX215 1	7E 30 30 32 31 35 20 31 0D	Reset	
-XX24 n	7E 30 30 32 34 20 a 0D	RGB Gain/Bias	Red Gain n = -50 (a=2D 35 30) ~ 50 (a=35 30)
-XX25 n	7E 30 30 32 35 20 a 0D		Green Gain n = -50 (a=2D 35 30) ~ 50 (a=35 30)
-XX26 n	7E 30 30 32 36 20 a 0D		Blue Gain n = -50 (a=2D 35 30) ~ 50 (a=35 30)
-XX27 n	7E 30 30 32 37 20 a 0D		Red Bias n = -50 (a=2D 35 30) ~ 50 (a=35 30)
-XX28 n	7E 30 30 32 38 20 a 0D		Green Bias n = -50 (a=2D 35 30) ~ 50 (a=35 30)
-XX29 n	7E 30 30 32 39 20 a 0D		Blue Bias n = -50 (a=2D 35 30) ~ 50 (a=35 30)
-XX33 n	7E 30 30 33 33 20 a 0D		Reset n = -50 (a=2D 35 30) ~ 50 (a=35 30)
-XX34 n	7E 30 30 33 34 20 a 0D	BrilliantColor™	n = 1 (a=31) ~ 10 (a=31 30)
-XX196 n	7E 30 30 31 39 36 20 a 0D	Noise Reduction	n = 1 (a=31) ~ 10 (a=31 30)
-XX35 1	7E 30 30 33 35 20 31 0D	Gamma	
-XX35 3	7E 30 30 33 35 20 33 0D		Film
-XX35 5	7E 30 30 33 35 20 35 0D		Graphics
-XX35 6	7E 30 30 33 35 20 36 0D		1.8
-XX35 7	7E 30 30 33 35 20 37 0D		2.0
			2.2



Due to the difference application for each model. Function is dependent on the model purchased.

Appendices

-XX35 8	7E 30 30 33 35 20 38 0D			2.6
-XX35 9	7E 30 30 33 35 20 39 0D			3D
-XX36 3	7E 30 30 33 36 20 30 0D	Color Temp.		Warm
-XX36 0	7E 30 30 33 36 20 31 0D			Standard
-XX36 1	7E 30 30 33 36 20 32 0D			Cool
-XX36 2	7E 30 30 33 36 20 33 0D			Cold
-XX37 1	7E 30 30 33 37 20 31 0D	Color Space		Auto
-XX37 2	7E 30 30 33 37 20 32 0D			RGB\ RGB(0-255)
-XX37 3	7E 30 30 33 37 20 33 0D			YUV
-XX37 4	7E 30 30 33 37 20 34 0D			RGB(16 - 235)
-XX73 n	7E 30 30 37 33 20 a 0D	Signal (RGB)		Frequency n = -5 (a=2D 35) ~ 5 (a=35) By signal
-XX74 n	7E 30 30 37 34 20 a 0D			Phase n = 0 (a=30) ~ 31 (a=33 31) By signal
-XX91 1	7E 30 30 39 31 20 31 0D			Automatic Enable
-XX91 0	7E 30 30 39 31 20 30 0D			Disable
-XX75 n	7E 30 30 37 35 20 a 0D			H. Position n = -5 (a=2D 35) ~ 5 (a=35) By timing
-XX76 n	7E 30 30 37 36 20 a 0D			V. Position n = -5 (a=2D 35) ~ 5 (a=35) By timing
-XX200 n	7E 30 30 32 30 30 20 a 0D	Signal(Video)		White Level
-XX201 n	7E 30 30 32 30 30 21 a 0D			Black Level
-XX204 1	7E 30 30 32 30 30 21 31 0D			0
-XX204 0	7E 30 30 32 30 30 21 30 0D			7.5
-XX60 1	7E 30 30 36 30 20 31 0D	Format		4:3
-XX60 2	7E 30 30 36 30 20 32 0D			16:9
-XX60 3	7E 30 30 36 30 20 33 0D			16:10(WXGA/WUXGA Model)
-XX60 5	7E 30 30 36 30 20 35 0D			LBX
-XX60 6	7E 30 30 36 30 20 36 0D			Native
-XX60 7	7E 30 30 36 30 20 37 0D			Auto
-XX62 n	7E 30 30 36 32 20 a 0D	Digital Zoom	Zoom	n = -5 (a=2D 35) ~ 25 (a=32 35)
-XX504 n	7E 58 58 35 30 34 20 a 0D			H Zoom n = 0 (a=30) ~ 100 (a=31 30 30)
-XX505 n	7E 58 58 35 30 35 20 a 0D			V Zoom n = 0 (a=30) ~ 100 (a=31 30 30)
-XX61 n	7E 30 30 36 31 20 a 0D	Edge mask		n = 0 (a=30) ~ 10 (a=31 30)
-XX63 n	7E 30 30 36 33 20 a 0D	H Image Shift		n = -100 (a=2D 31 30 30) ~ 100 (a=31 30 30)
-XX64 n	7E 30 30 36 34 20 a 0D	V Image Shift		n = -100 (a=2D 31 30 30) ~ 100 (a=31 30 30)
-XX66 n	7E 30 30 36 36 20 a 0D	V Keystone		n = -40 (a=2D 34 30) ~ 40 (a=34 30)
-XX230 1	7E 30 30 32 33 30 20 31 0D			3D Mode
-XX230 3	7E 30 30 32 33 30 20 33 0D			IR
-XX400 0	7E 30 30 34 30 30 20 30 0D	3D-->2D		3D
-XX400 1	7E 30 30 34 30 30 20 31 0D			L
-XX400 2	7E 30 30 34 30 30 20 32 0D			R
-XX405 0	7E 30 30 34 30 35 20 30 0D	3D Format		Auto
-XX405 1	7E 30 30 34 30 35 20 31 0D			SBS
-XX405 2	7E 30 30 34 30 35 20 32 0D			Top and Bottom
-XX405 3	7E 30 30 34 30 35 20 33 0D			Frame sequential
-XX231 0	7E 30 30 32 33 31 20 30 0D	3D Sync Invert		On
-XX231 1	7E 30 30 32 33 31 20 31 0D			Off
-XX70 1	7E 30 30 37 30 20 31 0D	Language		English
-XX70 2	7E 30 30 37 30 20 32 0D			German
-XX70 3	7E 30 30 37 30 20 33 0D			French
-XX70 4	7E 30 30 37 30 20 34 0D			Italian
-XX70 5	7E 30 30 37 30 20 35 0D			Spanish
-XX70 6	7E 30 30 37 30 20 36 0D			Portuguese
-XX70 7	7E 30 30 37 30 20 37 0D			Polish
-XX70 8	7E 30 30 37 30 20 38 0D			Dutch
-XX70 9	7E 30 30 37 30 20 39 0D			Swedish
-XX70 10	7E 30 30 37 30 20 31 30 0D			Norwegian/Danish
-XX70 11	7E 30 30 37 30 20 31 31 0D			Finnish
-XX70 12	7E 30 30 37 30 20 31 32 0D			Greek
-XX70 13	7E 30 30 37 30 20 31 33 0D			Traditional Chinese
-XX70 14	7E 30 30 37 30 20 31 34 0D			Simplified Chinese
-XX70 15	7E 30 30 37 30 20 31 35 0D			Japanese
-XX70 16	7E 30 30 37 30 20 31 36 0D			Korean
-XX70 17	7E 30 30 37 30 20 31 37 0D			Russian
-XX70 18	7E 30 30 37 30 20 31 38 0D			Hungarian
-XX70 19	7E 30 30 37 30 20 31 39 0D			Czechoslovak
-XX70 20	7E 30 30 37 30 20 32 30 0D			Arabic
-XX70 21	7E 30 30 37 30 20 32 31 0D			Thai
-XX70 22	7E 30 30 37 30 20 32 32 0D			Turkish
-XX70 23	7E 30 30 37 30 20 32 33 0D			Farsi
-XX70 25	7E 30 30 37 30 20 32 35 0D			Vietnamese
-XX70 26	7E 30 30 37 30 20 32 36 0D			Indonesian
-XX70 27	7E 30 30 37 30 20 32 37 0D			Romanian
-XX71 1	7E 30 30 37 31 20 31 0D	Projection		Front-Desktop
-XX71 2	7E 30 30 37 31 20 32 0D			Rear-Desktop
-XX71 3	7E 30 30 37 31 20 33 0D			Front-Ceiling
-XX71 4	7E 30 30 37 31 20 34 0D			Rear-Ceiling
-XX72 1	7E 30 30 37 32 20 31 0D	Menu Location		Top Left
-XX72 2	7E 30 30 37 32 20 32 0D			Top Right
-XX72 3	7E 30 30 37 32 20 33 0D			Centre
-XX72 4	7E 30 30 37 32 20 34 0D			Bottom Left
-XX72 5	7E 30 30 37 32 20 35 0D			Bottom Right

Appendices

(WXGA/WUXGA Model)

~XX90 1	7E 30 30 39 31 20 31 0D	Screen Type	16:10
~XX90 0	7E 30 30 39 31 20 30 0D		16:9
~XX77 n	7E 30 30 37 37 20 aabbc0 0D	Security	Security Timer
			Month/Day/Hour n = mm/dd/hh
			mm= 00 (aa=30 30) ~ 12 (aa=31 32)
			dd = 00 (bb=30 30) ~ 30 (bb=33 30)
			hh= 00 (cc=30 30) ~ 24 (cc=32 34)
~XX78 1	7E 30 30 37 38 20 31 0D		Security Settings
~XX78 0 ~nnnn	7E 30 30 37 38 20 32 20 a 0D		On
			Off(0/2 for backward compatible)
	~nnnn = ~0000 (a=7E 30 30 30 30)		~9999 (a=7E 39 39 39 39)
~XX79 n	7E 30 30 37 39 20 a 0D	Projector ID	n = 00 (a=30 30) ~ 99 (a=39 39)
~XX80 1	7E 30 30 38 30 20 31 0D	Mute	On
~XX80 0	7E 30 30 38 30 20 30 0D		Off (0/2 for backward compatible)
~XX310 0	7E 30 30 33 31 30 20 30 0D	Internal Speaker	Off
~XX310 1	7E 30 30 33 31 30 20 31 0D		On
~XX81 n	7E 30 30 38 31 20 a 0D	Volume(Audio)	n = 0 (a=30) ~ 10 (a=31 30)
~XX89 0	7E 30 30 38 39 20 30 0D	Audio Input	Default
~XX89 1	7E 30 30 38 39 20 31 0D		Audio1
~XX89 3	7E 30 30 38 39 20 33 0D		Audio2
~XX89 4	7E 30 30 38 39 20 34 0D		Audio3
~XX89 5	7E 30 30 38 39 20 35 0D		Audio4
~XX82 1	7E 30 30 38 32 20 31 0D	Logo	Optoma
~XX82 2	7E 30 30 38 32 20 32 0D		User
~XX82 3	7E 30 30 38 32 20 33 0D		Neutral
~XX83 1	7E 30 30 38 33 20 31 0D	Logo Capture	Off
~XX88 0	7E 30 30 38 38 20 30 0D	Closed Captioning	Off
~XX88 1	7E 30 30 38 38 20 31 0D		cc1
~XX88 2	7E 30 30 38 38 20 32 0D		cc2
~XX87 1	7E 30 30 38 37 20 31 0D	Network Status(Read only Return	:Ok, a=0/1 Disconnected/ Connected.
~XX87 3	7E 30 30 38 37 20 33 0D		IP Address(Read only) Return: "Okaaa_bbb_ccc_ddd"
~XX454 0/2	7E 30 30 34 35 34 20 30(32) 0D	Crestron	Off
~XX454 1	7E 30 30 34 35 34 20 31 0D		On
~XX455 0/2	7E 30 30 34 35 35 20 30(32) 0D	Extron	Off
~XX455 1	7E 30 30 34 35 35 20 31 0D		On
~XX456 0/2	7E 30 30 34 35 36 20 30(32) 0D	PJLink	Off
~XX456 1	7E 30 30 34 35 36 20 31 0D		On
~XX457 0/2	7E 30 30 34 35 37 20 30(32) 0D	AMX Device Discovery	Off
~XX457 1	7E 30 30 34 35 37 20 31 0D		On
~XX458 0/2	7E 30 30 34 35 38 20 30(32) 0D	Telnet	Off
~XX458 1	7E 30 30 34 35 38 20 31 0D		On
~XX459 0/2	7E 30 30 34 35 38 20 30(32) 0D	HTTP	Off
~XX459 1	7E 30 30 34 35 38 20 31 0D		On
~XX39 1	7E 30 30 33 39 20 31 0D	Input Source	HDMI
~XX39 2	7E 30 30 33 39 20 32 0D		DVI-D
~XX39 3	7E 30 30 33 39 20 34 0D		BNC
~XX39 5	7E 30 30 33 39 20 35 0D		VGA1
~XX39 6	7E 30 30 33 39 20 36 0D		VGA2
~XX39 8	7E 30 30 33 39 20 38 0D		Component
~XX39 9	7E 30 30 33 39 20 39 0D		S-video
~XX39 10	7E 30 30 33 39 20 31 30 0D		Video
~XX39 15	7E 30 30 33 39 20 31 35 0D		DisplayPort
~XX100 1	7E 30 30 31 30 30 20 31 0D	Source Lock	On
~XX100 0	7E 30 30 31 30 30 20 30 0D		Off (0/2 for backward compatible)
~XX101 1	7E 30 30 31 30 31 20 31 0D	High Altitude	On
~XX101 0	7E 30 30 31 30 31 20 30 0D		Off (0/2 for backward compatible)
~XX102 1	7E 30 30 31 30 32 20 31 0D	Information Hide	On
~XX102 0	7E 30 30 31 30 32 20 30 0D		Off (0/2 for backward compatible)
~XX103 1	7E 30 30 31 30 33 20 31 0D	Keypad Lock	On
~XX103 0	7E 30 30 31 30 33 20 30 0D		Off (0/2 for backward compatible)
~XX348 0	7E 30 30 33 34 38 20 30 0D	Display Mode Lock	Off (0/2 for backward compatible)
~XX348 1	7E 30 30 33 34 38 20 31 0D		On
~XX195 0	7E 30 30 31 39 35 20 30 0D	Test Pattern	None
~XX195 1	7E 30 30 31 39 35 20 31 0D		Grid(White)
~XX195 3	7E 30 30 31 39 35 20 33 0D		Grid(Green)
~XX195 4	7E 30 30 31 39 35 20 34 0D		Grid(Magenta)
~XX195 2	7E 30 30 31 39 35 20 32 0D		White
~XX192 0	7E 30 30 31 39 32 20 30 0D	12V Trigger	Off
~XX192 1	7E 30 30 31 39 32 20 31 0D		On
~XX192 3	7E 30 30 31 39 32 20 33 0D		Auto 3D
~XX11 0	7E 30 30 31 31 20 30 0D	IR Function	Off
~XX11 1	7E 30 30 31 31 20 31 0D		On
~XX104 1	7E 30 30 31 30 34 20 31 0D	Background Color	Blue
~XX104 2	7E 30 30 31 30 34 20 32 0D		Black
~XX104 3	7E 30 30 31 30 34 20 33 0D		Red
~XX104 4	7E 30 30 31 30 34 20 34 0D		Green
~XX104 5	7E 30 30 31 30 34 20 35 0D		White
~XX105 1	7E 30 30 31 30 35 20 31 0D	Advanced	Direct Power On
~XX105 0	7E 30 30 31 30 35 20 30 0D		On
~XX113 0	7E 30 30 31 31 33 20 30 0D		Signal Power On
~XX113 1	7E 30 30 31 31 33 20 31 0D		Off
~XX106 n	7E 30 30 31 30 36 20 a 0D	Auto Power Off (min)	n = 0 (a=30) ~ 180 (a=31 38 30)

Appendices

(5 minutes for each step).

-XX107 n 7E 30 30 31 31 30 37 20 a 0D Sleep Timer (min) n = 0 (a=30) ~ 995 (a=39 39 35)

(30 minutes for each step).

-XX114 1 7E 30 30 31 31 34 20 31 0D Power Mode(Standby) Active (<=0.5W)
-XX114 0 7E 30 30 31 31 34 20 30 0D Eco. (0/2 for backward compatible)

-XX109 1 7E 30 30 31 30 39 20 31 0D Lamp Reminder On
-XX109 0 7E 30 30 31 30 39 20 30 0D Off (0/2 for backward compatible)
-XX110 1 7E 30 30 31 31 30 20 31 0D Brightness Mode Bright
-XX110 2 7E 30 30 31 31 30 20 32 0D Eco
-XX110 5 7E 30 30 31 31 30 20 35 0D Power
-XX326 n 7E 30 30 33 32 36 20 a 0D Power 350W/340W/330W/320W/310W/300W/290W/280W
(n=0/n=1/n=2/n=3/n=4/n=5/n=6/n=7/n=8)
-XX111 1 7E 30 30 31 31 31 20 31 0D Lamp Reset Yes
-XX111 0 7E 30 30 31 31 31 20 30 0D No (0/2 for backward compatible)

-XX112 1 7E 30 30 31 31 32 20 31 0D Reset Yes

-XX99 1 7E 30 30 39 39 20 31 0D RS232 Alert Reset Reset System Alert
-XX210 n 7E 30 30 32 30 30 20 n 0D Display message on the OSD n: 1-30 characters

SEND to emulate Remote

-XX140 10 7E 30 30 31 34 20 31 30 0D Up
-XX140 11 7E 30 30 31 34 20 31 31 0D Left
-XX140 12 7E 30 30 31 34 30 20 31 32 0D Enter (for projection MENU)
-XX140 13 7E 30 30 31 34 30 20 31 33 0D Right
-XX140 14 7E 30 30 31 34 30 20 31 34 0D Down
-XX140 15 7E 30 30 31 34 30 20 31 35 0D Keystone +
-XX140 16 7E 30 30 31 34 30 20 31 36 0D Keystone -
-XX140 17 7E 30 30 31 34 30 20 31 37 0D Volume -
-XX140 18 7E 30 30 31 34 30 20 31 38 0D Volume +
-XX140 19 7E 30 30 31 34 30 20 31 39 0D Brightness
-XX140 20 7E 30 30 31 34 30 20 32 30 0D Menu
-XX140 21 7E 30 30 31 34 30 20 32 31 0D Zoom
-XX140 28 7E 30 30 31 34 30 20 32 38 0D Contrast
-XX140 47 7E 30 30 31 34 30 20 34 37 0D Source

SEND from projector automatically

232 ASCII Code	HEX Code	Function	Projector Return	Description
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when Standby/Warming/Cooling/Out of Range/Lamp fail/Fan Lock/Over Temperature/Lamp Hours Running Out/Cover Open

INFO n : 0/1/2/3/4/6/7/8/ = Standby/Warming/Cooling/Out of Range/Lamp fail/Fan Lock/Over Temperature/Lamp Hours Running Out/Cover Open

READ from projector

232 ASCII Code	HEX Code	Function	Projector Return	Description
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-XX121 1 7E 30 30 31 32 31 20 31 0D Input Source Commands OKn n : 0/1/2/3/4/5/7/10/15 = None/DVI/VGA1/VGA2/S-Video/Video/BNC/HDMI/Component/DisplayPort

-XX122 1 7E 30 30 31 32 32 20 31 0D Software Version OKdddd dddd: FW version
-XX123 1 7E 30 30 31 32 33 20 31 0D Display Mode OKn n : 0/1/2/3/4/7/9/12
None/Presentation/Bright/Movie/sRGB/Blackboard/DICOM SIM./3D

-XX124 1 7E 30 30 31 32 34 20 31 0D Power State OKn n : 0/1 = Off/On
-XX125 1 7E 30 30 31 32 35 20 31 0D Brightness OKn
-XX126 1 7E 30 30 31 32 36 20 31 0D Contrast OKn

-XX127 1 7E 30 30 31 32 37 20 31 0D Format OKn n: 1/2/3/5/6/7 =4:3/16:9/16:10/LBX/Native/Auto
*16:9 or 16:10 depend on Screen Type setting

-XX128 1 7E 30 30 31 32 38 20 31 0D Color Temperature OKn n :3/0/1/2 = Warm/Standard/Cool/Cold
-XX129 1 7E 30 30 31 32 39 20 31 0D Projection Mode OKn n : 0/1/2/3 = Front-Desktop/ Rear-Desktop/ Front-Ceiling/ Rear-Ceiling

-XX150 1 7E 30 30 31 35 30 20 31 0D Information OKabbbccdddde
a : 0/1 = Off/On
bbb: LampHour
cc: source 00/01/02/03/04/05/07/10/15 = None/DVI/VGA1/VGA2/S-Video/Video/BNC/HDMI/Component/DisplayPort
ddd: FW version
e : Display mode 0/1/2/3/4/7/9/10= None/Presentation/Bright/Movie/sRGB/Blackboard/3D/DICOM.

-XX151 1 7E 30 30 31 35 31 20 31 0D Model name OKn
-XX108 1 7E 30 30 31 30 38 20 31 0D Lamp Hours OKbbbb bbbb: LampHour
-XX108 2 7E 30 30 31 30 38 20 31 0D Cumulative Lamp Hours OKbbbb bbbb: (5 digits) Total Lamp Hours
-XX87 1 7E 30 30 38 37 20 31 0D Network Status OKn n=0/1
Disconnected/Connected

-XX87 3 7E 30 30 38 37 20 33 0D IP Address Okaaa_bbb_ccc_ddd

Telnet Commands

- ▶ Port: support 3 ports of 23/1023/2023
- ▶ Multi-connections: Projector could receive commands from different ports at the same time
- ▶ Command Format: Follow RS232 command format (support both of ASCII and HEX)
- ▶ Command Response: Follow RS232 return message.

Lead Code	Projector ID		Command ID			Space	Variable	Carriage Return
~	X	X	X	X	X		n	CR
Fix code One Digit~	00		Defined by Optoma 2 or 3 Digit. See the Follow content			One Digit	Per item Definition	Fix code One Digit



- ❖ For wide screen resolution (WXGA), the compatibility support is dependent on Notebook/PC models.

AMX Device Discovery commands

- ▶ DP : 239.255.250.250
- ▶ Port No. : 9131
- ▶ Each UDP broadcast information as below are updated around 40 seconds

Command	Description	Remark (Parameter)
Device-UUID	MAC address (Hex value without ':' separator)	12 digits
Device-SKDCClass	The Duet DeviceSdk class name	VideoProjector
Device-Make	Maker name	MakerPXLW
Device-Model	Model name	Projector

Command	Description	Remark (Parameter)
Config-URL	Device's IP address LAN IP address is shown up if LAN IP address is valid. Wireless LAN IP address is shown up if Wireless LAN IP address is valid.	http://xxx.xxx.xxx.xxx/index.html
Revision	The revision must follow a major.minor.micro scheme. The revision is only increased if the command protocol is modified.	1.0.0



- ❖ For wide screen resolution (WXGA), the compatibility support is dependent on Notebook/PC models.
- ❖ This AMX function is only to support AMX Device Discovery.
- ❖ The broadcast information only send out through valid interface.
- ❖ Both LAN and Wireless LAN interfaces could be supported at the same time.
- ❖ If "Beacon Validator" was used. Please take care below information.

PJLink™ supported commands

The table below shows commands to control the projector using the PJLink™ protocol.

Command Description Remark (Parameter)

Command	Description	Remark (Parameter)
POWR	Power control	0 = Standby
		1 = Power on
POWR?	Inquiry about the power state	0 = Standby
		1 = Power on
		2 = Cooling down
		3 = Warming up
INPT	INPT Input switching	11 = VGA1



❖ This projector is fully compliant to the specifications of JBMIA PJLink™ Class 1. It supports all the commands defined by PJLink™ Class 1, and the compliance has been verified with the PJLink™ standard specifications Version 1.0.

Command	Description	Remark (Parameter)
INPT?	Inquiry about input switching	12 = VGA2
		13 = Component
		14 = BNC
		21 = VIDEO
		22 = S-VIDEO
		31 = HDMI 1
		32 = HDMI 2
AVMT	Mute control	30 = Video and audio mute disable
AVMT?	Inquiry about the mute state	31 = Video and audio mute enable
ERST?	Inquiry about the error state	1st byte: Fan error, 0 or 2
		2nd byte: Lamp error, 0 to 2
		3rd byte: Temperature error, 0 or 2
		4th byte: Cover open error, 0 or 2
		5th byte: Filter error, 0 or 2
		6th byte: Other error, 0 or 2
		0 to 2 mean as follows: 0 = No error detected, 1 = Warning, 2 = Error
LAMP?	Inquiry about the lamp state	1st value (1 to 5 digits): Cumulative LAMP operating time (This item shows a lamp operating time (hour) calculated based on that LAMP MODE is LOW.)
		2nd value: 0 = Lamp off, 1 = Lamp on
INST?	Inquiry about the available inputs	The following value is returned. "11 12 21 22 31 32"
NAME?	Inquiry about the projector name	The projector name set on the NETWORK menu or the ProjectorView Setup window is returned
INF1?	Inquiry about the manufacturer name	"Optoma" is returned.
INF2?	Inquiry about the model name	"EH7700" is returned.



Command	Description	Remark (Parameter)
INF0?	Inquiry about other information	No other information is available. No parameter is returned.
CLSS?	Inquiry about the class information	"1" is returned.

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- ▶ Crestron RoomView Connected™
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This projector supports standard protocol PJLink™ for projector control and you can control and monitor projector's operations using the same application among projectors of different models and different manufacturers.
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Electronics, Inc. to facilitate configuration of the control system of Crestron and its target devices.

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