



Luxi Presenter 100 series full specifications

8.1 Signal inputs on the Tx devices

TPR-110CR inputs

Number/signal type	1 single link HDMI or DVI (with optional adaptor)
Connectors	1 female Type A HDMI connector
TMDS pairs	Digital video and audio, voltage +/- 0.2 to +/- 0.78 V, impedance 100 ohms +/-15%, automatic equalization
Digital video formats	Digital RGB or YCrCb, all formats in the HDMI 1.4 specs including 720p, 1080p, 3D, 4k, deep color and computer video formats from 640x480 to 1600x1200 @ 60 Hz
Digital audio formats	All digital audio formats in the HDMI 1.4 specs including LPCM, Dolby Digital, DTS, Dolby TrueHD, and DTS-HD Master (not support one bit audio)
TMDS max data rate	9.0 Gbps total
TMDS max pixel clock	300 MHz per pair
Standards	HDMI 1.4, DVI 1.0
DDC lines	EDID and HDCP, I ² C bus, low voltage -0.5 to 1.5 V, high voltage 3.0 to V _{DD} + 0.5 V, impedance 50 to 50k ohms
Copyright protection	HDCP 1.3
HPD line	Output voltage 5.0 V, impedance 1k ohm
CEC line	Pass thru, high level 2.5 to 3.6 V, low level 0 to 0.6 V; pull up resistance 27k ohms
+5 V line	Accepts 5 +/-0.3 V

TPR-150CR video inputs

Number/signal type	Total 3 inputs, VGA with audio, HDMI and DisplayPort
Input selections	Automatic input selection: the input with live signal selected; if more than one input has live signals, the order of priority is: VGA, HDMI, DP; manual selection available also via toggling the "Show Me" push button or the RS-232 remote control

VGA/Audio input

Video	1 computer RGB video or component video YUV
Connectors	1 female 15-pin HD VGA
Nominal level	1.0 Vp-p for Y of component video, 0.7 Vp-p for RGB and for R-Y and B-Y of component video
Minimum/maximum levels	Analog: 0.0 V to 2.0 Vp-p with no offset
Impedance	75 ohms
Horizontal frequency	30 kHz to 100 kHz
Vertical frequency	24 Hz to 120 Hz
Resolution range	640x480 to 1920x1200 or 480p, 576p, 720p, 1080i, or 1080p
Formats	RGB and HDTV YUV
Return loss	<-30 dB @ 5 MHz
Sync	RGBHV, RGBS, RGsB; bi-level YUV component video, or tri-level HDTV component video
Sync input level	2.75 V to 5.0 Vp-p for RGBHV or RGBS; 0.6 Vp-p for component video tri-level sync; 0.3 Vp-p for component video bi-level sync or RGsB
Sync input impedance	10k ohms
Audio	1 stereo, unbalanced
Connectors	(1) 3.5 mm mini stereo (tip-ring-sleeve) jack
Impedance	10k ohms unbalanced, DC coupled
Nominal level	-10 dBV (316 mVrms)
Max level	+8 dBV (2.5 Vrms) at 1% THD+N



HDMI input (see TPR-110CR input specs)

DisplayPort input

Number/signal type	1 DisplayPort
Connectors	1 female DisplayPort downstream connector
Main lanes	Digital video and audio, configurable 1 or 2 lane operations, max voltage 1.38 Vp-p, differential impedance 100 ohms, automatic equalization
Digital video formats	Digital RGB or YCrCb, all formats in the DisplayPort 1.2 specs including 720p, 1080p, 3D, 4k, deep color and computer video formats from 640x480 to 1920x1200@60Hz
Digital audio formats	All digital audio formats in the DisplayPort 1.2 specs including LPCM, Dolby Digital, DTS, Dolby TrueHD, and DTS-HD Master
TMDS max data rate	5.4 Gbps total
TMDS max pixel clock	270 MHz per lane
Standards	DisplayPort 1.2
AUX channel	DPCD, HDCP and EDID, up to 1 Mbps data rate, 0.32 to 1.36 Vp-p, differential impedance 100 ohms
Copyright protection	HDCP 1.3
HPD	Voltage 2.25 to 3.6 V, impedance 100k ohms
DP Power line	Accepts 3.0 to 3.6 V

8.2 Signal outputs on the Rx devices

RPR-110CR outputs

Number/signal type	1 single link HDMI or DVI (with optional adaptor)
Connectors	1 female Type A HDMI connector
TMDS pairs	Digital video and audio, voltage +/- 0.2 to +/- 0.78 V, impedance 100 ohms +/-15%
Digital video formats	Digital RGB or YCrCb, all formats in the HDMI 1.4 specs including 720p, 1080p, 3D, 4k, deep color and computer video formats from 640x480 to 1600x1200@60Hz
Digital audio formats	All digital audio formats in the HDMI 1.4 specs including LPCM, Dolby Digital, DTS, Dolby TrueHD, and DTS-HD Master (not support one bit audio)
TMDS max data rate	9.0 Gbps total
TMDS max pixel clock	300 MHz per pair
Standards	HDMI 1.4, DVI 1.0
DDC lines	EDID and HDCP, I ² C bus, low voltage -0.5 to 1.5 V, high voltage 3.0 to V _{DD} + 0.5 V, impedance 50 to 50k ohms
Copyright protection	HDCP 1.3
HPD line	Detection voltage range: high 2.0 to 5.3 V, low 0 to 0.8 V
CEC line	Pass thru, high level 2.5 to 3.6 V, low level 0 to 0.6 V; pull up resistance 27k ohms
+5 V line	Accepts 5 +/-0.3 V

RPR-150CR video outputs

Number/signal type	Total 2 outputs, VGA with audio and HDMI, live simultaneously
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VGA/Audio output

Video	1 computer RGB video or component video YUV
Connectors	1 female 15-pin HD VGA
Nominal level	1.0 Vp-p for Y of component video, 0.7 Vp-p for RGB and for R-Y



	and B-Y of component video
Minimum/maximum levels	Analog: 0.0 V to 2.0 Vp-p with no offset
Impedance	75 ohms
Horizontal frequency	30 kHz to 100 kHz
Vertical frequency	24 Hz to 120 Hz
Resolution range	640x480 to 1920x1200 or 480p, 576p, 720p, 1080i, or 1080p
Formats	RGB and HDTV YUV
Return loss	<-30 dB @ 5 MHz
Sync	RGBHV, RGBS, RGsB; bi-level YUV component video, or tri-level HDTV component video
Sync output level	5.0 Vp-p for RGBHV or RGBS; 0.6 Vp-p for component video tri-level sync; 0.3 Vp-p for component video bi-level sync or RGsB
Sync input impedance	50 ohms
Audio	1 stereo, unbalanced
Connectors	(1) 3.5 mm mini stereo (tip-ring-sleeve) jack
Impedance	50 ohms unbalanced, DC coupled
Nominal level	-10 dBV (316 mVrms)
Max level	+8 dBV (2.5 Vrms) at 1% THD+N

HDMI output (see RPR-110CR output specs)

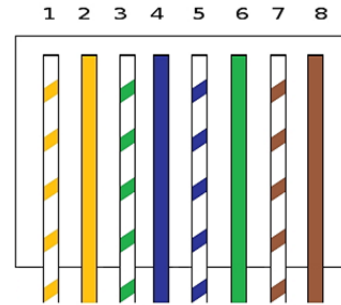
8.3 Daisy chain system

Input number/signal type	1 input, Luxi proprietary format, digital video, audio, control, Ethernet and power
Connectors	1 RJ45 female connector
Output number/signal type	1 output, Luxi proprietary format, digital video, audio, control, Ethernet and power
Connectors	1 RJ45 female connector
Signal flows	Digital video, unidirectional downstream in the daisy chain; all other signals, bi-directional
Max distance between 2 adjacent devices	Typical 33 m (110') for WXGA or 720p, 18 m (60') for 1080p (note: depending heavily on the source and display device performance, signal format and cable quality)
Max number of Tx devices (sources)	Up to 31 (higher limit in future release)
Max number of Rx devices (displays)	Up to 12 (higher limit in future release)
Max number of devices in the daisy chain	32 (higher limit in future release); each Tx counts as one device, each Rx counts as two devices
Max number of video/audio feeds	1 selected at any given time (higher limit in future release); all displays would show the selected content. Up to 4 audio streams, distribution list selectable via RS-232
System video formats	The default video format is the most common native resolution and timing among all the displays connected in the daisy chain; it can be selected via RS-232 (150 models only)
System cables	Cat5e, Cat6, Cat7 unshielded or shielded cables; best result achieved with unshielded Cat6 550 MHz rated 23 AWG solid cables

RJ45 connector pin configurations

..... Standard EIA 568B pinout

Pin	Signal Name	Wire Color
1	HL-	Orange/white
2	HL+	Orange
3	GND	Green/white
4	VL0-	Blue
5	VL0+	Blue/white
6	GND	Green
7	VL2-	Brown/white
8	VL2+	Brown



8.4 Scaler in Tx devices (150 model only)

- Supported input signal formats See specs section 8.1
- Default input format The Tx device will request the source to send the signal format matching the daisy chain system format (see section 8.3) via EDID
- Pre-stored input formats 1024x768, 1280x800, 1366x768, 1280x1024, 1440x900, 1680x1050, 1600x900, 800x600, 640x480, 480p, 576p, 720p, 1080i, 1080p at 50 and 60 Hz
- Pre-stored output formats 720p and 1080p
- Other input and output formats User adjustable and savable via RS-232, local or remote
- Available adjustments H and V pixels, phase, start, shift, size; brightness, contrast, audio gain, audio delay
- Video sampling 30 bit total (10 bit per color), 165 MHz max
- Available colors 1 billion colors
- Audio sampling 24 bit, 96 or 48 kHz
- Audio delay adjustment range 0 to 680 ms at 48 kHz sampling frequency

8.5 Scaler in Rx devices (150 model only)

- Supported output signal formats ... See specs section 8.2
- Default input format Daisy chain system format (see section 8.3)
- Pre-stored input formats 800x600, 1024x768, 1280x800, 1366x768, 480p, 576p, 720p, 1080i, 1080p at 50 and 60 Hz
- Pre-stored output formats 720p and 1080p, or same resolution as input
- Other input and output formats User adjustable and savable via RS-232, local or remote
- Available adjustments H and V shift
- Video bit depth 30 bit total (10 bit per color), 165 MHz max clock
- Available colors 1 billion colors
- Audio bit depth 24 bit, 48 kHz clock

8.6 Controls

- Local contact closure control port:
 - TPR-110CR One "Show Me" port on 3.5 mm 2-pin captive screw connector
 - Pin configurations 1 = Contact, 2 = GND
 - TPR-150CR One "Show Me" port on 3.5 mm 4-pin captive screw connector
 - Pin configurations 1 = VGA, 2 = HDMI, 3 = DP, 4 = GND
- RS-232 control port
 - Serial control ports 1 RS-232, 3.5 mm 3-pin captive screw connector
 - Baud rate and protocol 9600 baud, 8 data bits, 1 stop bit, no parity
 - Pin configurations 1 = Tx, 2 = Rx, 3 = GND



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Control capability Local Presenter product with Luxi RS-232 commands; remote Presenter products with Luxi RS-232 commands and destination header; other remote devices connected to Presenters via RS-232 ports with Luxi pass thru command and destination headers

Pass thru command and response.. Max length equivalent to 25 ASCII characters excluding these symbols in quotations: “{”, “}”, “(”, “)”

Pass thru response wait time The remote RS-232 port will wait for response for 1 second after sending the pass thru command or until seeing the first carriage line return in the response whichever comes first

8.7 Ethernet

Ethernet functions The Ethernet ports on all Presenter products in a daisy chain function as an Ethernet switch; any one of them can be connected to internet and all the rest will get internet access

Connector 1 female RJ45 connector

Ethernet protocol 10/100BaseT, full duplex with auto-detect

8.8 Power

Source to receive power External power supply (not included) or remote power from other Presenter devices on the daisy chain

External power ratings 12 V 1 A DC for powering up to four of the 110 models and two of the 150 models

External power connector 3.5 mm 2-pin captive screw connector

Pin configurations 1 = +, 2 = GND

8.9 General

Temperature/humidity..... Storage -40° to +158°F (-40° to +70°C) / 10% to 90%, non-condensing

Operating..... +32° to +122°F (0° to +50°C) / 10% to 90%, non-condensing

Mounting hardware Not included; under or thru desk, in rack and above projector mountable, Luxi under desk mount P/N 78-002-01, compatible with Extron under desk mount 70-077-01, thru desk mount 70-077-02, rack shelf 60-604-21, 60-604-11, 60-604-02, above projector mount 70-217-01, 70-739-02, 70-734-01, 70-563-03

Enclosure type Steel

Enclosure dimensions (excluding connectors)

 TPR-110CR and RPR-110CR....4.29” W x 1.00” H x 3.00” D (10.9 cm W x 2.5 cm H x 7.6 cm D)

 TPR-150CR and RPR-150CR....4.29” W x 1.00” H x 6.00” D (10.9 cm W x 2.5 cm H x 15.2 cm D)

Unit net weight TPR-110CR 0.48 lbs (0.217 kg); RPR-110CR 0.49 lbs (0.223 kg)

Package box dimensions 110 models: 6.0” W x 1.1” H x 4.8” D (15.3 cm W x 2.8 cm H x 12.2 cm D)

Packaged product weight TPR-110CR 0.62 lbs (0.281 kg); RPR-110CR 0.63 lbs (0.285 kg)

Vibration ISTA/NSTA 1A in carton (International Safe Transit Association)

Regulatory compliance

 Safety CE, CUL/UL (power supply only)

 EMI/EMC CE, C-tick, FCC Class A, ICES, VCCI

MTBF..... 30,000 hours

Warranty 3 years parts and labor



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8.10 Part numbers:

Presenter products

Part number	Model	Description
74-017-01	TPR-110CR	Presenter transmitter, 100 series, daisy-chainable, HDMI input, rack mountable, optional 12 V power supply not included
74-018-01	TPR-150CR	Presenter transmitter, 100 series, daisy-chainable, HDMI, DisplayPort, VGA/audio inputs, rack mountable, optional 12 V power supply not included
74-020-01	RPR-110CR	Presenter receiver, 100 series, daisy-chainable, HDMI output, rack mountable, optional 12 V power supply not included
74-021-01	RPR-150CR	Presenter receiver, 100 series, daisy-chainable, HDMI and VGA/audio outputs, rack mountable, optional 12 V power supply not included

Accessories

Part number	Model	Description
69-002-01	PWA-121U	Power adaptor, 100-240V AC input on US plug, 12 V 1 A DC output on bare wires
78-002-01	UDM-100	Under desk mount, for Luxi Presenter and other 1/4 rack width products