

Specifications

HC 402 EU/MK (HCT 101 EU/MK, HCR 102)

NOTE: This product consists of a switching transmitter (HCT 101 EU or HCT 101 MK) and a scaling receiver (HCR 102), sold together as a system.

Video input

Number/signal type

Digital

HCT 101 EU, HCT 101 MK 1 HDMI (or single link DVI-D with the appropriate DVI-HDMI adapter)

HCR 102 1 HDMI (or single link DVI-D with the appropriate DVI-HDMI adapter)

Connectors

HCT 101 EU, HCT 101 MK 1 female HDMI type A

HCR 102 1 female HDMI type A

HDMI equalization..... Automatic

HDMI input cable length..... ≤50' (15 m) for resolutions up to 1920x1200 or 1080p @ 60 Hz; 2K, using Extron HDMI Pro Series cable

Resolution range..... 640x480 to 1600x1200 and 1920x1200*, 480p, 576p, 720p, 1080i, 1080p, and 2K

*reduced blanking

Return loss <30 dB @ 5 MHz

DC offset (max. allowable)..... 250 mV

Standards DVI 1.0, HDMI 1.4, HDCP 1.4

Interconnection between transmitter and receiver

Connector..... 1 female RJ-45 on each unit (transmitter and receiver)

Termination standard..... TIA/EIA T568B

Transmission distance..... Up to 230' (70 m) using shielded twisted pair (STP) cable or XTP DTP 24 STP cable with a 1080p, 60 Hz signal

Cable requirements Solid conductor, 24 AWG or better

Cable recommendations..... 400 MHz bandwidth, STP (shielded twisted pair)

NOTE: Extron XTP DTP 24 shielded twisted pair cable is strongly recommended for optimal performance.

Video processing

Decoder..... 12 bit digital (3D-adaptive comb filter)

Digital pixel data bit depth..... 8, 10, or 12 bits per channel; 165 MHz pixel clock

Colors..... 1 billion (10 bit processing)

Video output

Number/signal type..... 1 HDMI (with CEC)

Connectors..... 1 female HDMI

HDMI peripheral device power 250 mA

Scaled resolution 640x480^{6,8,9}, 800x600^{6,8,9}, 852x480^{6,8,9}, 1024x768^{6,8,9}, 1024x852^{6,8,9}, 1024x1024^{6,8,9}, 1280x768^{6,8,9}, 1280x800^{6,8,9}, 1280x1024^{6,8,9}, 1360x765^{6,8,9}, 1360x768^{6,8,9}, 1365x768^{6,8,9}, 1365x1024^{6,8,9}, 1366x768^{6,8,9}, 1400x1050^{6,8}, 1440x900^{6,8,9}, 1600x900^{6,8}, 1600x1200^{6,8}, 1680x1050^{6,8}, 1920x1200^{6,8}, HDTV 480p^{7,8}, 576p⁶, 720p^{3,4,5,6,7,8}, 1080i^{6,7,8}, 1080p^{1,2,3,4,5,6,7,8}, 2048x1080^{1,2,3,4,5,6,7,8}

¹ = at 23.98 Hz, ² = at 24 Hz, ³ = at 25 Hz, ⁴ = at 29.97 Hz, ⁵ = at 30 Hz,

⁶ = at 50 Hz, ⁷ = at 59.94 Hz, ⁸ = at 60 Hz, ⁹ = at 75 Hz

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Audio

Gain.....	Unbalanced output: 0 dB; balanced output +6 dB
Frequency response	20 Hz to 20 kHz, ±0.5 dB
THD + Noise	<0.1%, 20 Hz to 20k Hz at nominal level
S/N	>90 dB, at maximum input (unweighted)
Crosstalk	≤-80 dB @ 1 kHz, fully loaded
Stereo channel separation.....	>80 dB @ 1 kHz

Audio input

Number/signal type.....	2 digital audio, embedded in the HDMI signal
Connectors	2 female HDMI Type A
Source formats	
HDMI.....	LPCM up to 7.1/24-bit/192 kHz, Dolby TrueHD, Dolby Digital Plus, Dolby Digital EX, Dolby Digital 5.1, Dolby Digital 2/0 Surround, Dolby Digital 2/0, DTS-HD Master Audio, DTS-HD, DTS-ES Discrete 6.1, DTS-ES Matrix 6.1, DTS Digital Surround 5.1, DTS 2 Channel
Impedance.....	10k ohms, DC coupled
Nominal level.....	-10 dBV, unbalanced
Maximum level	+6 dBV, unbalanced
CMRR.....	>60 dB typical, unbalanced, @ 1 kHz

NOTE: 0 dBu = 0.775 Vrms, 0 dBV = 1 Vrms, 0 dBV ≈ 2 dBu

Audio output

Number/signal type.....	1 analog, line level stereo, balanced or unbalanced (variable) 1 digital, embedded in HDMI (fixed)
Connectors	(1) 3.5 mm captive screw connector, 5 pole 1 female HDMI
Impedance.....	50 ohms unbalanced, 100 ohms balanced
Gain error.....	±0.5 dB channel to channel
Maximum level (Hi-Z).....	>+15 dBu, balanced; >+9 dBu, unbalanced
Output volume range	0 to 100% in 1% steps

Communications

USB control port	1 receiver front panel female USB mini-B
USB standards	USB 2.0, high speed
Program control	Extron Product Configuration Software (PCS) for Windows®

Communications – control processor

Memory	
SDRAM	512 MB
Flash	512 MB
Software	
Configuration software.....	Extron Global Configurator® Plus and Professional
Utilities.....	Toolbelt, embedded web page
Ethernet	
Network interface controllers (NICs)	1
Connectors	1 female RJ-45 connector
Data rate	10/100Base-T, half/full duplex with autodetect
Protocols.....	DHCP, DNS, HTTP, HTTPS, ICMP, IEEE 802.1X, NTP, SFTP, SMTP, SNMP, SSH, TCP/IP, UDP/IP
Default settings.....	Link speed and duplex level = autodetected IP address = 192.168.254.250 Subnet mask = 255.255.255.0 Gateway = 0.0.0.0 DHCP = off DNS: 127.0.0.1

Specifications • HC 402 EU/MK (HCT 101 EU/MK, HCR 102) (Continued)

Serial	
Quantity/type.....	1 bidirectional RS-232
Connectors	(1) 3.5 mm captive screw connector, 3-pole
Baud rate and protocol.....	300 to 115200 baud (9600 baud = default); 8 (default) or 7 data bits; 1 (default) or 2 stop bits; no parity (default), even, or odd parity

NOTE: This 3-pole port supports software flow control. The default is no flow control.

Pin configuration.....	Pin 1 = Tx, 2 = Rx, 3 = Gnd
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Digital I/O

Quantity/type.....	4 digital input/output (configurable)
Connectors	(1) 3.5 mm captive screw connector, 6-pole

Digital inputs

Input voltage range 0 to 24 VDC, clamped at +30 VDC

Input impedance..... >10k ohms

Programmable pullup..... 1k ohms to +5 VDC

Threshold low to high..... 2.8 VDC

Threshold high to low..... 2.0 VDC

Digital outputs 250 mA sink from 24 VDC max.

Pin configurations..... Pins 1, 2, 4, 5 = digital I/Os 1, 2, 3, 4; pins 3, 6= Gnd

IR

Quantity/type..... 1 programmable TTL level (0 to 5 V) infrared (carrier and non-carrier) up to 300 kHz

Connector (1) 3.5 mm captive screw connector, 2-pole

Pin configuration..... Pin 1 = signal, 2 = Gnd

IR output carrier frequency 30 kHz to 300 kHz

General

Power supply.....	External, included Input: 100-240 VAC, 50-60 Hz Output: 12 VDC, 4.2 A, 50 watts
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Power consumption

System

Device 16.8 watts

Device and power supply... 19.0 watts

NOTE: Connect the included 4.2 A, 50 W, external power supply to the HCR 102, and the receiver remotely powers the HCT 101 EU or HCT 101 MK. Alternatively, the transmitter can be powered locally by an optional external power supply.

Temperature/humidity	Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing Operating: +32 to +104 °F (0 to +40 °C) / 10% to 90%, noncondensing
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Cooling	Convection, vents on top and sides
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Thermal dissipation

System

Device 56.4 BTU/hour

Device and power supply... 65.9 BTU/hour

Mounting

HCT 101 EU

Furniture or wall mount Yes, with an EU 1-gang electrical junction box and included EU 1-gang frame

HCT 101 MK

Furniture or wall mount Yes, with an MK 1-gang electrical junction box and included MK 1-gang frame

HCR 102

Rack mount..... Yes, with optional 1U high rack shelf or back of the rack mounting kit

Furniture mount Yes, with included, attached MBU 125 under-desk mounting brackets

Specifications • HC 402 EU/MK (HCT 101 EU/MK, HCR 102) (Continued)

Enclosure type Metal

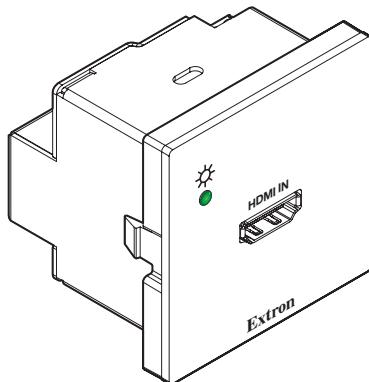
Enclosure dimensions

HCT 101 EU

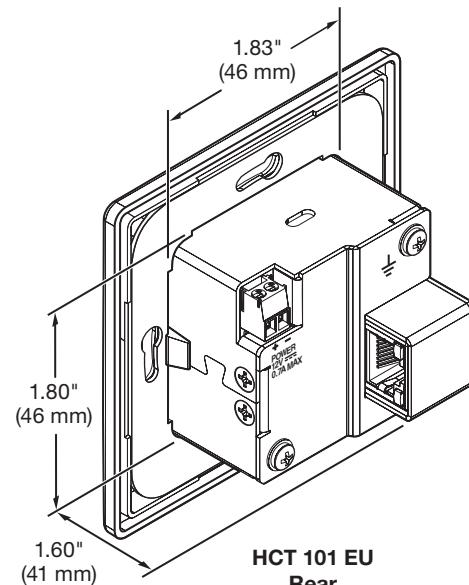
Frame 3.17" H x 3.17" W x 0.40" D (1-gang)
 (81 mm H x 81 mm W x 10 mm D)

Device 2.17" H x 2.17" W x 1.60" D
 (55 mm H x 55 mm W x 41 mm D)

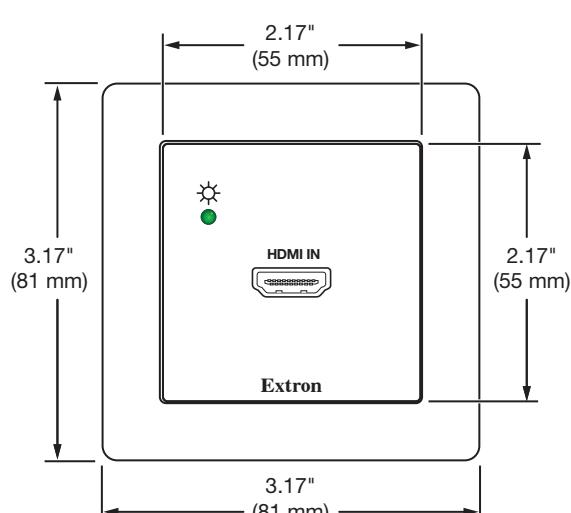
(Excludes faceplate. Fits mounting frames that accept 55 mm x 55 mm modules and fits many 1 gang EU junction boxes. Allow at least 2.4" [61 mm] depth in the wall or furniture.)



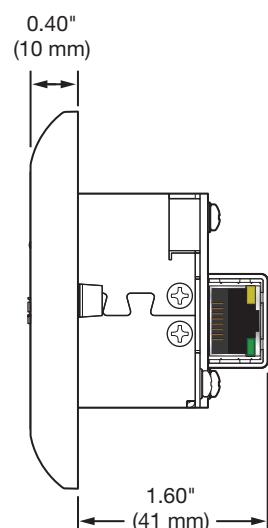
**HCT 101 EU/MK
Device Module**



**HCT 101 EU
Rear**



**HCT 101 EU
Front**



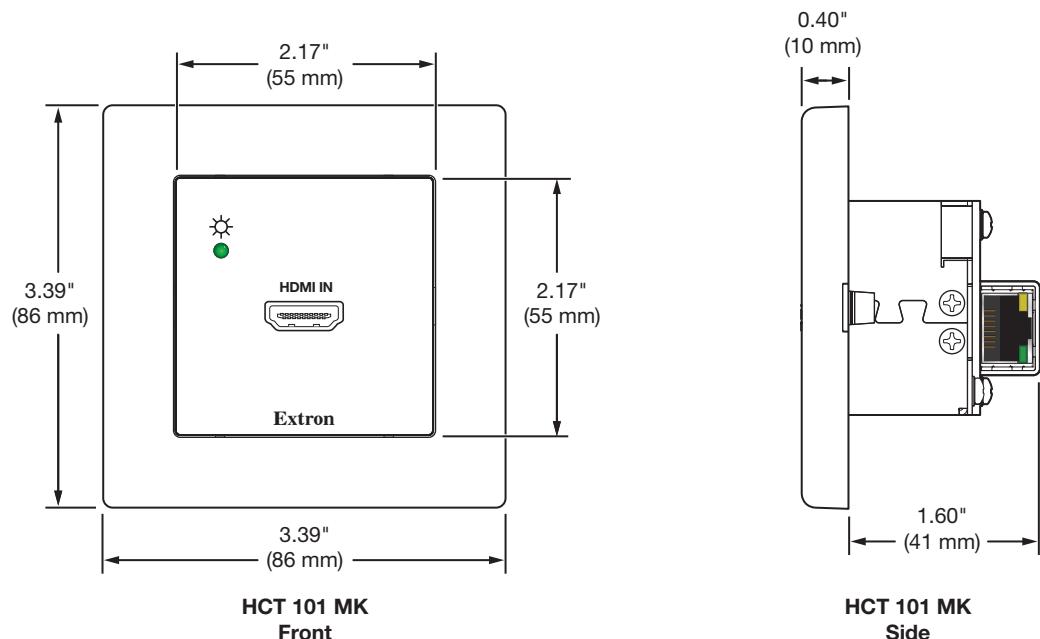
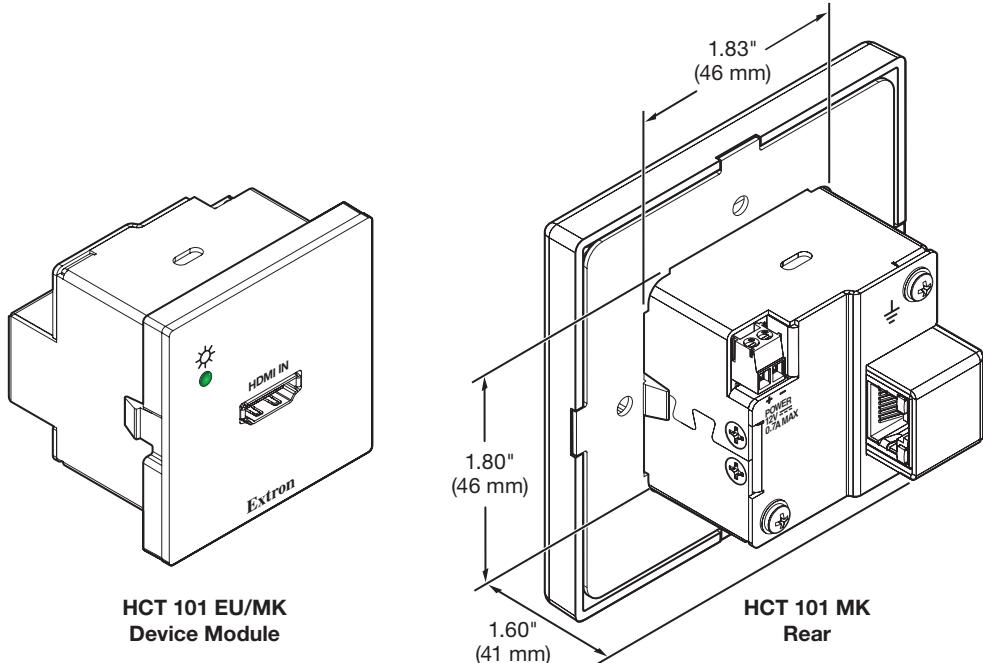
**HCT 101 EU
Side**

Specifications • HC 402 EU/MK (HCT 101 EU/MK, HCR 102) (Continued)

HCT 101 MK

Frame 3.39" H x 3.39" W x 0.40" D (1-gang)
 (86 mm H x 86 mm W x 10 mm D)

Device 2.17" H x 2.17" W x 1.60" D
 (55 mm H x 55 mm W x 41 mm D)
 (Excludes faceplate. Fits mounting frames that accept 55 mm x 55 mm modules and fits many 1 gang EU junction boxes. Allow at least 2.4" [61 mm] depth in the wall or furniture.)



HCR 102 1.0" H x 8.75" W x 6.0" D (half rack wide)
 (25 mm H x 222 mm W x 152 mm D)
 (Depth excludes connectors.)

Specifications • HC 402 EU/MK (HCT 101 EU/MK, HCR 102) (Continued)

Product weight

HCT 101 EU, HCT 101 MK 0.2 lb (0.1 kg)

HCR 102 1.2 lbs (0.6 kg)

Regulatory compliance..... CE**, C-tick, c-UL, FCC Class A**, ICES, UL, VCCI
Complies with the appropriate requirements of RoHS, WEEE

NOTE: **CE and FCC testing is conducted with STP (shielded twisted pair) I/O cable.

Product warranty 3 years parts and labor

Everlast power supply warranty..... 7 years parts and labor

NOTE: All nominal levels are at ±10%.

NOTE: Specifications are subject to change without notice.

NOTE: Shipping weights and dimensions are available at www.extron.com.

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