HC 403

MEETING SPACE COLLABORATION SYSTEM – DECORATOR-STYLE WALLPLATE

Powerful Solution for Meeting Rooms

▸ Decorator-style wallplate transmitter has one HDMI input and one VGA input

▸ HDMI input on receiver is ideal for connecting a local source, such as a ShareLink wireless collaboration gateway

▸ Signal extension for video, audio, and power up to 230 feet (70 meters) over a shielded CATx cable

▸ Built-in control capability

▸ Auto-switching between inputs

Extron

Introduction

The **HC 403** is an easy-to-use AV system solution for professional and educational spaces. It consists of a decorator-style wallplate switching transmitter and a matching scaling receiver that extend video, audio, and power up to 230 feet (70 meters) over a single CATx cable. The HC 403 features one HDMI and one VGA input at the transmitter, and one HDMI input at the receiver. Advanced Extron scaling technology ensures excellent image quality with maximum detail and color accuracy. Built-in control capabilities facilitate automatic source switching, display control, and integration with occupancy sensors for an intuitive, effortless user experience. Designed for professional integration, HC 403 transmitter and receiver enclosures are ideal for discreet placement in walls and lecterns, beneath tables, or wherever required.

Effortless Collaboration

The HC 403 is easy-to-use and fully operational out of the box. Automatic power control and switching allow users to collaborate with minimal interaction with the AV hardware. The system powers the display on when a presenter connects a source device, and automatically switches to new source devices as they are connected. When no signal is detected, the system will power down after a predetermined time period. For further flexibility, the system integrates with Extron OCS 100 occupancy sensors to automatically power the system on when users enter the room.

Bring Your Own Device

Connecting an Extron ShareLink wireless collaboration gateway to the receiver's HDMI input adds support for wireless BYOD – Bring Your Own Device environments, providing effective collaboration and content sharing from a wide variety of mobile devices.

Reliable Operation

The HC 403 is a highly reliable AV system solution designed for professional requirements. It delivers high quality extension of video and audio signals for maximum performance and reliability. Multiple input connections are provided to support a wide range of video sources and resolutions. Advanced Extron video scaling ensures excellent video quality and EDID Minder technology ensures a consistently reliable image at the display.

Easy to Integrate

The HC 403 is simple to install and easy to set up. Robust signal extension over CATx eliminates the need for long video cables. For simplified installation, remote power capability enables a single power supply connected at the receiver to provide power to both the transmitter and receiver. Managing system AV settings is easy with Extron PCS – Product Configuration Software, which also allows convenient control of multiple systems. Ethernet connectivity facilitates management, monitoring, and control of AV devices over a standard network. The HC 403 offers built-in control processing, eliminating the need to connect additional equipment. Ethernet, RS-232, IR, CEC, and digital I/O ports are available on the receiver to control and interface with displays, sensors, switchers, or other equipment. Configuration is simple using Global Configurator, Extron's powerful software for AV control systems, and no programming is required.

Expandable Functionality

HC 403 system solutions can be expanded for even more functionality with a variety of compatible products. Wireless collaboration may be added with a ShareLink gateway.

Control capability can be expanded by linking the HC 403 to another Pro Series control processor using the controller grouping function within Global Configurator Professional. GlobalViewer Enterprise software can be used to monitor and support HC 403-equipped collaboration rooms across the enterprise.
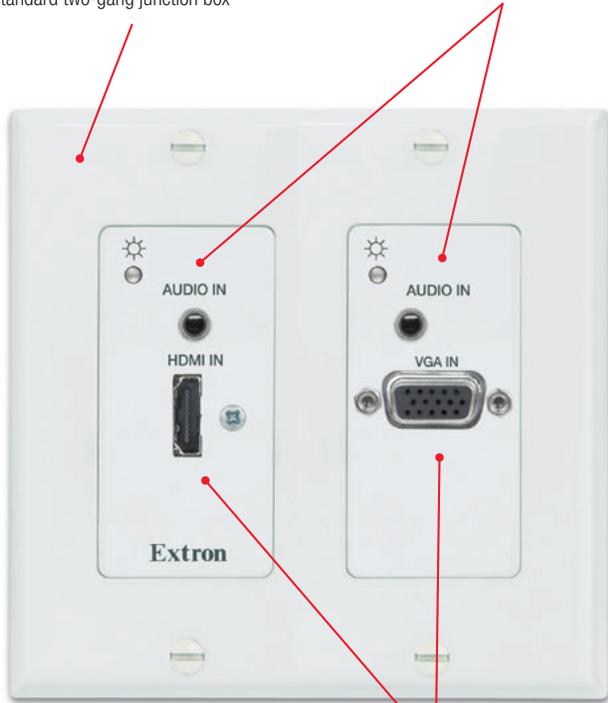
Decorator-Style Wallplate
Available in black or white. Mounts in a standard two-gang junction box

Selective audio embedding via two analog stereo inputs

Contact Closure Port
Contact closure enables easy integration with button panels for input switching

HC 403 Transmitter - HCT 102 D

Auto-input Switching
Auto-switching between HDMI and VGA inputs simplifies operation

Twisted Pair Output
Extends video, audio, and power over a shielded CATx cable up to 230 feet (70 meters)
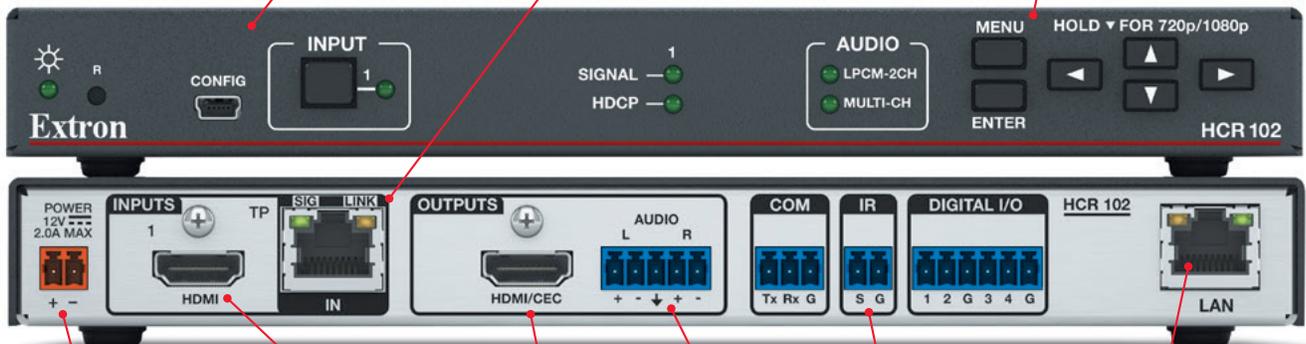
Advanced Extron Scaling Engine
Features 30-bit processing and selectable output resolutions up to 1920x1200, including 1080p/60 and 2K

Twisted Pair Signal Extension
Extends video, audio, and power over a shielded CATx cable up to 230 feet (70 meters)

Menu navigation controls for on-screen display

HC 403 Receiver - HCR 102

Remote Power Capability
DC Power is sent to transmitter over CATx when the receiver is connected to a local power supply

HDMI input is ideal for connecting a ShareLink wireless collaboration gateway or other local source

Stereo audio de-embedding

HDMI output with CEC control

Integrated control processing with RS-232, IR, and four Digital I/O ports

Ethernet port for network control and management

Features

Powerful solution for meeting rooms
The HC 403 system incorporates video switching, scaling, signal extension, and system control into a pair of compact, easily installed transmitter and receiver modules.

Decorator-style wallplate transmitter has one HDMI input and one VGA input

HDMI input on receiver is ideal for connecting a local source, such as a ShareLink wireless collaboration gateway

Signal extension for video, audio, and power up to 230 feet (70 meters) over a shielded CATx cable
The HC 403 provides high reliability and maximum performance on an easily installed cable infrastructure.

Supports computer and video resolutions up to 1920x1200, including 1080p/60 and 2K

Selectable output rates from 640x480 to 1920x1200, including 1080p/60 and 2K

Auto-switching between inputs
Auto-switching allows for intuitive operation in collaboration spaces. Multiple switching priority modes are available, including last-connected input and user-selectable priority.

Stereo audio embedding
Analog stereo audio may be selectively embedded onto any of the transmitter's video inputs.

Stereo audio de-embedding
Embedded HDMI two-channel PCM audio can be extracted to the receiver's analog audio output, or multi-channel bitstream formats can be passed to the HDMI output.

Remote power capability
The receiver sends power to the transmitter over the twisted pair connection for simplified installation.

Advanced scaling engine with 30-bit precision processing and motion-adaptive deinterlacing for signals up to 1080i

EDID Minder® automatically manages EDID communication between connected devices

HDCP compliant

User-selectable HDCP authorization
Allows individual inputs to appear HDCP compliant or non-HDCP compliant to the connected source, which is beneficial if the source automatically encrypts all content when connected to an HDCP-compliant device. Protected material is not passed in non-HDCP mode.

HDCP Visual Confirmation
When HDCP-encrypted content is transmitted to a non-HDCP compliant display, a full-screen green signal is sent to the display for immediate visual confirmation that protected content cannot be viewed on that display.

Supported HDMI specification features include data rates up to 6.75 Gbps, Deep Color, and HD lossless audio formats

Aspect ratio control
The aspect ratio of the video output can be controlled by selecting a FILL mode, which provides a full screen output, or a FOLLOW mode, which preserves the original aspect ratio of the input signal.

Automatic 3:2 and 2:2 pulldown detection

On-screen menus
Intuitive on-screen menus allow for easy system setup using the front panel controls.

Internal video test patterns and pink noise generator for calibration and setup

Includes MBU 125 under-table low-profile mount kit

Includes LockIt® HDMI cable lacing brackets

Built-in control capability
Designed for handling essential AV functions, such as display on/off, input switching, volume control, and control of AV devices over Ethernet, RS-232, IR, and CEC connections.

Supports TouchLink® Pro touchpanels

Supports secure industry standard communication protocols
The HC 403 uses industry standard communication protocols, including HTTP (insecure), HTTPS, SSH, SFTP, SMTP, NTP, Discovery Service, DHCP, DNS, ICMP, and IPv4.

Automatic display control via bi-directional RS-232, Ethernet, IR, or CEC

Four Digital I/O ports

Contact closure port for transmitter input switching

Supports popular BMS - Building Management System protocols, such as BACnet, KNX, and DALI

Manage, monitor, and control AV devices using a standard Ethernet network

Supports 10/100Base-T

Supports control system synchronization
Synchronization will allow users to retain and recover the state of their configured endpoints in case of network or power failure.

Multi-level password protection

Fully configurable using Extron control system software

Library of Pro Series device drivers for use with Global Configurator

Mounts in an included two-gang decorator style wallplate
The two gang decorator style wallplate is available in black or white to blend with a wide range of environments.

1" (2.5 cm) high, half rack width metal enclosure
Low profile receiver enclosure can be installed discreetly wherever needed.

Software Setup

PCS SOFTWARE

The HC 403 can be easily configured using Product Configuration Software. The user-friendly interface makes it simple to adjust every aspect of system performance including video and audio settings, HDCP authorization, power down conditions, and more.
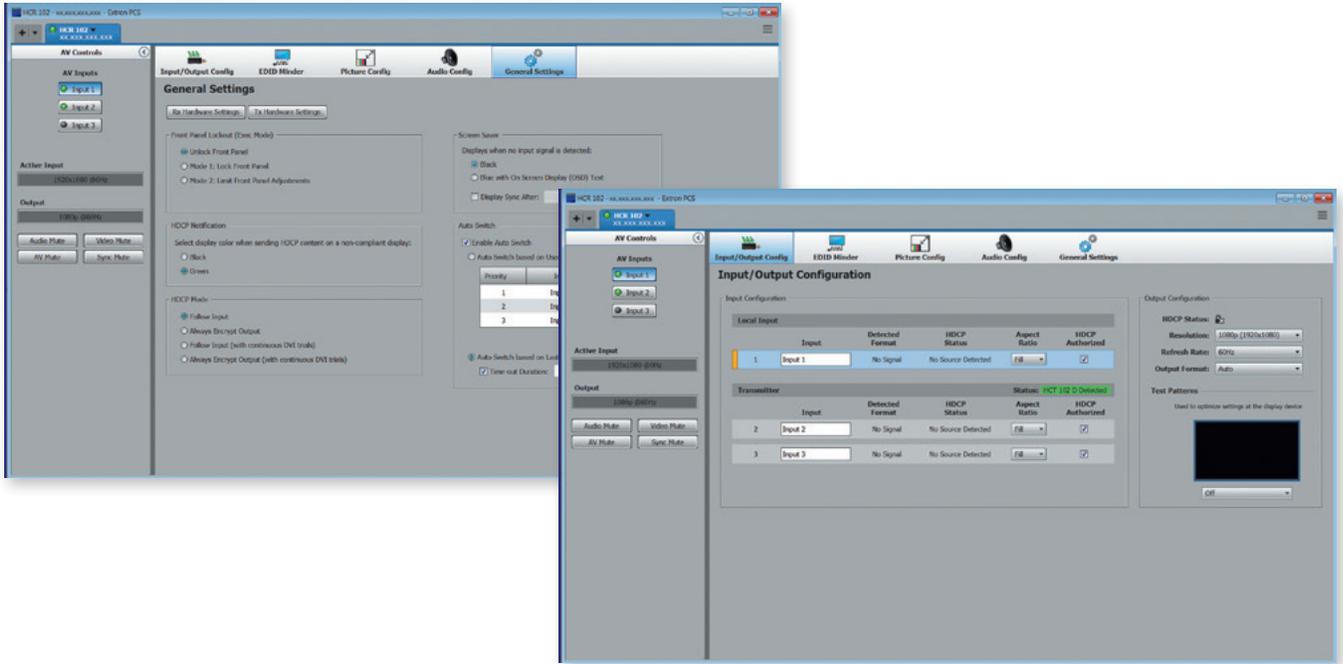
GLOBAL CONFIGURATOR SOFTWARE

The HC 403 can be configured using Global Configurator Plus or Global Configurator Professional software or programmed using Extron Global Scripter. For enterprise-wide applications, GlobalViewer® Enterprise can provide centralized AV resource monitoring, management, and control over a computer network. Global Configurator control system configuration software offers powerful features such as conditional logic, variables, and macros to provide flexibility for sophisticated control system designs.
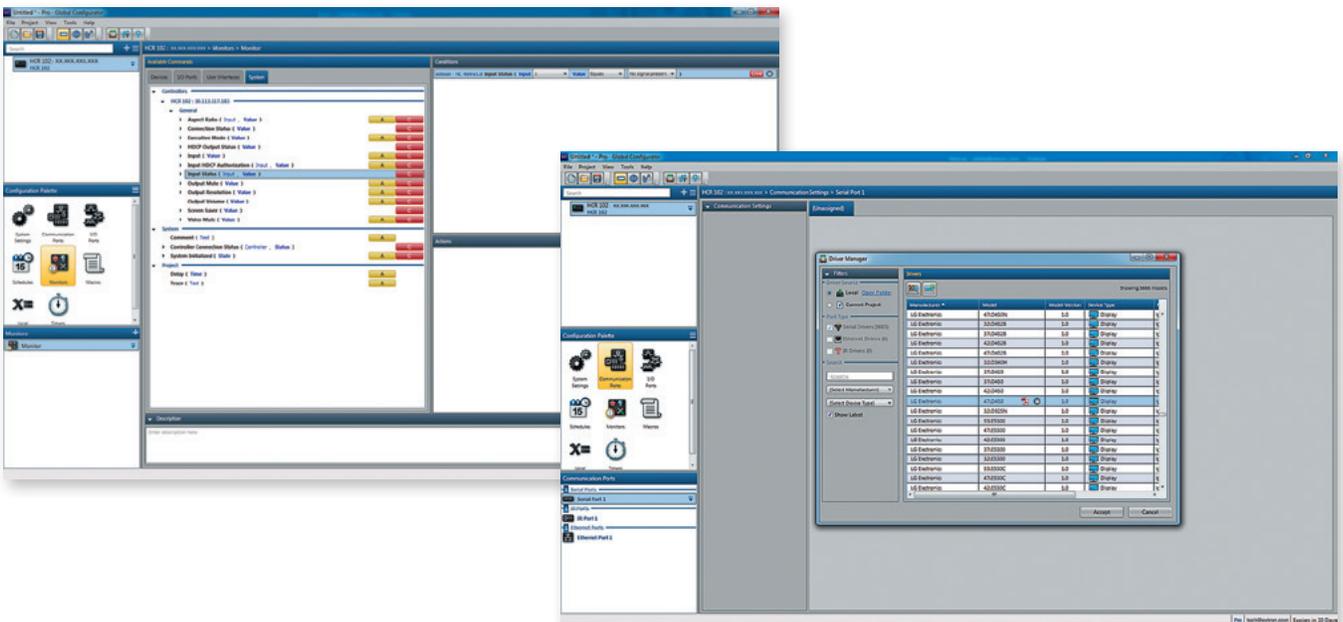
Applications

INTUITIVE OPERATION RIGHT OUT OF THE BOX

This basic HC 403 system will power up automatically and display the correct image when a laptop is connected for presentation. It will switch automatically upon connection of another laptop. Built-in video scaling and signal extension ensure consistently high picture quality and maximum signal integrity. The system will power down automatically when the meeting is over and there are no sources connected.
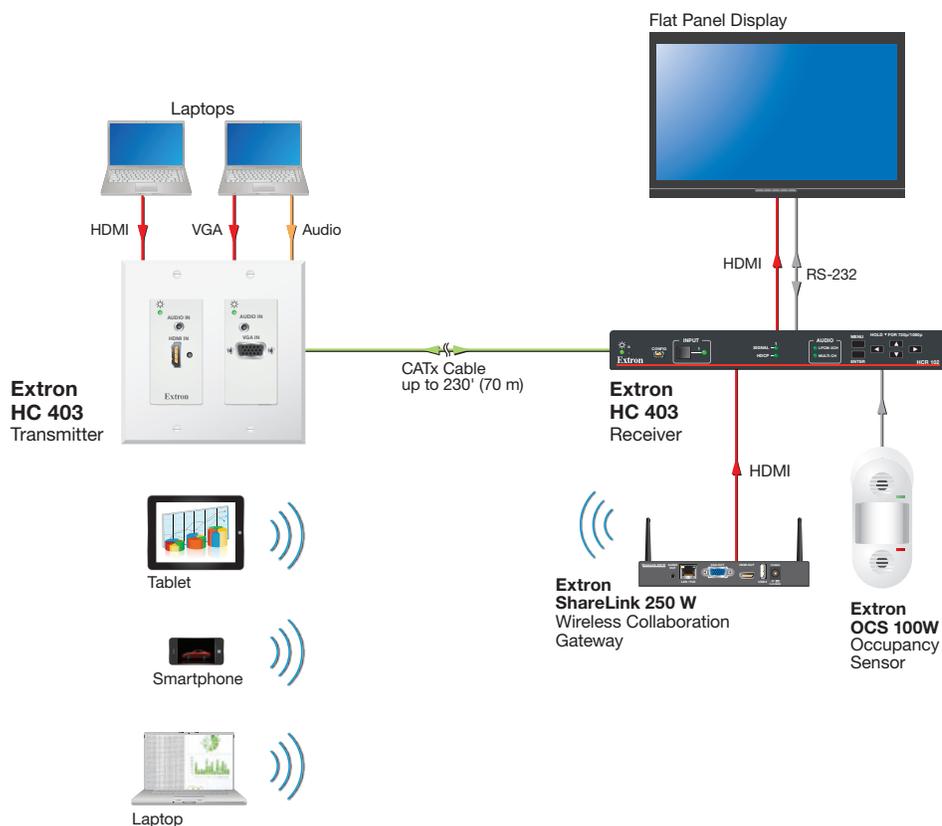
Flat Panel Display

Laptops

HDMI   VGA   Audio

AUDIO IN   AUDIO IN

HDMI IN   VGA IN

Extron

**Extron
HC 403**
Transmitter

CATx Cable
up to 230' (70 m)

HDMI/CEC

**Extron
HC 403**
Receiver
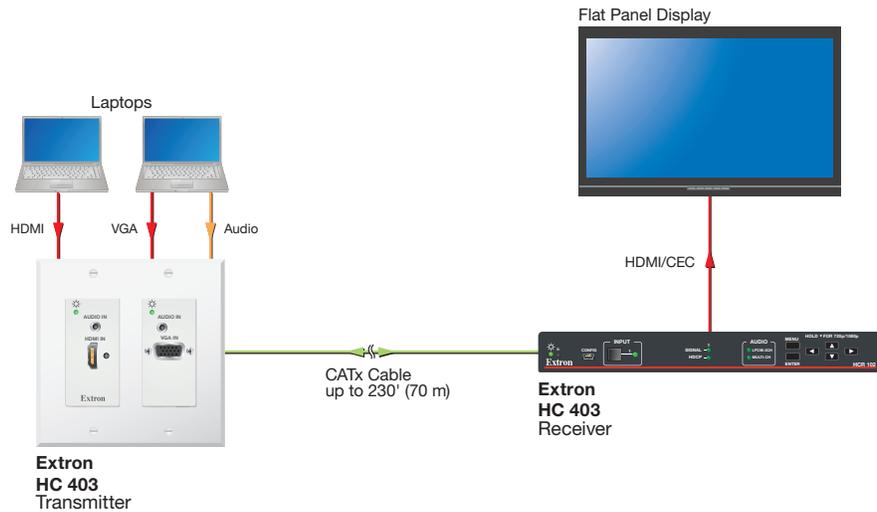
WIRED AND WIRELESS BYOD COLLABORATION

HC 403 systems can be expanded to support wireless collaboration by adding a ShareLink Wireless Collaboration Gateway to the receiver's HDMI input. Input switching remains automatic, requiring minimal user effort to operate. The HC 403 interfaces directly with the OCS 100W occupancy sensor for automatic system power control in facilities where always-active video sources are attached.

Flat Panel Display

Laptops

HDMI   VGA   Audio

AUDIO IN   AUDIO IN

HDMI IN   VGA IN

Extron

**Extron
HC 403**
Transmitter

CATx Cable
up to 230' (70 m)

HDMI   RS-232

**Extron
HC 403**
Receiver

Tablet

HDMI

Smartphone

**Extron
ShareLink 250 W**
Wireless Collaboration
Gateway

**Extron
OCS 100W**
Occupancy
Sensor

Laptop

ENTERPRISE RESOURCE MANAGEMENT, MONITORING, AND CONTROL

GlobalViewer Enterprise software makes it easy to remotely manage multiple HC 403 systems that are on the network across the enterprise, as shown below. GVE simplifies AV system resource management with intuitive control for hundreds of common AV tasks. Whether you're working with 5 or 5000 rooms, GVE provides a powerful, flexible way to manage, monitor, and control nearly any device over a standard network. It's quite common for corporations, universities, and government agencies to have hundreds of collaboration spaces spread over broad areas. GVE provides you with all the information and help desk resources you need to effectively manage the ever-increasing demand for AV technology.

Huddle Space

Extron
HC 403
Transmitter

CATx Cable
up to 230' (70 m)

Extron
HC 403
Receiver

Ethernet

TCP/IP
Network

HDMI   RS-232

Display

Huddle Space

Extron
HC 403
Transmitter

CATx Cable
up to 230' (70 m)

Extron
HC 403
Receiver

Ethernet

TCP/IP
Network

HDMI   RS-232

Display

AV Resource Management

HDMI

Extron
Show Me
Cable

HDMI   VGA

Extron
Cable Cubby 700
Cable Access Enclosure

Audio

Extron
HC 404
Transmitter

CATx Cable
up to 230' (70 m)

Extron
HC 404
Receiver

Ethernet

TCP/IP
Network

HDMI   RS-232

Huddle Room   Display

Extron
DTP T DSW 4K 333
Transmitter

CATx Cable
up to 330' (100 m)

Ethernet

TCP/IP
Network

Extron
DTP CrossPoint
84 4K IPCP SA
Scaling Presentation Matrix

CATx Cable
up to 330' (100 m)

CATx Cable
up to 330' (100 m)

Extron
DTP HDMI 4K
330 Rx
Receiver

HDMI

Extron
DTP HDMI 4K
330 Rx
Receiver

HDMI

Display   Display

Boardroom

NOTE: This product consists of a switching transmitter (HCT 102 D) and a scaling receiver (HCR 102), sold together as a system, with a twisted pair cable linking the transmitter and receiver.

VIDEO INPUT

Connectors	
HCT 102 D	1 female 15-pin HD
	1 female HDMI type A
HCR 102	1 female HDMI type A
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

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

Digital pixel data bit depth	8, 10, or 12 bits per channel; 165 MHz pixel clock (HDMI)
Colors	1 billion (10 bit processing)

VIDEO OUTPUT

Connectors	1 female HDMI
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], 576p[6], 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

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)

AUDIO INPUT

Connectors	2 female 3.5 mm mini stereo jacks; tip (L), ring (R), sleeve (ground)
	2 female HDMI Type A

AUDIO OUTPUT

Connectors	(1) 3.5 mm captive screw connector, 5 pole
	1 female HDMI
Output volume range	0 to 100% in 1% steps

COMMUNICATIONS

Contact closure remote control	(1) 3.5 mm, 3 pole captive screw connector
USB control port	1 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

Software and control options	
Software	Extron Global Configurator® Plus and Professional for Windows®
Ethernet control	
Connectors	1 female RJ-45 connector
Data rate	10/100Base-T, half/full duplex with autodetect
Protocols	DHCP, DNS, HTTP, HTTPS, ICMP, NTP, SFTP, SMTP, SNMP, SSH, TCP/IP, UDP/IP
Serial control	
Quantity/type	1 bidirectional RS-232
Digital I/O control	
Quantity/type	4 digital input/output (configurable)
Digital inputs	
Input voltage range	0 to 24 VDC, clamped at +30 VDC
Digital outputs	250 mA sink from 24 VDC max.
IR control	
Quantity/type	1 programmable TTL level (0 to 5 V) infrared (carrier and non-carrier) up to 300 kHz

GENERAL

Power supply	External
	Input: 100-240 VAC, 50-60 Hz
	Output: 12 VDC, 3 A, 36 watts
Power consumption	
System	

NOTE: Connect the included 3 A, 36 W, external power supply to the HCR 102, and the receiver remotely powers the HCT 102 D. Alternatively, the transmitter can be powered locally by an optional external power supply.

Mounting	
HCT 102 D	
Furniture or wall mount	Yes, with 2-gang junction box or mud ring mounting bracket and the included decorator-style wallplate, or with an optional AAP 424 panel
HCR 102	
Furniture mount	Yes, with included, attached MBU 125 under-desk mounting brackets
Vibration	ISTA 1A in carton (International Safe Transit Association)
Regulatory compliance	
Safety	CE, c-UL, UL
EMI/EMC	CE**, C-tick, FCC Class A**, ICES, VCCI
Environmental	Complies with the appropriate requirements of RoHS, WEEE

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

Model	Version Description	Part number
HC 403	Meeting Collaboration System, Decorator Tx, White	42-271-01
HC 403	Meeting Collaboration System, Decorator Tx, Black	42-271-02

For complete specifications, please go to www.extron.com
Specifications are subject to change without notice.

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