

# Specifications

## Annotator 300

### Video input

Number/signal type .....	1 RGB, RGBcvs, component (interlaced, progressive, HD), S-video, composite video 1 HDMI (HDCP compliant) 1 DisplayPort (HDCP compliant)
Connectors .....	1 female 15-pin HD 1 female HDMI 1 female DisplayPort
Nominal level .....	1 Vp-p for Y of component video and S-video, and for composite video 0.7 Vp-p for RGB and for R-Y and B-Y of component video 0.3 Vp-p for C of S-video
Minimum/maximum levels.....	Analog: 0.0 V to 1.0 Vp-p with no offset at unity gain
Impedance .....	75 ohms
Horizontal frequency.....	15 kHz to 100 kHz
Vertical frequency.....	24 Hz to 75 Hz
Resolution range	
VGA and HDMI.....	640x480 to 1600x1200 and 1920x1200* NTSC, PAL, SECAM, 480i, 480p, 576i, 576p, 720p, 1080i, 1080p, and 2k
DisplayPort .....	640x480 to 1600x1200 and 2560x1600* 480p, 576p, 720p, 1080i, 1080p, and 2k *reduced blanking
Return loss.....	<-30 dB @ 5 MHz
DC offset (max. allowable) .....	0.5 V
Standards.....	DVI 1.0, HDMI, DisplayPort 1.1a, HDCP

### Video processing

Decoder .....	12 bit digital (3D-adaptive comb filter)
Analog sampling .....	12 bits per color; 13.5 MHz standard (video), 170 MHz standard (RGB)
HDMI pixel data bit depth .....	8, 10, or 12 bits per channel; 165 MHz pixel clock
Display Port pixel data bit depth .....	8, 10, or 12 bits per channel; 270 MHz pixel clock
Colors .....	1 billion, (10 bit processing)

### Video output

Number/signal type .....	2 HDMI (HDCP compliant) 1 DTP (HDCP compliant)
Connectors .....	2 female HDMI 1 female RJ-45 connector
Digital bit depth .....	8 or 10 bit, automatic
Vertical frequency.....	23.98 Hz, 24 Hz, 25 Hz, 29.97 Hz, 30 Hz, 50 Hz, 59.94 Hz, 60 Hz
Scaled resolution .....	640x480 <sup>8</sup> , 800x600 <sup>8</sup> , 1024x768 <sup>8</sup> , 1280x768 <sup>8</sup> , 1280x800 <sup>8</sup> , 1280x1024 <sup>8</sup> , 1360x768 <sup>8</sup> , 1366x768 <sup>8</sup> , 1440x900 <sup>8</sup> , 1400x1050 <sup>8</sup> , 1600x900 <sup>8</sup> , 1600x1200 <sup>8</sup> , 1680x1050 <sup>8</sup> , 1920x1200 <sup>8</sup> HDTV: 480p <sup>7,8</sup> , 576p <sup>6</sup> , 720p <sup>3,4,5,6,7,8</sup> , 1080i <sup>6,7,8</sup> , 1080p <sup>1,2,3,4,5,6,7,8</sup> , 2048x1080 <sup>1,2,3,4,5,6,7,8</sup> <sup>1</sup> = 23.98 Hz, <sup>2</sup> = 24 Hz, <sup>3</sup> = 25 Hz, <sup>4</sup> = 29.97 Hz, <sup>5</sup> = 30 Hz, <sup>6</sup> = 50 Hz, <sup>7</sup> = 59.94 Hz, <sup>8</sup> = 60 Hz

## Interconnection between Annotator 300 and DTP/HDBT receiver

Termination standard.....	TIA/EIA T568B
Signal transmission distance	
1080p @ 60 Hz.....	Up to 230' (70 m) using shielded twisted pair cable or XTP DTP 24 STP cable
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

## Audio input

Number/signal type .....	1 embedded digital audio from HDMI 1 embedded digital audio from DisplayPort
Connectors .....	1 female HDMI 1 female DisplayPort

## Audio output

Number/signal type .....	2 embedded digital audio on HDMI 1 DTP 230 (embedded digital and remote balanced/unbalanced analog) or HDBaseT (embedded digital)
Connectors .....	2 female HDMI 1 RJ-45

## Sync

Input type .....	RGBHV, RGBS, RGsB, RGBcV, bi-level or tri-level component video
Input standards .....	NTSC 3.58, NTSC 4.43, PAL, SECAM
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
Input impedance .....	Horizontal: 75 ohms Vertical: 510 ohms

## Control/remote — signal processor

Serial control port.....	1 bidirectional RS-232, 3-pin captive screw connector
Baud rate and protocol.....	9600, 8 data bits, 1 stop bit, no parity (default)
Serial control pin configuration.....	1 = Tx, 2 = Rx, 3 = Gnd
Contact closure .....	1 rear panel 3.5 mm captive screw connector, 3 pole
Contact closure pin configurations .	Pin 1 = input 1, 2 = input 2, 3 = input 3
USB control port.....	1 female mini USB on front panel
USB standards .....	USB 2.0, high speed
Ethernet control port.....	1 RJ-45 female connector
Ethernet data rate .....	10/100Base-T, half/full duplex with autodetect
Ethernet protocol .....	ARP, ICMP (ping), IP, TCP, UDP, DHCP, HTTP, SMTP, Telnet
Ethernet default settings .....	Link speed and duplex level = autodetected IP address = 192.168.254.254 Subnet mask = 255.255.0.0 Gateway = 0.0.0.0 DHCP = off
Web server.....	Up to 200 simultaneous sessions 40 MB nonvolatile user memory
Program control .....	Extron control/configuration program for Windows® Extron Simple Instruction Set (SIS™)

## Control/remote — external device (pass-through, unidirectional or bidirectional) (RS-232/IR over DTP)

**NOTE:** Protocol is mirrored between the connected DTP 230 endpoint and the “Over DTP” port on Annotator 300. Signals from a control device pass into the Annotator 300 “Over DTP” port, is embedded with the DTP signal, and sent to individual DTP 230 Rx endpoint for control of a remote sink device. The “Over DTP” port is simply a pass-through connection to a DTP endpoint. There is no RS-232 or IR insertion from any Annotator 300 control port to the “Over DTP” port.

### Serial control pass-through ports

Annotator 300 output/DTP Rx..	RS-232 via (1) 3.5 mm, 5 pole captive screw connector (shared with IR port)
Baud rates.....	300 to 38400
Protocol .....	8 or 7 data bits 1 or 2 stop bits no parity (default) even or odd parity
Serial control pin configuration.....	1 = Tx, 2 = Rx, 3 = Gnd
IR pass-through control ports .....	TTL level (0 to 5 V) modulated infrared control from 30 kHz up to 60 kHz
Annotator 300 output/DTP Rx..	(1) 3.5 mm captive screw connector, 5 pole (shared with RS-232 port)
IR control pin configuration.....	3 = Gnd 4 = IR Tx, 5 = IR Rx

## Control/remote — annotation

Number/signal type .....	32 USB devices (via hubs)
Connectors .....	3 USB type A connectors (2 on rear and 1 on front)
USB standards .....	USB 2.0, USB 1.1, USB 1.0 compatible
USB data rates.....	Low speed (1.5 Mbps), full speed (12 Mbps)

## General

Power supply.....	Internal Input: 100-240 VAC, 50-60 Hz
Power consumption .....	37 watts
Auxiliary power output	
USB .....	5 VDC, 500 mA on each USB connector
DTP output .....	Supports one endpoint (one DTP Rx)
Temperature/humidity .....	Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing
Cooling.....	Fan, air flows from right to left (as viewed from the front panel)
Thermal dissipation .....	81.4 BTU/hr
Mounting	
Rack mount.....	Yes, with pre-installed brackets.
Furniture mount .....	Yes, with optional under-desk or through-desk mounting kit
Enclosure type.....	Metal
Enclosure dimensions .....	1.75" H x 17.5" W x 9.5" D (1U high, full rack wide) (4.4 cm H x 44.5 cm W x 24.1 cm D) (Depth excludes connectors and knobs.)
Product weight.....	5.4 lbs (2.4 kg)
Shipping weight.....	7 lbs (4 kg)
DIM weight.....	8 lbs (4 kg)
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.
Warranty.....	3 years parts and labor

**NOTE:** All nominal levels are at ±10%.

**NOTE:** Specifications are subject to change without notice.