

## Specifications

### FOX3 T 301/311/201 PC

#### TRUE 4K specification

| Max. 4K Capabilities              |                 |                          |
|-----------------------------------|-----------------|--------------------------|
| Resolution and Refresh Rate       | Chroma Sampling | Max. Bit Depth per Color |
| 4096 x 2160 at 60 Hz <sup>1</sup> | 4:4:4           | 8 bit                    |
| 3840 x 2160 at 60 Hz <sup>1</sup> |                 |                          |
| 4096 x 2160 at 30 Hz <sup>1</sup> |                 | 10 bit                   |
| 3840 x 2160 at 30 Hz <sup>1</sup> |                 |                          |
| 4096 x 2160 at 60 Hz <sup>2</sup> | 4:2:2           | 12 bit                   |
| 3840 x 2160 at 60 Hz <sup>2</sup> |                 |                          |
| 4096 x 2160 at 30 Hz <sup>2</sup> | 4:4:4           |                          |
| 3840 x 2160 at 30 Hz <sup>2</sup> |                 |                          |

Frame rate<sup>3</sup> ..... 24, 25, 30, 50, or 60 fps  
 Chroma sampling<sup>3</sup> ..... 4:4:4, 4:2:2  
 Color bit depth<sup>2,3</sup> ..... 8, 10, or 12 bits per color  
 Signal type ..... HDMI 2.0, HDCP 2.3  
 Max. video data rate ..... 18.0 Gbps

**NOTE:** <sup>1</sup>Supports lossless 4K video over one fiber or uncompressed 4K video over two fibers.  
<sup>2</sup>Supports 12-bit color bit depth for uncompressed 4K video over two fibers. When using a FOX3 SR scaling receiver, the scaler must be in bypass mode to pass 4K video with a 12-bit color bit depth.  
<sup>3</sup>Subject to the maximum data rate limit. Use our calculator at [www.extron.com/8KdataRate](http://www.extron.com/8KdataRate) to determine video parameters supported by this data rate.

**NOTE:** The analog audio signal(s) is (are) digitized in the transmitter, sent through the fiber cable, and converted back to analog audio in the receiver.

**NOTE:** Optical data rate is 10 Gbps over one fiber and 20 Gbps over two fibers.

**NOTE:** These transceivers are class 1 laser products. They meet the safety regulations of IEC-60825.

#### Optical fiber interconnection between transmitter and receiver

Number/type ..... 1 or 2 SFPs  
 Connectors ..... 1, 2, or 3 LC connectors  
 Operating distance  
     Singlemode ..... 20 km (12.4 miles) with singlemode (SM) cables  
     Multimode ..... 500 m (1640 feet) with 50 µm OM4 4700 MHz bandwidth laser optimized multimode cables

**NOTE:** The system works with OM1, OM2, and OM3 fiber at reduced distances.

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**NOTE:** Operating distance is approximate. These are typical maximum distances that may vary depending on factors such as fiber type, fiber bandwidth, connector splicing, losses, modal or chromatic dispersion, environmental factors, and kinks.

|                               |  |
|-------------------------------|--|
| Nominal peak wavelength ..... | 850 nm for multimode, 1310 nm for singlemode |
| Data rate.....                | 10.0 Gbps (1 fiber) or 20.0 Gbps (2 fibers)  |
| Transmission power            |  |
| Singlemode .....              | -5.2 dBm, typical                            |
| Multimode .....               | -3.3 dBm, typical                            |
| Maximum receiver sensitivity  |  |
| Singlemode .....              | -12.6 dBm, typical                           |
| Multimode .....               | -13.0 dBm, typical                           |
| Optical loss budget           |  |
| Singlemode .....              | +7.4 dB, maximum                             |
| Multimode .....               | +9.7 dB, maximum                             |

### Video

**NOTE:** Appropriate HDMI to DVI cables or adapters are required for DVI signal output.

|                            |   |
|----------------------------|---|
| Maximum data rate .....    | 18.0Gbps (6.0 Gbps per color)   |
| Maximum pixel clock.....   | 594 MHz   |
| Resolution range.....      | 640x480 <sup>8</sup> up to 4096x2160 <sup>1,2,3,4,5,6,7,8</sup> ,<br>480p <sup>7,8</sup> , 576p <sup>6</sup> , 720p <sup>3,4,5,6,7,8,9</sup> , 1080i <sup>6,7,8</sup> , 1080p <sup>1,2,3,4,5,6,7,8,9</sup> ,<br>2K <sup>1,2,3,4,5,6,7,8</sup> , 3840x2160 <sup>1,2,3,4,5,6,7,8</sup> , 4096x2160 <sup>1,2,3,4,5,6,7,8</sup> |
| Frame rate .....           | 1 <sup>23.98</sup> Hz, 2 <sup>24</sup> Hz, 3 <sup>25</sup> Hz, 4 <sup>29.97</sup> Hz, 5 <sup>30</sup> Hz, 6 <sup>50</sup> Hz, 7 <sup>59.94</sup> Hz, 8 <sup>60</sup> Hz, 9 <sup>120</sup> Hz  |
| Color space .....          | 4:4:4, 4:2:2  |
| Color bit depth.....       | 8, 10, and 12 bits per color  |
| Signal type.....           | DVI 1.0, HDCP 1.4, HDMI 2.0, HDCP 2.3   |
| Horizontal frequency ..... | 24 kHz to 135 kHz   |
| Vertical frequency.....    | 24 Hz to 120 Hz (depending on the resolution)   |
| Format.....                | RGB and YCbCr digital video   |

### Video input and loop out

|                              |   |
|------------------------------|---|
| Number/signal type.....      | 1 HDMI input<br>1 HDMI loop out                             |
| Connectors.....              | 1 female HDMI input type A<br>1 female HDMI loop out type A |
| Power for active cables..... | TBD watts   |

### Audio

|                                |  |
|--------------------------------|--|
| Gain.....                      | Unbalanced output: -6dB                      |
| Frequency response .....       | 20 Hz to 20 kHz, ±0.5 dB                     |
| THD + Noise .....              | <0.03% @ 20 Hz to 20 kHz at maximum output   |
| S/N.....                       | >90 dB at maximum input (7dBV), (unweighted) |
| CMRR.....                      | 65 dB @ 20 Hz to 20 kHz                      |
| Stereo channel separation..... | >80 dB @ 1 kHz to 20 kHz                     |
| Bit depth.....                 | 16, 20, 24                                   |
| Sampling rate.....             | 48 kHz                                       |

# Specifications • FOX3 T 301/311/201 PC (Continued)

## Audio input

|                         |  |
|-------------------------|--|
| Number/signal type..... | 1 digital audio, de-embedded from HDMI (2-CH, PCM only) or<br>1 analog stereo, unbalanced                              |
| Connectors.....         | 1 female HDMI (shared with video input)<br>(1) 3.5 mm mini stereo jack, 2 channels; tip (L), ring (R), sleeve (ground) |
| Source formats.....     | 2-CH LPCM  |
| Impedance.....          | >10k ohms, DC coupled  |
| Nominal level.....      | -10 dBV (316 mVrms)  |
| Maximum level.....      | +7 dBV unbalanced  |

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

## Communications

|  |   |
|--|---|
| Program control.....                   | Extron Product Configuration Software<br>Extron Simple Instruction Set (SIS™) |
| RS-232 over fiber                      |   |
| Pass-through port.....                 | (1) 3.5 mm captive screw connector, 3-pole                                    |
| Pass-through baud rate.....            | 9600 to 115,200 baud  |
| Pass-through pin<br>configuration..... | 1 = Tx, 2 = Rx, 3 = GND   |

## USB host ports

|                               |                                  |
|-------------------------------|----------------------------------|
| FOX3 T 301 PC                 |                                  |
| Number/signal type.....       | 1-port USB HID<br>1-port USB 2.0 |
| Connectors.....               | 2 USB type B, female             |
| Maximum built-in USB HUBs.... | 1                                |
| Minimum built-in USB HUBs.... | 1                                |
| FOX3 T 311 PC                 |                                  |
| Number/signal type.....       | 1-port USB HID                   |
| Connector.....                | 1-port USB type B, female        |
| Maximum built-in USB HUBs.... | 1                                |
| Minimum built-in USB HUBs.... | 1                                |

## General

|                           |  |
|---------------------------|--|
| Power supply.....         | Internal<br>Powered by the PowerCage 411 Enclosure   |
| Power consumption         |  |
| FOX3 T 201 PC.....        | TBD watts  |
| FOX3 T 301 PC.....        | TBD watts  |
| FOX3 T 311 PC.....        | TBD watts  |
| Temperature/humidity..... | Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing<br>Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing                   |
| Cooling.....              | Fans, front to back within the PowerCage 411 enclosure   |
| Thermal dissipation       |  |
| FOX3 T 201 PC.....        | TBD BTU/hr   |
| FOX3 T 301 PC.....        | TBD BTU/hr   |
| FOX3 T 311 PC.....        | TBD BTU/hr   |
| Module dimensions.....    | Each fits a single slot opening in a PowerCage 411 enclosure<br>1.6" H x 3.5" W x 8.0"<br>(2.5 cm H x 22.2 cm W x 20.3 cm D)<br>(Depth excludes connectors.) |

## Specifications • FOX3 T 301/311/201 PC (Continued)

Product weight

FOX3 T 201 PC ..... TBD lbs (TBD kg)

FOX3 T 301 PC ..... TBD lbs (TBD kg)

FOX3 T 311 PC ..... TBD lbs (TBD kg)

Regulatory compliance..... CE, c-UL, C-tick, FCC Class A, FSA Class 1, ICES, UL, VCCI  
Complies with the appropriate requirements of RoHS, WEEE.

Product warranty ..... 3 years parts and labor

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

**NOTE:** All nominal levels are at  $\pm 10\%$ .

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

**NOTE:** Shipping weights and dimensions are available at [www.extron.com](http://www.extron.com).

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