

The SFP (Small Form-Factor Pluggable) interface supports multiple modules enabling the encoder to stream full HD video from broadcast-quality sources, such as Optical SDI and ST2022-6 interfaces.

Exterity AvediaStream e375x SDI Encoders support a number of Embrionix SFP modules. Please contact your local Embrionix distributor to purchase.

Generally, Embrionix SFPs come in two types: input and output.

**Input modules** can be used to capture uncompressed video and deliver it onto an Exterity IPTV network at manageable bandwidths.

**Output modules** can be used to provide a loop-through functionality, transporting the SDI video out of the encoder to be used as the source for another device.

### Why Optical SFPs?

**Longer cable-runs.** Optical SDI uses fibreoptic cabling to transport high-quality SDI video. The main advantage of optical cabling over coaxial cabling is that optical cabling suffers far less signal degradation over distance. This means that high-quality HD video can be accurately transmitted over optical cabling for distances in excess of 15 km compared to 1-200 m using coaxial cabling.



### Why ST2022-6?

**Improved workflow efficiency.** The ST2022-6 standard defines the transport of uncompressed video over IP encapsulated in RTP packets.

As with HDMI/SDI versus Exterity IPTV delivery, ST2022-6 uses the flexibility of IP network routing for the distribution of uncompressed high-quality video within the broadcast environment. This has the effect of increasing the efficiency with which video is routed throughout a building.

As with Exterity IPTV, ST2022-6 video does not require complex SDI switchers and hundred of metres of dedicated cabling for each one-to-one connection around the building; the network infrastructure handles this.

For HD video, this means a 10 Gb Ethernet infrastructure is required, and to support longer cable runs optical cabling is recommended. AvediaStream e375x Encoders support up to 3G SDI video transported on 10GbE optical cabling to match this environment.

### Why Coaxial BNC?

**It's the most popular.** Coaxial (copper) cabling is the default cabling used for the transport of high-quality SDI video.

Used extensively within broadcasting, coaxial cabling using BNC connectors is ubiquitous on high-end and professional video equipment. BNC connectors are the go-to connector when robustness is required as the connector is mechanically strong and locks in place.

Dual SDI (Optical)	
Input (EB60LC2R-MN2-P)	Output (EB60LC2T-MN2-13F)
<ul style="list-style-type: none"> <li>Enables optical SDI input straight into encoder</li> <li>SFF-8472, ST424, ST292, ST259, ST297, ST344 compliant</li> <li>LC fibre connectors</li> <li>RX = 1260-1650nm</li> <li>Low Power Consumption - typical 685mW</li> <li>Operating temperature range: 0 ...+40°C / +32 ... +104°F</li> <li>Storage temperature range: -20 ...+70°C / -4 ... +158°F</li> <li>Operating and storage Relative Humidity: 10-90% (non-condensing)</li> </ul>	<ul style="list-style-type: none"> <li>Provides a loop-through function</li> <li>SFF-8472, ST424, ST292-1, ST259, ST297, ST344 compliant</li> <li>LC fibre connectors</li> <li>Low Power Consumption - typical 500mW</li> <li>Operating temperature range: 0 ...+40°C / +32 ... +104°F</li> <li>Storage temperature range: -20 ...+70°C / -4 ... +158°F</li> <li>Operating and storage Relative Humidity: 10-90% (non-condensing)</li> <li>58.5mm x 13.4mm x 8.6mm SFP Package</li> </ul>

Dual SDI (HD-BNC)	
Input (EB30HD2R-LN)	Output (EB30HD2T-LN)
<ul style="list-style-type: none"> <li>Enables (HD-BNC) SDI input straight into encoder</li> <li>SMPTE 424M, SMPTE 292M, and SMPTE 259M compliant</li> <li>HD-BNC 75Ω connectors</li> <li>Low Power Consumption - typical 351mW</li> <li>Operating temperature range: 0 ...+40°C / +32 ... +104°F</li> <li>Storage temperature range: -20 ...+70°C / -4 ... +158°F</li> <li>Operating and storage Relative Humidity: 10-90% (non-condensing)</li> <li>58.5mm x 13.4mm x 8.6mm SFP Package</li> </ul>	<ul style="list-style-type: none"> <li>Provides a loop-through function</li> <li>SMPTE 424M, SMPTE 292M, and SMPTE 259M compliant</li> <li>HD-BNC 75Ω connectors</li> <li>Low Power Consumption - typical 351mW</li> <li>Operating temperature range: 0 ...+40°C / +32 ... +104°F</li> <li>Storage temperature range: -20 ...+70°C / -4 ... +158°F</li> <li>Operating and storage Relative Humidity: 10-90% (non-condensing)</li> <li>58.5mm x 13.4mm x 8.6mm SFP Package</li> </ul>

Dual SDI (DIN)
Input (EB30CS2R-LN)
<ul style="list-style-type: none"> <li>Enables (DIN) SDI input straight into encoder</li> <li>SMPTE 424M, SMPTE 292M, and SMPTE 259M compliant</li> <li>DIN 1.0/2/3 75Ω connectors</li> <li>Low Power Consumption - typical 615mW</li> <li>Operating temperature range: 0 ...+40°C / +32 ... +104°F</li> <li>Storage temperature range: -20 ...+70°C / -4 ... +158°F</li> <li>Operating and storage Relative Humidity: 10-90% (non-condensing)</li> <li>58.5mm x 13.4mm x 8.6mm SFP Package</li> </ul>

Dual ST2022-6
Input (EB22LC2B-SN & e mOPT-2D-2022-6)
<ul style="list-style-type: none"> <li>Enables ST2022-6 input straight into encoder</li> <li>10GBASE-SR compliant</li> <li>LC fibre connectors</li> <li>TX = 850nm, RX = 840-860nm</li> <li>Low Power Consumption - typical 2W</li> <li>Operating temperature range: 0 ...+40°C / +32 ... +104°F</li> <li>Storage temperature range: -20 ...+70°C / -4 ... +158°F</li> <li>Operating and storage Relative Humidity: 10-90% (non-condensing)</li> <li>56.7mm x 13.9mm x 12.3mm SFP Package</li> </ul>

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