The DLC156 is an innovative, six channel TDM multiplexer for transporting uncompressed and compressed video over dark fiber or managed optical networks such as ROADM and OTN. Users can mix and match SD-SDI, ASI, HD-SDI, or 3G-SDI services into a single 10.7 Gb/s optical transport stream.

The DLC156 is a cost-effective and power-efficient module for transporting up to six HD-SDI or three 3G-SDI digital video services over a single optical wavelength, saving fiber cost and simplifying network design and deployment. Using time division multiplexing (TDM), each channel is assigned a fixed time-slot, eliminating complex configurations. Six independent, mixed format video signals are aggregated to a single wavelength and two time slots can be combined to carry 3G-SDI.

The DLC156 supports links in excess of 80 km using industry standard, hot swappable 10G XFP transceivers in WDM, CWDM, and DWDM wavelengths. Installing a DLC156D as a repeater between the link source and destination extends the maximum range of a link. Any DLC156D can repeat the signal from a DLC156M while simultaneously receiving the video signals. The DLC156D can also repeat one direction of 10GigE traffic.

Up to 240 uncompressed HD channels are possible over a single fiber using DWDM. For additional flexibility, the DLC156 can also be used as a transport aggregator for Artel's DLC274 four channel TDM module.

With its format flexibility, easy configuration, and competitive price, the DLC156 is an ideal solution for fiber constrained, multi-service video transport applications.

**FEATURES**

6 Channel TDM Multiplexer

Advanced Forward Error Correction (FEC) insures error free video

Single wavelength optical transport for:
- Six independent HD-SDI, SD-SDI, or DVB-ASI channels
- Three independent 3G-SDI channels
- Combinations of both

Formats supported:
- 2.967 Gb/s 3G-SDI (SMPTE 424M)
- 1.483516 Gb/s HD-SDI (SMPTE 292M)
- 270 Mb/s
- SD-SDI (SMPTE 259M-C, ITU 656)
- SDTI (SMPTE 305M)
- DVB-ASI
- Other 270 Mb/s, 1.485 Gb/s, and 2.97 Gb/s services

Externally accessible 10.7 Gb/s XFP transceiver optics
- Optical budget to 24dB
- WDM (1310 nm, 1550 nm)
- CWDM ITU G.694.2
- DWDM ITU G.694.1

Simple and easy configuration
- On-board switches
- DigiLink Manager

Repeater Operation
- DLC156D can be used as an Optical to Optical repeater
- Compensates for long or lossy fiber routes
- Repeats DLC156M 10.7 Gb/s signals
- Repeats 10 Gig Ethernet (10.3125 Gb/s)

Multiple monitoring options
- Switch selectable front panel monitor of individual channels (HD-BNC)
- Front and rear panel status LEDs
- Loss of video (individual channels)
- Loss of optical input
- Laser (XFP) fail

DigiLink DLC156 - 6 Channel TDM Multiplexer for 3G, HD, SDI, and ASI
### SPECIFICATIONS

#### Environmental

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient operating temperature</td>
<td>0 to 50°C</td>
</tr>
<tr>
<td>Ambient storage temperature</td>
<td>-40 to 80°C</td>
</tr>
<tr>
<td>Relative humidity</td>
<td>10 to 95% (non-condensing)</td>
</tr>
<tr>
<td>Power dissipation</td>
<td>&lt; 21 Watts (DLC156D)</td>
</tr>
<tr>
<td></td>
<td>&lt; 15 Watts (DLC156M)</td>
</tr>
</tbody>
</table>

#### Physical

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>1.6” x 5” x 10.8” (2 slots in chassis)</td>
</tr>
</tbody>
</table>

#### Optical Interface

- Artel Video XFP
- See XFP Specifications

#### Electrical Interface

**Signal Formats**

- 2.97 Gb/s - 3G-SDI (SMPTE 424M)
- 1.483516 Gb/s - HD-SDI (SMPTE 292M)
- 270 Mb/s - SD-SDI (SMPTE 259M-C, ITU 656)
- SDTI (SMPTE 305M)
- DVB-ASI

**Signal Polarity**

- Non inverting

**Channels**

- Six channels ASI, SD/HD-SDI
- Three channels of 3G-SDI

**Connectors**

- Input (DLC156M): Six BNC 75 Ohm
- Output (DLC156D): Six BNC 75 Ohm
- Monitor: One HD-BNC 75 Ohm

**Return Loss**

- >15 dB, 5-1485 MHz
- >10 dB, 1486-2967 MHz

**Cable Equalization**

- Belden 1694A type cable: 0 to 250 meters (270 Mb/s)
- 0 to 100 meters (1.483516 Gb/s)
- 0 to 100 meters (2.97 Gb/s)

#### Regulatory Conformance

- Certified NEBS Level 3, CSA 60950, EN60950, EN50022 FCC Part 15 (Class A), CISPR 22

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**DLC156D front panel monitoring and status display**

**DLC156M rear panel video I/O, XFP cage and status LEDs**

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**Ordering Information**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Part #</th>
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</thead>
<tbody>
<tr>
<td>DLC156M</td>
<td>Six Channel TDM Multiplexer for 3G, HD, SDI, ASI</td>
<td>390-008200-00</td>
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<tr>
<td>DLC156D</td>
<td>Six Channel TDM De-Multiplexer for 3G, HD, SDI, ASI</td>
<td>390-008210-00</td>
</tr>
</tbody>
</table>

**XFP Options**

See SFP/SFP+/XFP compatibility chart

**Monitor Cable**

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Part #</th>
</tr>
</thead>
<tbody>
<tr>
<td>DL100HDMC-72</td>
<td>Monitor Cable, HD-BNC to BNC, 72” long</td>
<td>396-001010-72</td>
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</tbody>
</table>