The 7707IFTA is a VistaLINK®-capable fiber optic transmitter for 70/140MHz IF signals. The 7707IFTA accepts one 70/140MHz coaxial input and provides a fiber optic output signal at 1310nm, 1550nm, CWDM or DWDM wavelengths. An IF BNC output is also provided for monitoring or further signal distribution. Monitoring and control of card status is provided locally at the card edge and remotely via VistaLINK®.

### Features & Benefits
- 30MHz-200MHz bandwidth
- Wide dynamic range RF input (-5 to -65dBm)
- Protocol transparent - transmits all video, audio and data modulation formats
- Supports manual and automatic gain control on IF input
- Additional IF BNC output for monitoring or distribution
- Available with BNC or F-Type connector options
- Available with output wavelengths of 1310nm, 1550nm, CWDM (ITU-T G.694.2 compliant) and DWDM (ITU-T G.694.1 compliant)
- Supports single-mode and multi-mode fiber optic cable (contact factory for multi-mode applications)

### APPLICATION

<table>
<thead>
<tr>
<th>APPLICATION</th>
<th>OPTICAL/LINK BUDGET</th>
<th>TRANSMITTER SIDE</th>
<th>RECEIVER SIDE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ONE SIGNAL PER FIBER</strong></td>
<td></td>
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</tr>
<tr>
<td>Short to Medium Haul</td>
<td>14dB/30km</td>
<td>7707IFTA13</td>
<td>0dBm</td>
<td>1310nm FP laser on Tx</td>
</tr>
<tr>
<td>Medium Haul</td>
<td>16dB/45km</td>
<td>7707IFTA13L</td>
<td>+2dBm</td>
<td>1310nm DFB laser on Tx</td>
</tr>
<tr>
<td>Long Haul</td>
<td>16dB/64km</td>
<td>7707IFTA15</td>
<td>+2dBm</td>
<td>1550nm DFB laser on Tx</td>
</tr>
<tr>
<td>Long Haul</td>
<td>25dB/71km</td>
<td>7707IFTA13L</td>
<td>+2dBm</td>
<td>1310nm DFB laser on Tx, High Sensitivity RX</td>
</tr>
<tr>
<td>Long Haul</td>
<td>25dB/100km</td>
<td>7707IFTA15</td>
<td>+2dBm</td>
<td>1550nm DFB laser on Tx, High Sensitivity RX</td>
</tr>
<tr>
<td><strong>MULTI-SIGNAL PER FIBER (WAVELENGTH MUX/DEMUX)</strong></td>
<td></td>
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<tr>
<td>Medium Haul</td>
<td>12.5dB/50km*</td>
<td>7707IFTAxx</td>
<td>+2dBm</td>
<td>1470nm-1610nm CWDM DFB laser on Tx, with 8 Ch CWDM Mux/Demux*</td>
</tr>
<tr>
<td>Long Haul</td>
<td>21.5dB/86km*</td>
<td>7707IFTAxx</td>
<td>+2dBm</td>
<td>1470nm-1610nm CWDM DFB laser on Tx, High Sensitivity RX, 8 Ch CWDM Mux/Demux*</td>
</tr>
<tr>
<td>Long Haul</td>
<td>16dB/70km**</td>
<td>7707IFTADxxx</td>
<td>+7dBm</td>
<td>DWDM DFB laser on Tx, with 8 Ch DWDM Mux/Demux**</td>
</tr>
<tr>
<td>Long Haul</td>
<td>25dB/100km**</td>
<td>7707IFTADxxx</td>
<td>+7dBm</td>
<td>DWDM DFB laser on Tx, High Sensitivity RX, 8 Ch DWDM Mux/Demux**</td>
</tr>
</tbody>
</table>

Fiber loss = 0.35/0.25dB per km @ 1310nm/1550nm

*Assumes 8 Channel upper band CWDM Mux/Demux loss of 3.5dB

**Assumes 8 Channel DWDM Mux/Demux loss of 5dB
**Specifications**

**RF Input:**
- Connector: 1 BNC per IEC 61169-8 Annex A (F-type optional)
- I/O Impedance: 75 Ω (50 Ω optional)
- Return Loss: 16dB (min)
- Frequency Range: 30MHz-200MHz
- Input Power Range: -5 to -65dBm
- AGC Hold Range: -10 to -35dBm

**IF Monitoring Output:**
- Connector: 1 BNC per IEC 61169-8 Annex A (F-type optional)
- I/O Impedance: 75 Ω (50 Ω optional)
- Return Loss: 18dB (min)
- Frequency Range: 30MHz-200MHz
- Flatness: ±1dB @ 30MHz-200MHz, ±2dB @ 36MHz BW

**Output Signal Level:**
- AGC mode: -20dBm constant (within AGC range -10 to -35dBm total RF input power)
- Manual mode: (Input signal) + (manual Gain setting)
- Intermodulation Products: -50dBc (-10dBm RF in, AGC mode)

**Optical Output:**
- Number of outputs: 1
- Connector: Female SC/PC, ST/PC, FC/PC, SC/APC, FC/APC
- Operating Wavelengths:
  - Standard: 1310nm, 1550nm (nominal)
  - CWDM: 1270nm to 1610nm
  - DWDM: C-Band (ITU G.694.1 compliant)
- Output Power:
  - 1310nm FP: 0dBm ±1dBm
  - 1310nm, 1550nm & CWDM DFB: +2dBm ±1dBm
  - DWDM DFB: +7dBm ±1dBm

**Electrical:**
- Voltage: +12V DC
- Power: 6W (9W (DWDM))
- EMIRFI: Complies with FCC Class A

**Physical (number of slots):**
- For 3RU: 1
- For 7700FR-C: 1
- For 7800FR: 1

**Compliance:**
- Laser Safety: Complies with 24 CFR 1040.10 and 1040.11
- EMIRFI: Complies with FCC regulations for Class A and EU EMC directive

**Ordering Information**

**Specifications**

- **Input Power Range:** -5 to -65dBm
- **AGC Hold Range:** -10 to -35dBm

**Electrical:**
- **Voltage:** +12V DC
- **Power:** 6W (9W (DWDM))
- **EMIRFI:** Complies with FCC Class A

**Physical (number of slots):**
- For 3RU: 1
- For 7700FR-C: 1
- For 7800FR: 1

**Compliance:**
- **Laser Safety:** Complies with 24 CFR 1040.10 and 1040.11
- **EMIRFI:** Complies with FCC regulations for Class A and EU EMC directive

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**Ordering Options**

- **Rear Plate and Fiber Connector must be specified at time of order**
  - Eg. Model +3RU +SC

**Impedance Suffix**
- **50:** 50Ω I/O Impedance

**Connector Suffix**
- **+SC:** SC/PC
- **+AP+SC:** SC/APC (Angle polished available with 7707IFTA13 only)
- **+9T:** ST/PC
- **+PC:** FC/PC
- **+AP+FC:** FC/APC (Angle polished available with 7707IFTA13 only)
- **+7S:** 75Ω, F-Type rear connector

**Enclosures**
- **350FR:** 3RU Portable Multiframe which holds up to 7 single slot modules
- **7700FR-C:** 3RU Multiframe which holds up to 15 single slot modules
- **7800FR:** 3RU Multiframe which holds up to 15 single slot modules
- **7801FR:** 1RU Multiframe which holds up to 4 single or 2 dual slot modules
- **7701FR:** 1RU Multiframe which holds up to 3 single or dual slot modules
- **S7701FR:** Standalone Enclosure

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**Rear Plate Suffix**
- **+3RU:** 3RU Rear Plate for use with 350FR, 7700FR-C or 7800FR Multiframe
- **+1RU:** 1RU Rear Plate for use with 7701FR Multiframe
- **+SA:** Standalone Enclosure Rear Plate

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**Note:** 75Ω I/O impedance ships standard

**For CWDM, please refer to the end of the fiber section for ordering information**

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**For DWDM, please refer to the end of the fiber section for ordering information**

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**Ordering Information**