RF Over Fiber Systems
Dispersion Compensation Module

Dispersion Compensation Module (DCM)

- 1U Rack chassis
- Standard lengths and customer specific
- Compatible with any RF frequency
- SC/APC as standard
- Standard 5-year warranty

A DCM/Dispersion Compensation Fiber (DCF) provides fixed chromatic dispersion compensation for diverse and disaster recovery DWDM networks.

ViaLiteHD DCMs are purely passive modules based on the ITU G.652 standard to provide negative dispersion for DWDM transmission systems, increasing transmission range and decreasing BER of optical links. It can be used to address dispersion on standard single mode optical fiber (SMF) across the entire C-Band and L-Band range.

The DCMs are available as part of ViaLite’s Ka-Band diversity antenna system. Each DCM can be supplied in 5 km increments, supporting medium to long distance fiber optic systems ranging from 30 km to 600 km.

ADVANTAGES

- Low Insertion loss
- 19" rack mountable
- Passive device
- Low polarization mode dispersion
- Excellent performance price ratio
- Signal performance improvements

APPLICATIONS

- Fixed satcom earth stations and teleports
- Ka-Band diversity systems
- L-Band long distance links
- G.652 100% C-Band compensation fiber
- Long distance DWDM optimization
- CATV Systems

FORMATS

- 1U Chassis

RELATED PRODUCTS

- DWDM Mux/De-Mux
- DWDM EDFA’s and Boosters
- Delay Lines
- L-Band HTS 700-2450 MHz

ViaLite System Designer

For complex designs where multiple DWDM products are required the System Designer tool is essential for predicting and validating performance results. The software uses a drag and drop approach from a pallet of products. Once designed, the analyzer can be run to give end-to-end system results and these can then be saved as a detailed PDF. Please ask our sales team for more information.
RF Over Fiber Systems
Dispersion Compensation Module

**PRODUCT CONFIGURATOR**

- **Module Type**
  - W – Dispersion Compensator
- **Frequency Type**
  - 5 – Not frequency specific
- **Module Package**
  - 7 – 10 15’ Channels
  - U – 20 19’ Channels

**TECHNICAL SPECIFICATION**

- **Working Wavelengths**
  - 1525 to 1565 nm
- **Dispersion Length**
  - 10 to 120 km
- **Nonlinearity (n2/Aeff)**
  - 1.4 x 10^-9
- **SBS Threshold (Max input)**
  - +6 dBm
- **Return Loss @ 1550 nm**
  - 45dB (typ)
- **Interface**
  - SC/APC
- **Operating temperature range**
  - -5°C to +70°C
- **Storage temperature range**
  - -40°C to +85°C
- **Working Humidity**
  - 0% to 85%

**Optical Fiber insertion loss (1525-1565)**

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<th>Distance (Km)</th>
<th>Typical (dB)</th>
<th>Maximum (dB)</th>
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<tr>
<td>120</td>
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ACCESSORIES

RF over Fiber L-Band HTS DWDM Links

- L-Band HTS (700-2450 MHz)
- Up to 500 km systems available
- 1 to 96 channels per fiber
- Ideal for Ka-Band rain fade diversity
- 5 mW Laser

RF over Fiber Timing modules

- Radio timing signals:
  - DCF, MSF signals
  - JJY, BPC, HBG, TDF, WWVB, WWV, CHU, RJH, RWM,
- IRIG-B
- Loran-C & eLoran
- 10kHz – 50 MHz signals
- GPS (via GPS Link)
- MiFID II standard

Rack Chassis

- 3U accepts up to 13 RF or Support cards, plus an SNMP card and dual power supplies
- A 1U chassis accepts up to 3 RF or Support cards or 2 cards and an SNMP card (with dual power supplies)
- Up to 26 channels per 3U chassis (using dual RF cards) – reducing the amount of rack space required
- Blind mate option
- All modules hot-swappable and auto-reconfigure with SNMP option
- On-card LNB and BUC power options
- Power fed through rear chassis connector to card Bias Tees
- System can be monitored and controlled remotely via SNMP using a web browser

Outdoor Enclosures

- CE approved and EMC compatible
- IP rated and NEMA approved
- Plug and play format
- Suitable for harsh environments
- All modules hot-swappable
- Dual redundant power options
- Interface for monitor and control (M&C) systems