

50 Ohm CWDM L-Band HTS

- Up to 50 km
- L-Band HTS (700-2450 MHz)
- Up to 16 channels in a single fiber
- 65 dB dynamic range for 500 MHz traffic
- 13/18 V and 22 KHz tone LNB option
- Blind mate option
- Standard 5-year warranty



ViaLiteHD L-Band HTS CWDM fiber optic links use coarse wavelength division multiplexer (CWDM) lasers and have been designed for the satellite industry to transport RF signals between antennas and control rooms, where reducing fiber count is key. Due to the very wide dynamic range, the same link can be used in both the transmit and receive paths, over the same fiber. This dynamic range allows High Throughput Satellite (HTS) transponder bandwidths of 500, 800 or even 1500 MHz to be transported, as well as multiple standard 36 MHz transponders.

The chassis cards are available with the **ViaLiteHD** blind mate option, which allows all cables to be connected at the rear of the chassis when installed. It also allows any configuration changes to be completed without disturbing the connections and very fast changeover of cards; enabling five 9s reliability.

Options include:

- 50 Ω electrical connectors: SMA and MCX
- Optical connectors: SC/APC, LC/APC, FC/APC and E2000/APC
- Test ports on Tx and Rx modules
- Built-in BiasT for LNB powering through RF connection
- LNB control circuit with 13/18 VDC and 22 kHz tone
- Blind mate connectivity (SC/APC and SMA)
- Serial digital channel to 20 kb/s on same optical path

Applications

Fiber count reduction
Fixed satcom earth stations and teleports
Broadcast facilities
Mobile SNG, military and flyaways
VSAT hubs (IP gateways)
Marine antennas
Telemetry, Tracking and Command (TT&C)
Oil and gas platforms
Television Receive-Only (TVRO)

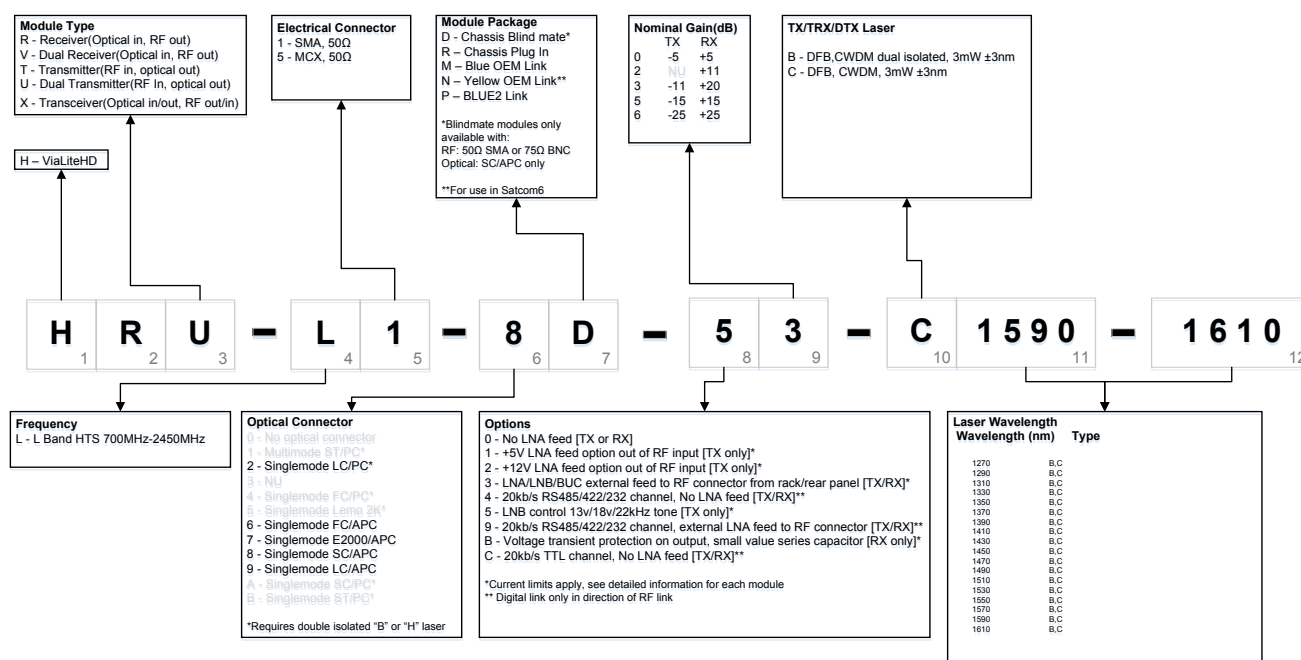
Formats

3U Chassis
1U Chassis
Blue OEM
Yellow OEM
Outdoor enclosures

Related Products

50 km L-Band HTS
75 Ohm CWDM L-Band HTS
HTS 100 km+ systems
DWDM links

Product Configurator



Popular products

HRT-L1-8R-33-C1610

L-Band 700-2450 MHz, 50 Ohm SMA, Singlemode SC/APC, Rack plug-in module, Wavelength 1610 nm

HRR-L1-8R-03

L-Band 700-2450 MHz, 50 Ohm SMA, Singlemode SC/APC, Rack plug-in module

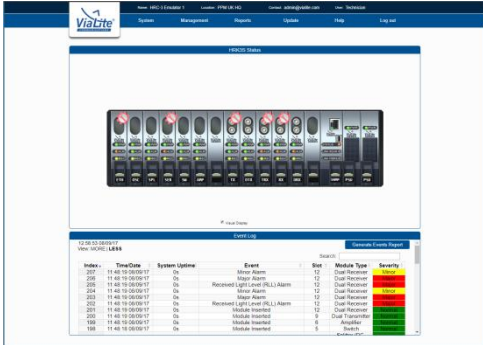
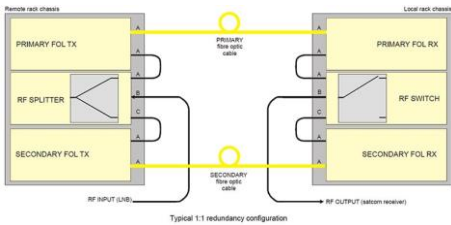


RF parameters for popular link gains

Link	Tx Gain	Rx Gain	Link Noise Figure (Default Tx Gain)	Link Noise Figure (Max Tx Gain)	Link P1 dB (Default Tx Gain)	Link P1 dB (Max Tx Gain)
HRT-L1-xx-x3-C1610 & HRR-L1-xx-x3 (9dB Gain Link)	-11 dB	+20 dB	20 dB	12.5 dB	-1 dBm	-8.5 dBm
HRT-L1-xx-x5-C1510 & HRR-L1-xx-x5 (Unity Gain Link)	-15 dB	+15 dB	24 dB	12.5 dB	+3 dBm	-8.5 dBm
HRT-L1-xx-x6-C1530 & HRR-L1-xx-x6 (High P1dB Unity Gain Link)	-25 dB	+25 dB	34 dB	29 dB	+13 dBm	+9 dBm

	Units	Note	L-Band HTS 50 ohms
Transmitter (Tx)			HRT-L1-8R-33-S1310 (example)
Receiver (Rx)			HRR-L1-8R-03 (example)
Frequency range	MHz		700-2450
Impedance, RF connector			50 Ω SMA, blind mate
VSWR	(typ)		1:1.5
Transmitter (Tx) gain, default	dB (typ)	^a	-11 +/- 0.5
Receiver (Rx) gain, default	dB (typ)	^a	+20 +/- 0.5
Link gain (Tx & Rx), default	dB (typ)	^a	+9 +/- 1.5
Tx gain adjustment range	dB (typ)		15.5
Tx gain adjustment from default gain	dB (min)	^d	+/- 3
Rx gain adjustment range	dB (typ)		15.5
Rx gain adjustment from default gain	dB (min)	^d	+/- 3
Gain adjustment step size Rx and Tx	dB (typ)		0.5
Flatness, fullband	dB (max)	^{a h}	\pm 1.2
Flatness, fullband	dB (typ)	^{a h}	\pm 0.5
Flatness, 36 MHz	dB (typ)	^a	\pm 0.2
Gain stability over temperature range	dB (max)	^a	\pm 3
Gain stability	dB (typ)		0.25 @ 24 hrs
Nominal input signal / output signal	dBm		-20 / -20
IMD @ nominal output power	dB (typ)	^c	-61
CNR @ nominal input power, 36 MHz	dB (typ)	^b	57
P1dB _{input}	dBm (typ)	^{a k}	-1
P1dB _{input} , at minimum Tx gain	dBm (typ)	^{a k}	0.5
IP3 _{input} , at default gain	dBm (typ)	^{a k}	11
Noise figure, at default gain	dB (typ)	^{a k}	20
Noise figure, at maximum Tx gain	dB (typ)	^{a k}	13
Noise figure, 5 dB optical loss	dB (typ)	^{c k}	26
SFDR	dB/Hz ^{2/3} (typ)	^a	110
Test port gain, transmitter	dB (typ)	^l	-20
Test port gain, receiver	dB (typ)	^l	-20
Test port flatness	dB (typ)	^l	\pm 1
Maximum input power without damage	dBm (min)		15
LNB power			External 0-28 V @ 350 mA from chassis power connector
Power consumption Tx	W (typ)		1.9
Power consumption Rx	W (typ)		1.3
Optical connector			SC/APC, blind mate
Optical wavelength	nm		1310 \pm 20
Laser type			DFB (Distributed feedback) laser
Optical power output	dBm (typ)		4.5
Summary alarm output			Open drain alarm: OPEN: Alarm, CURRENT SINK: okay
Operating temperature range		^e	-20 °C to +60 °C
Storage temperature range			-40 °C to +70 °C
Humidity	RH		95% non-condensing humidity



- ^a Nominal input power @ 0 dB optical loss
- ^b Nominal input power @ 1 dB optical loss
- ^c Nominal output power @ 5 dB optical loss
- ^h Default gain setting
- ^k Measured @ 1.2 GHz
- ^l Relative to rear port @1.2 GHz
- All tests @ 25 °C after 15 minutes warm up
- ^d Guaranteed minimum adjustment from default gain
- ^e Datasheet parameters based on temperature range -10°C to +50°C, refer to user manual for performance parameters @ -20 °C and +60 °C

Type	Key Features
<p>SNMP/Web Browser card</p>  <p>The screenshot shows a web browser interface for a ViaLite device. At the top, there's a navigation menu with 'System', 'Management', 'Support', 'Help', and 'Log out'. Below that, a 'RACK STATUS' section displays a graphical representation of a rack with various modules and their status indicators. Below the rack status is an 'EVENT LOG' table with columns for Index, Time/Date, System/Status, Event, Slot, Module Type, and Severity. The table contains several entries, including 'Minor Alarm', 'Received LPT Cmd (PLL Alarm)', 'Major Alarm', 'Module Inverted', and 'Module Inverted'.</p>	<ul style="list-style-type: none"> • Easy to use graphical user interface (GUI) • Real time monitoring of card performance • Alarm monitoring and event logging • Control of gain adjustment • Compatible with all ViaLiteHD rack chassis and modules • Easy integration with network management systems (NMS) using management information base (MIB) tables • Actively manage redundancy switching • New RF cards can be automatically reprogrammed with the previous card parameters • Remote SNMP to local SNMP connection via optical fiber • Provides remote LAN 10/100 Ethernet link
<p>Dual Redundancy</p>  <p>The diagram illustrates a 'Typical 1:1 redundancy configuration'. It shows two 'Remote rack chassis' on the left and one 'Local rack chassis' on the right. The remote chassis contains 'PRIMARY FOL TX', 'RF SPLITTER', and 'SECONDARY FOL TX'. The local chassis contains 'PRIMARY FOL RX', 'RF SWITCH', and 'SECONDARY FOL RX'. 'PRIMARY' and 'SECONDARY' lines connect the TX and RX components between the racks. A 'PRIMARY Bias tee cable' and a 'SECONDARY Bias tee cable' are also shown connecting the racks. The RF INPUT (LNB) is connected to the RF SPLITTER, and the RF OUTPUT (SYSTEM RECEIVER) is connected to the RF SWITCH.</p>	<ul style="list-style-type: none"> • 1:1 redundancy for L-Band • Maximises link up-time • Can be used to backup copper coax • Manual and automatic control via SNMP • Flexible configuration options • Other options available
<p>Rack Chassis</p>  <p>The photograph shows a rack chassis, which is a long, black metal enclosure with multiple slots for modules. Below it is a support card, which is a smaller, black printed circuit board with various components and connectors.</p>	<ul style="list-style-type: none"> • 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-reconfiguration 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
<p>Outdoor Enclosures</p>  <p>The photograph shows several outdoor enclosures of different sizes and configurations. Some are tall, narrow cabinets, while others are smaller, box-like units. One enclosure is shown with its door open, revealing internal components and wiring.</p>	<ul style="list-style-type: none"> • 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

75 Ohm CWDM L-Band HTS

- Up to 50 km
- L-Band HTS (700-2450MHz)
- Up to 16 channels in a single fiber
- 65 dB dynamic range for 500 MHz traffic
- 13/18V and 22 KHz tone LNB option
- Blind mate option
- Standard 5-year warranty



ViaLiteHD L-Band HTS CWDM fiber optic links use coarse wavelength division (CWDM) multiplexer lasers and have been designed for the broadcast satellite industry to transport RF signals between antennas and control rooms, where reducing fiber count is key. Due to the very wide dynamic range, the same link can be used in both the transmit and receive paths, over the same fiber. This dynamic range allows High Throughput Satellite (HTS) transponder bandwidths of 500, 800 or even 1500 MHz to be transported, as well as multiple standard 36MHz transponders.

The chassis cards are available with the **ViaLiteHD** blind mate option, which allows all cables to be connected at the rear of the chassis when installed. It also allows configuration changes to be completed without disturbing the connections and very fast changeover of cards; enabling five 9s reliability.

Options include:

- 75Ω electrical connectors: BNC, F-Type and MCX
- Optical connectors: SC/APC, LC/APC, FC/APC and E2000/APC
- Test ports on Tx and Rx modules
- Built-in BiasT for LNB powering through RF connection
- LNB control circuit with 13/18 VDC and 22 kHz tone
- Blind mate connectivity (SC/APC and BNC)
- Serial digital channel to 20 kb/s on same optical path

Applications

Fiber count reduction
Broadcast facilities
Mobile SNG, military and flyaways
Television Receive-Only (TVRO)
Fixed satcom earth stations and teleports
VSAT hubs (IP gateways)
Marine antennas
Telemetry, Tracking and Command (TT&C)
Oil and gas platforms

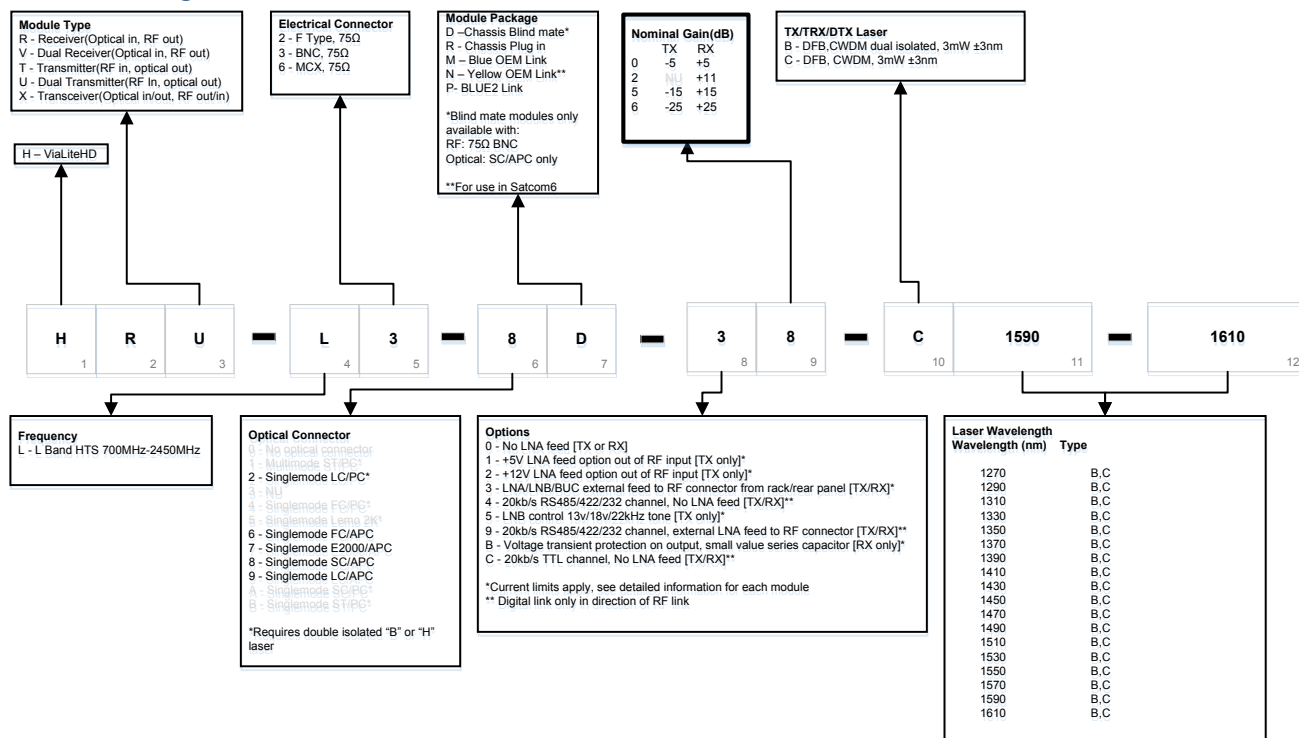
Formats

3U Chassis
1U Chassis
Blue OEM
Yellow OEM
Outdoor enclosures

Related Products

50km L-Band HTS
50 Ohm CWDM L-Band HTS
HTS 100 km+ systems
DWDM links

Product Configurator



Popular products

HRT-L3-6R-58-C1610

L-Band 700-2450 MHz, 75 Ohm BNC, Singlemode SC/APC, Rack plug-in module, Wavelength 1610 nm

HRR-L3-8R-08

L-Band 700-2450 MHz, 75 Ohm BNC, Singlemode SC/APC, Rack plug-in module

RF parameters for popular link gains

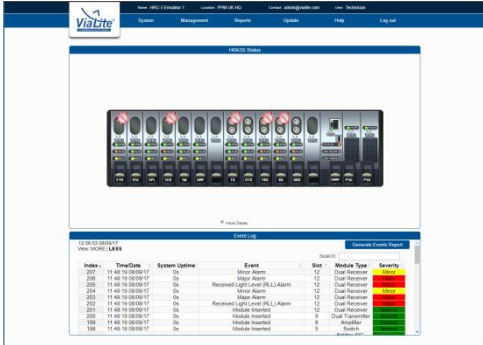
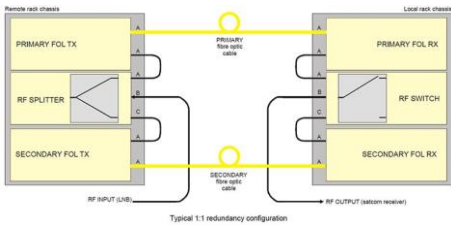


Link	Tx Gain	Rx Gain	Link Noise Figure (Default Tx Gain)	Link Noise Figure (Max Tx Gain)	Link P1dB (Default Tx Gain)	Link P1dB (Max Tx Gain)
HRT-L1-xx-x8-C1610 & HRR-L1-xx-x8 (3dB Gain Link)	-11 dB	+14 dB	21 dB	13.5 dB	0 dBm	-7.5 dBm
HRT-L1-xx-x5-C1610 & HRR-L1-xx-x5 (Unity Gain Link)	-15 dB	+15 dB	25 dB	13.5 dB	+2 dBm	-8.5 dBm
HRT-L1-xx-x8-C1610 & HRR-L1-xx-x2 (Low Noise Unity Gain Link)	-11 dB	+11 dB	21 dB	13.5 dB	0 dBm	-7.5 dBm

	Units		L-Band HTS 75 ohms
Transmitter			HRT-L3-8D-38-C1610 (example)
Receiver			HRR-L3-8D-08 (example)
Frequency range	MHz		700-2450
Impedance, RF connector			75Ω BNC, blind mate
VSWR	(typ)		1:1.5
Link gain (Tx gain / Rx gain), default	dB (nom)	a	+3 (-11 /+14)
Tx gain adjustment range	dB (typ)		15.5
Tx gain adjustment from default gain	dB (typ)		-7.5 to +8.0
Rx gain adjustment range	dB (typ)		15.5
Rx gain adjustment from default gain	dB (typ)		-7.5 to +8.0
Gain adjustment step size Rx and Tx	dB (typ)		0.5
Flatness, fullband	dB (max)	a h	±1.4
Flatness, fullband	dB (typ)	a h	±0.6
Flatness, 36MHz	dB (typ)	a	±0.2
Gain stability over temperature range	dB (max)	a	±3
Gain stability	dB (typ)		0.25 @ 24 hrs
Nominal input signal / output signal	dBm		-20 / -20
IMD @ nominal output power	dB (typ)	c	-50
CNR @ nominal input power, 36MHz	dB (typ)	b	56
P1dBinput	dBm (typ)	a k	0
P1dBinput, at minimum Tx gain	dBm (typ)	a k	5
IP3input, at default gain	dBm (typ)	a k	12
Noise figure, at default gain	dB (typ)	a k	21
Noise figure, at maximum Tx gain	dB (typ)	a k	18
Noise figure, 5dB optical loss	dB (typ)	c k	27
SFDR	dB/Hz ² (typ)	a	110
Test port gain, transmitter	dB (typ)	l	-26
Test port gain, receiver	dB (typ)	l	-14
Test port flatness	dB (typ)	l	±1
Maximum input power without damage	dBm (min)		15
LNB power			External 0-28V @ 350mA from chassis power connector
Power configuration Tx	W (typ)		1.9
Power configuration Rx	W (typ)		1.3
Optical connector			SC/APC, blind mate
Optical wavelength	nm		1270-1610 ± 3
Laser type			DFB (Distributed feedback) laser
Optical power output	dBm (typ)		4.5
Summary alarm output			Open drain alarm: OPEN: Alarm, CURRENT SINK: okay
Operating temperature range		e	-20 °C to +60 °C
Storage temperature range			-40°C to +70°C
Humidity	RH		95% non-condensing humidity



- a Nominal input power @ 0dB optical loss
 - b Nominal input power @ 1dB optical loss
 - c Nominal output power @ 5dB optical loss
 - h Default gain setting
 - k Measured @ 1.2GHz
 - l Relative to rear port @1.2GHz
- All tests @ 25°C after 15 minutes warm up

- e Datasheet parameters based on temperature range -10°C to +50°C, refer to user manual for performance parameters @ -20 °C and +60 °C

Type	Key Features
<p>SNMP/Web Browser Card</p> 	<ul style="list-style-type: none"> • Easy to use graphical user interface (GUI) • Real time monitoring of card performance • Alarm monitoring and event logging • Control of gain adjustment • Compatible with all ViaLiteHD rack chassis and modules • Easy integration with network management systems (NMS) using management information base (MIB) tables • Actively manage redundancy switching • New RF cards can be automatically reprogrammed with the previous card parameters • Remote SNMP to local SNMP connection via optical fiber • Provides remote LAN 10/100 Ethernet link
<p>Dual Redundancy</p>  <p>Typical 1:1 redundancy configuration</p>	<ul style="list-style-type: none"> • 1:1 redundancy for L-Band • Maximises link up-time • Can be used to backup copper coax • Manual and automatic control via SNMP • Flexible configuration options • Other redundancy options available
<p>Rack Chassis</p> 	<ul style="list-style-type: none"> • 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 reconfiguration 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
<p>Outdoor Enclosures</p> 	<ul style="list-style-type: none"> • 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

50 Ω DWDM High Power L-Band HTS

- *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*
- *Up to 100 km with no EDFA*
- *12 mW Laser*
- *Standard 5-year warranty*



ViaLiteHD DWDM L-Band HTS RF over fiber links use dense wavelength division multiplexer (DWDM) lasers and have been designed for the satellite industry to transport RF signals over long distances, enabling Ka-Band diversity or remote location of antennas up to 500 kms away. Due to the very wide dynamic range, the same link can be used in both the transmit or receive paths. This dynamic range allows High Throughput Satellite (HTS) transponder bandwidths of 500 MHz, 800 MHz or even 1500 MHz to be transported, even over long distances. A full suite of DWDM accessories is available as well as system design, commissioning expertise and system setup.

The chassis cards are available with the **ViaLiteHD** blind mate option, which allows all cables to be connected at the rear of the chassis when installed. It also allows configuration changes to be completed without disturbing the connections and very fast changeover of cards; enabling five 9s reliability.

Options include:

- 50 Ω electrical connectors: SMA and MCX
- Optical connectors: SC/APC, LC/APC, FC/APC and E2000/APC
- Test ports on Tx and Rx modules
- Built-in BiasT for LNB powering through RF connection
- LNB control circuit with 13/18 VDC & 22 kHz tone
- Blind mate connectivity (SC/APC and SMA)

Applications

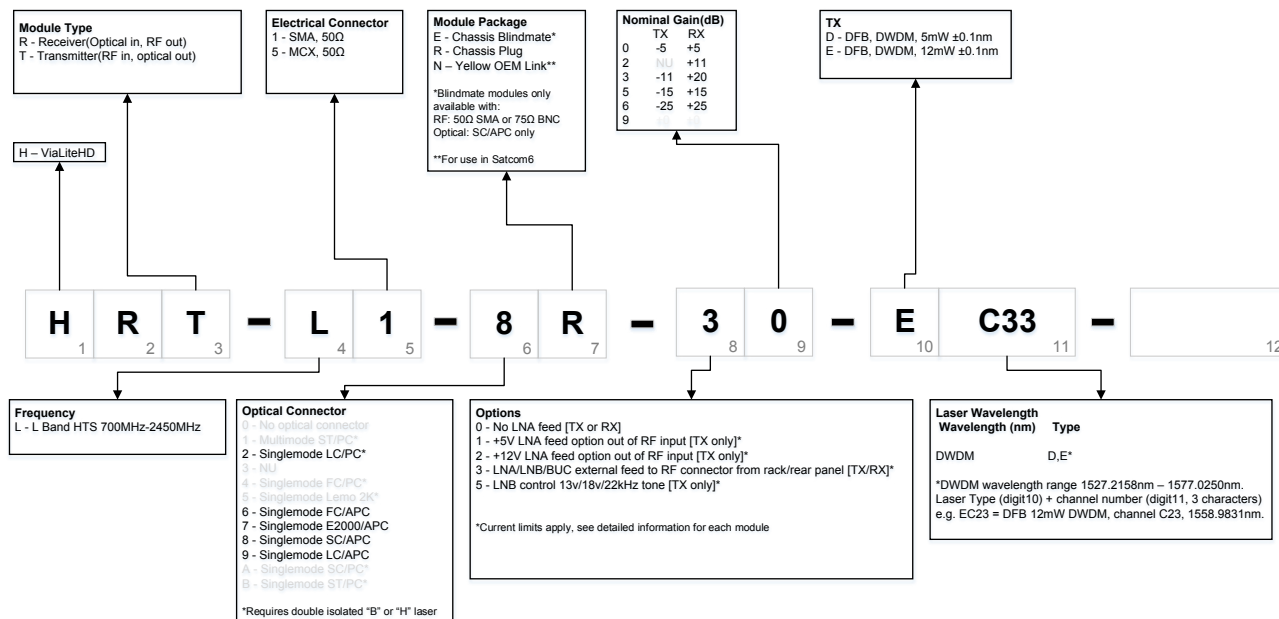
- Ka-Band diversity rain-fade application
- Fixed satcom earth stations and teleports
- Gateway reduction within a satellite footprint
- Government installations
- Remote monitoring stations
- Leased fiber reduction

Formats

3U Chassis
1U Chassis
Yellow OEM
Outdoor enclosures

Related Products

50km 1550 nm L-Band HTS
75 Ohm DWDM L-Band HTS
100 km+ systems



Popular products

HRT-L1-6N-30-EC33

L-Band HTS 700-2450 MHz Yellow OEM High Power DWDM Transmitter, FC/APC Connectors

HRR-L1-8N-00

L-Band HTS 700-2450 MHz Yellow OEM receiver, SC/APC Connectors

RF parameters for popular link gains

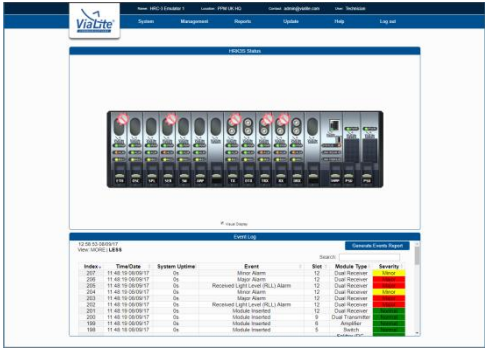
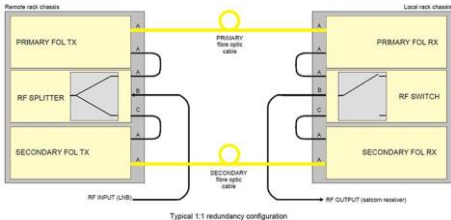


Link	Tx Gain	Rx Gain	Link Noise Figure (Default Tx Gain)	Link Noise Figure (Max Tx Gain)	Link P1dB (Default Tx Gain)	Link P1dB (Max Tx Gain)
HRT-L1-xx-x0-EC33 & HRR-L1-xx-x3 (Low noise 15dB Gain Link)	-5 dB	+20 dB	14 dB	9 dB	-1.5 dBm	-6.5 dBm
HRT-L1-xx-x5-EC35 & HRR-L1-xx-x5 (Unity Gain Link)	-15 dB	+15 dB	24 dB	12.5 dB	+8.5 dBm	-3 dBm
HRT-L1-xx-x6-EC33 & HRR-L1-xx-x6 (High P1dB Unity Gain Link)	-25 dB	+25 dB	34 dB	29 dB	+18.5 dBm	+14.5 dBm

Technical specification

	Units	Note	50 Ohm DWDM L-Band HTS
Transmitter			HRT-L1-8R-30-EC33 (example)
Receiver			HRR-L1-8R-03 (example)
Frequency range	MHz		700-2450
Impedance, RF connector			50Ω SMA, blind mate
VSWR	(typ)		1:1.5
Link gain (Tx gain / Rx gain), default	dB (nom)	a	15 (-5 / +20)
Tx gain adjustment range	dB (typ)		15.5
Tx gain adjustment from default gain	dB (typ)	d	+/-3
Rx gain adjustment range	dB (typ)		15.5
Rx gain adjustment from default gain	dB (typ)	d	+/-3
Gain adjustment step size Rx and Tx	dB (typ)		0.5
Flatness, fullband, L-Band	dB (max)	a h	±1.5
Flatness, fullband, L-Band	dB (typ)	a h	±0.5
Flatness, 36MHz, L-Band	dB (typ)	a	±0.2
Gain stability over temperature range	dB (max)	a	±1
Gain stability	dB (typ)		0.25 @ 24 hrs
Nominal input signal / output signal	dBm		-20 / -20
IMD @ nominal output power	dB (typ)	c	-69
CNR @ nominal input power, 36MHz	dB (typ)	b	60
P1dB _{input}	dBm (typ)	a k	-1.5
P1dB _{input} , at maximum Tx gain	dBm (typ)	a k	-6.5
IP3 _{input} , at default gain	dBm (typ)	a k	+11.5
Noise figure, at default gain	dB (typ)	a k	14
Noise figure, at maximum Tx gain	dB (typ)	a k	9
Noise figure, 5dB optical loss	dB (typ)	c k	19.5
SFDR	dB/Hz ^{2/3} (typ)	a	114
Test port gain, transmitter	dB (typ)	l	-20
Test port gain, receiver	dB (typ)	l	-20
Test port flatness	dB (typ)	l	±1
Maximum input power without damage	dBm		15
LNB power			Internal 13/18/22 V @ 700 mA with switchable tone
Power Consumption Tx	W (typ)		3.5, excluding LNA power
Power Consumption Rx	W (typ)		2.8
Optical connector			SC/APC, blindmate
Optical wavelength	nm		1550.12 ± 0.16
Laser type			DFB (Distributed feedback), thermo-electric cooled laser
Optical power output	dBm (typ)		10.8
Summary alarm output			Open drain alarm: OPEN: Alarm, CURRENT SINK: okay
Operating temperature range			-20 °C to +60 °C
Storage temperature range			-40 °C to +70 °C
Humidity	RH		95 % non-condensing humidity



- a Nominal input power @ 0 dB optical loss
 - b Nominal input power @ 1 dB optical loss
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 - h Default gain setting
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- d Guaranteed minimum adjustment from default gain
 - e Datasheet parameters based on temperature range -10 °C to +50 °C, refer to user manual for performance parameters @ -20 °C and +60 °C

Type	Key Features
<p>SNMP/Web Browser Card</p>  <p>The screenshot shows a web browser interface for a ViaLite system. At the top, there's a navigation menu with options like 'System', 'Management', 'Reports', 'Update', and 'Help'. Below the menu is a 'PERIOD Status' section with a visual representation of a rack of modules. At the bottom, there's an 'EVENT LOG' table with columns for Index, TimeDate, System, Update, Event, Size, Module Type, and Severity. The table contains several entries with various event types like 'Minor Alarm', 'Major Alarm', and 'Received LPT Level Full Alarm'.</p>	<ul style="list-style-type: none"> • Easy to use graphical user interface (GUI) • Real time monitoring of card performance • Alarm monitoring and event logging • Control of gain adjustment • Compatible with all ViaLiteHD rack chassis and modules • Easy integration with network management systems (NMS) using management information base (MIB) tables • Actively manage redundancy switching • New RF cards can be automatically reprogrammed with the previous card parameters • Remote SNMP to local SNMP connection via optical fiber • Provides remote LAN 10/100 Ethernet
<p>Dual Redundancy</p>  <p>The diagram illustrates a 'Typical 1:1 redundancy configuration'. It shows two rack chassis: 'Primary rack chassis' and 'Local rack chassis'. The primary chassis contains a 'PRIMARY FOL TX' and an 'RF SPLITTER'. The local chassis contains a 'PRIMARY FOL RX' and an 'RF SWITCH'. A 'SECONDARY FOL TX' is also connected to the RF SPLITTER, and a 'SECONDARY FOL RX' is connected to the RF SWITCH. 'PRIMARY fiber optic cable' connects the primary TX to the primary RX, and 'SECONDARY fiber optic cable' connects the secondary TX to the secondary RX. The RF input is labeled 'RF INPUT (LNB)' and the RF output is labeled 'RF OUTPUT (satcom receiver)'.</p>	<ul style="list-style-type: none"> • 1:1 redundancy for L-Band • Maximises link up-time • Can be used to backup copper coax • Manual and automatic control via SNMP • Flexible configuration options • Other redundancy options available
<p>Rack Chassis</p>  <p>The image shows a rack chassis unit, which is a long, black metal enclosure with multiple slots for modules. Below it is a close-up view of the front panel of a module, showing various connectors and a display screen.</p>	<ul style="list-style-type: none"> • 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
<p>Outdoor Enclosures</p>  <p>The image shows several outdoor enclosures of different sizes and configurations. Some are closed, showing their weather-resistant exteriors, while one is open, revealing the internal components and wiring.</p>	<ul style="list-style-type: none"> • 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

50Ω DWDM Medium Power L-Band HTS

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



ViaLiteHD DWDM L-Band HTS RF over fiber links use dense wavelength division multiplexer (DWDM) lasers and have been designed for the satellite industry to transport RF signals over long distances, enabling Ka-Band diversity or remote location of antennas up to 500 kms away. Due to the very wide dynamic range, the same link can be used in both the transmit or receive paths. This dynamic range allows High Throughput Satellite (HTS) transponder bandwidths of 500 MHz, 800 MHz or even 1500 MHz to be transported, even over long distances. A full suite of DWDM accessories is available as well as system design, commissioning expertise and system setup.

The chassis cards are available with the **ViaLiteHD** blind mate option, which allows all cables to be connected at the rear of the chassis when installed. It also allows configuration changes to be completed without disturbing the connections and very fast changeover of cards; enabling five 9s reliability.

Options include:

- 50 Ω electrical connectors: SMA and MCX
- Optical connectors: SC/APC, LC/APC, FC/APC and E2000/APC
- Test ports on Tx and Rx modules
- Built-in BiasT for LNB powering through RF connection
- LNB control circuit with 13/18 VDC & 22 kHz tone
- Blind mate connectivity (SC/APC and SMA)

Applications

- Ka-Band diversity rain-fade application
- Fixed satcom earth stations and teleports
- Gateway reduction within a satellite footprint
- Government installations
- Remote monitoring stations
- Leased fiber reduction

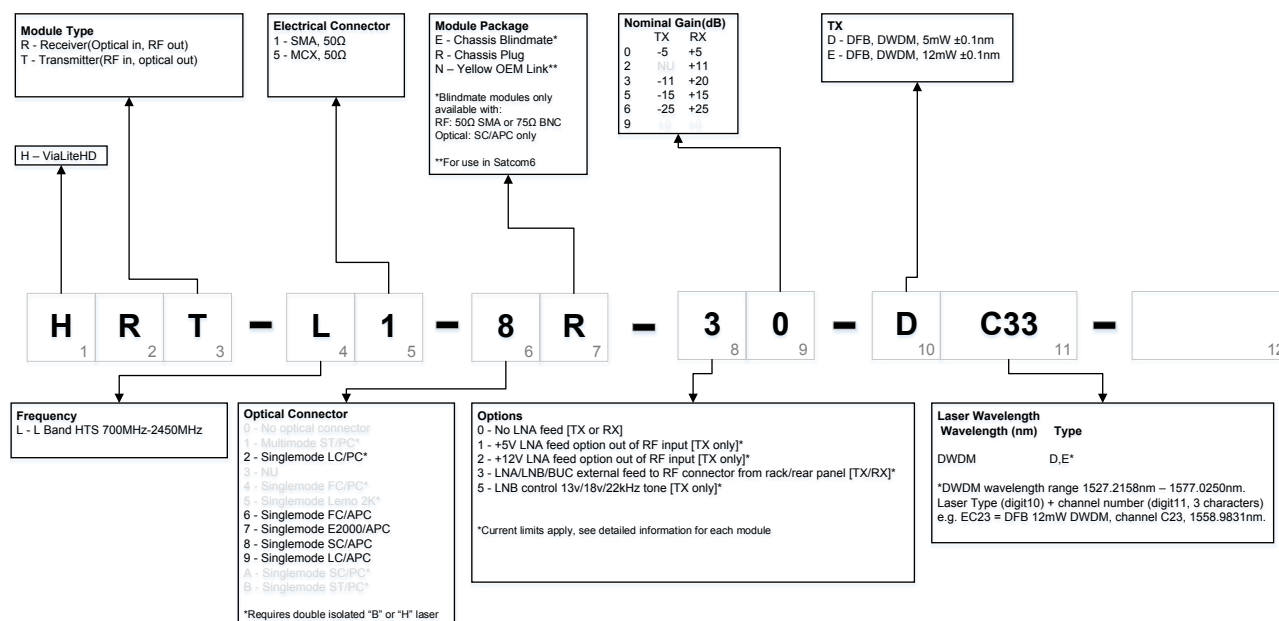
Formats

3U Chassis
1U Chassis
Yellow OEM
Outdoor enclosures

Related Products

50km 1550 nm L-Band HTS
75 Ohm DWDM L-Band HTS
100 km+ systems

Product Configurator



Popular products

HRT-L1-8R-30-DC33

L-Band 700-2450 MHz Transmitter, Singlemode SC/APC, Rack Plug-in Module, LNA/LNB or BUC DC Voltage Connector

HRR-L1-8R-03

L-Band 700-2450 MHz Receiver, Singlemode SC/APC, Rack plug-in module


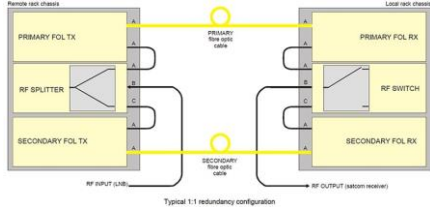


RF parameters for popular link gains

Link	Tx Gain	Rx Gain	Link Noise Figure (Default Tx Gain)	Link Noise Figure (Max Tx Gain)	Link P1dB (Default Tx Gain)	Link P1dB (Max Tx Gain)
HRT-L1-xx-x0-DC33 & HRR-L1-xx-x3 (Low noise 15dB Gain Link)	-5 dB	+20 dB	14 dB	9 dB	-1.5 dBm	-6.5 dBm
HRT-L1-xx-x5-DC33 & HRR-L1-xx-x5 (Unity Gain Link)	-15 dB	+15 dB	24 dB	12.5 dB	+8.5 dBm	-3 dBm
HRT-L1-xx-x6-DC33 & HRR-L1-xx-x6 (High P1dB Unity Gain Link)	-25 dB	+25 dB	34 dB	29 dB	+18.5 dBm	+14.5 dBm

	Units		50 Ohm DWDM L-Band HTS
Transmitter			HRT-L1-8R-30-DC33 (example)
Receiver			HRR-L1-8R-03 (example)
Frequency range	MHz		700-2450
Impedance, RF connector			50 Ω SMA, blind mate
VSWR	(typ)		1:1.5
Link gain (Tx gain / Rx gain), default	dB (nom)	^a	15 (-5 / +20)
Tx gain adjustment range	dB (typ)		15.5
Tx gain adjustment from default gain	dB (typ)	^d	+/-3
Rx gain adjustment range	dB (typ)		15.5
Rx gain adjustment from default gain	dB (typ)	^d	+/-3
Gain adjustment step size Rx and Tx	dB (typ)		0.5
Flatness, fullband, L-Band	dB (max)	^{a h}	±1.5
Flatness, fullband, L-Band	dB (typ)	^{a h}	±0.5
Flatness, 36MHz, L-Band	dB (typ)	^a	±0.2
Gain stability over temperature range	dB (max)	^a	±1
Gain stability	dB (typ)		0.25 @ 24 hrs
Nominal input signal / output signal	dBm		-20 / -20
IMD @ nominal output power	dB (typ)	^c	-69
CNR @ nominal input power, 36MHz	dB (typ)	^b	60
P1dB _{input}	dBm (typ)	^{a k}	-1.5
P1dB _{input} , at maximum Tx gain	dBm (typ)	^{a k}	-6.5
IP3 _{input} , at default gain	dBm (typ)	^{a k}	+11.5
Noise figure, at default gain	dB (typ)	^{a k}	14
Noise figure, at maximum Tx gain	dB (typ)	^{a k}	9
Noise figure, 5dB optical loss	dB (typ)	^{c k}	19.5
SFDR	dB/Hz ² (typ)	^a	114
Test port gain, transmitter	dB (typ)	^l	-20
Test port gain, receiver	dB (typ)	^l	-20
Test port flatness	dB (typ)	^l	±1
Maximum input power without damage	dBm		15
LNB power			Internal 13/18/22 V @ 700 mA with switchable tone
Power Consumption Tx	W (typ)		3.5, excluding LNA power
Power Consumption Rx	W (typ)		1.3
Optical connector			SC/APC, blindmate
Optical wavelength	nm		1550.12 ± 0.16
Laser type			DFB (Distributed feedback), thermo-electric cooled laser
Optical power output	dBm (typ)		7
Summary alarm output			Open drain alarm: OPEN: Alarm, CURRENT SINK: okay
Operating temperature range		^e	-20 °C to +60 °C
Storage temperature range			-40 °C to +70 °C
Humidity	RH		95% non-condensing humidity



- ^a Nominal input power @ 0 dB optical loss
- ^b Nominal input power @ 1 dB optical loss
- ^c Nominal output power @ 5 dB optical loss
- ^e Datasheet parameters based on temperature range -10 °C to +50 °C, refer to user manual for performance parameters @ -20 °C and +60 °C
- ^h Default gain setting
- ^k Measured @ 1.2 GHz
- ^l Relative to rear port @ 1.2 GHz
- ^d Guaranteed minimum adjustment from default gain

Type	Key Features																																			
<p>SNMP/Web Browser Card</p>  <p>The screenshot shows the ViaLite web interface. At the top, there are navigation tabs: Home, Engineering HSC 3, System, Management, Reports, Update, Help, and Log out. Below this is a 'VIA-LITE Status' section with a visual display of a rack of modules. At the bottom, there is a 'Event Log' table with columns for Index, Time/Date, System Uptime, Event, Slot, Module Type, and Severity.</p> <table border="1" data-bbox="183 600 660 651"> <thead> <tr> <th>Index</th> <th>Time/Date</th> <th>System Uptime</th> <th>Event</th> <th>Slot</th> <th>Module Type</th> <th>Severity</th> </tr> </thead> <tbody> <tr> <td>314</td> <td>14.25.23 01:21:19</td> <td>1s</td> <td>Module Inserted</td> <td>8</td> <td>Outlier</td> <td></td> </tr> <tr> <td>313</td> <td>14.25.23 01:21:19</td> <td>1s</td> <td>Module Inserted</td> <td>6</td> <td>Switch</td> <td></td> </tr> <tr> <td>312</td> <td>14.25.22 01:21:19</td> <td>1s</td> <td>Module Inserted</td> <td>2</td> <td>Splitter</td> <td></td> </tr> <tr> <td>311</td> <td>14.25.22 01:21:19</td> <td>1s</td> <td>Module Inserted</td> <td>7</td> <td>Amplifier</td> <td></td> </tr> </tbody> </table>	Index	Time/Date	System Uptime	Event	Slot	Module Type	Severity	314	14.25.23 01:21:19	1s	Module Inserted	8	Outlier		313	14.25.23 01:21:19	1s	Module Inserted	6	Switch		312	14.25.22 01:21:19	1s	Module Inserted	2	Splitter		311	14.25.22 01:21:19	1s	Module Inserted	7	Amplifier		<ul style="list-style-type: none"> • Easy to use graphical user interface (GUI) • Real time monitoring of card performance • Alarm monitoring and event logging • Control of gain adjustment • Compatible with all ViaLiteHD rack chassis and modules • Easy integration with network management systems (NMS) using management information base (MIB) tables • Actively manage redundancy switching • New RF cards can be automatically reprogrammed with the previous card parameters • Remote SNMP connection via optical fiber • Provides remote LAN 10/100 Ethernet link
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<p>Dual Redundancy</p>  <p>The diagram illustrates a 'Typical 1:1 redundancy configuration'. It shows an 'RF INPUT (LNB)' connected to an 'RF SPLITTER'. The splitter has two outputs: 'A' leading to 'PRIMARY FOL TX' and 'B' leading to 'SECONDARY FOL TX'. Both paths then go through 'PRIMARY 90° COAX CABLE' and 'SECONDARY 90° COAX CABLE' respectively. These are connected to 'PRIMARY FOL RX' and 'SECONDARY FOL RX' modules. The outputs of these modules go through an 'RF SWITCH' to the 'RF OUTPUT (station receiver)'. The diagram also shows a 'Load rack chassis' on the right.</p>	<ul style="list-style-type: none"> • 1:1 redundancy for L-Band • Maximises link up-time • Can be used to backup copper coax • Manual and automatic control via SNMP • Flexible configuration options • Other options available 																																			
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<p>DWDM Systems</p>  <p>The image shows a rack of DWDM (Dense Wavelength Division Multiplexing) systems, featuring several modules with various ports and indicators.</p>	<ul style="list-style-type: none"> • DWDM multiplexers • EDFAs • Delay lines • Optical switches • Dispersion Compensation • System design and configuration • Remote link monitoring 																																			