

ViaLiteHD® – Passive RF and Optical Card

Passive RF and Optical Card (Systems Integration modules)

- Available configurations:
 - 5 MHz to 1 GHz Splitter
 - L-Band Splitter
 - CWDM Multiplexer
 - Dual 10 MHz / L-Band Diplexer
 - Wideband amplifier
- Connectivity for M&C
- 5-year warranty



The Passive RF and Optical Cards are carrier cards for passive RF and optical devices that support simple integration with the **ViaLiteHD** chassis in rack mounted applications. There are many small form-factor passive devices that are often required for more complex systems and the cards allows their use in an easy to manage way.

The base carrier card provides mechanical mounting points for various RF and optical passive devices and cables their interfaces to the rear IO panel. Any new device required of a system can be quickly added to the Passive RF and Optical Card family with minimal effort.

The base carrier card also includes an electronic ID capability to ensure compatibility with the current range of Monitoring and Control (M&C) cards. This ensures that remote managed chassis units report accurately, the location and identity of any Passive RF and Optical Card within a system.

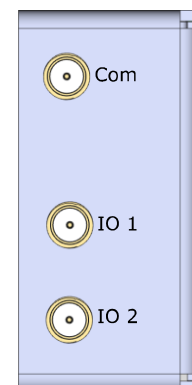
The cards can be put in a **ViaLiteHD** 3U or 1U rack chassis.

Module Types:

HRG-1-AA

The HRG-1-AA is an RF 5 MHz to 1 GHz Combiner / Splitter. Signals pass between the common and IO ports. The two IO ports are isolated.

Parameter	Specification
Passband (L-Band)	5 MHz to 1000 MHz
Insertion loss (< 500 MHz)	< 3.9 dB
Insertion loss (< 1 GHz)	< 4.5 dB
Return Loss	> 18 dB
Isolation (< 100MHz)	> 28 dB
Isolation (< 1GHz)	> 20 dB
Phase Unbalance (< 100MHz)	< 5 Degrees
Amplitude Unbalance (< 1GHz)	< 0.5 dB
Operating temperature	-20°C to +60°C

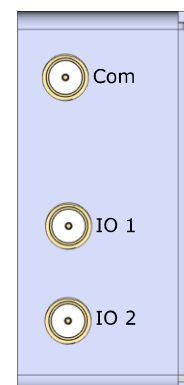


HRG-1-AB

The HRG-1-AB is an extended L-Band (400-3000 MHz) Combiner / Splitter.

Signals pass between the common and IO ports. The two IO ports are isolated.

Parameter	Specification
Passband	400 MHz to 3000 MHz
Insertion loss (700 MHz-2150 MHz)	< 4.5 dB
Insertion loss (< 3 GHz)	< 5.0 dB
Return Loss	> 14 dB
Isolation	> 18 dB
Phase Unbalance (700 MHz-2150 MHz)	< 5 Degrees
Amplitude Unbalance (700 MHz-2150 MHz)	< 0.5 dB
Power Handling	0.5 W
Operating temperature	-20°C to +60°C

**HRG-6-AA**

Optical DWDM multiplexer with one common port and four channel specific ports. The channels (ITU 100GHz grid) filtered are:

- C27
- C29
- C31
- C33

The multiplexer uses free-space optics to achieve very low loss and the channel selection ensures excellent isolation between them. All connections at the rear interface are LC/PC. Supplied with 4 off LC/PC to SC/APC fiber patch leads (0.3 m).

Parameter	Specification
Insertion loss	< 1.0dB All wavelengths
Channel Passband	+/- 6.5 nm
Port Isolation	> 40 dB
Directivity	> 50 dB
Return loss	> 45 dB
Power Handling	300 mW
Operating temperature	-20°C to +60°C

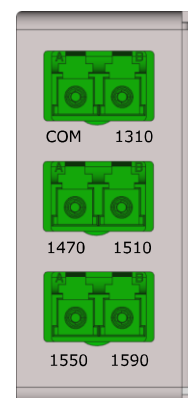
HRG-7-AA

Optical CWDM multiplexer with one common port and five wavelength specific ports. The wavelengths filtered are:

- 1310 nm
- 1470 nm
- 1510 nm
- 1550 nm
- 1590 nm

The multiplexer uses free-space optics to achieve very low loss and the channel selection ensures excellent isolation between them. All connections at the rear interface are LC/APC.

Parameter	Specification
Insertion loss	< 1.0dB All wavelengths
Channel Passband	+/- 6.5 nm
Port Isolation	> 40 dB
Directivity	> 50 dB
Return loss	> 45 dB
Power Handling	300 mW
Operating temperature	-20°C to +60°C



HRG-9-AA

The HRG-9-AA is a wideband (0.1 to 500 MHz) RF amplifier

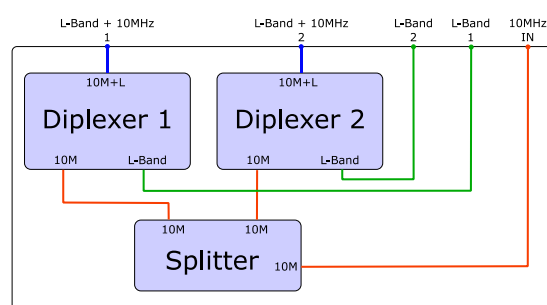
Parameter	Specification
Passband	0.1 MHz to 500 MHz
Flatness (across entire frequency range)	+/- 0.5 dB
Gain	+24 dB +/- 0.5 dB
IP3	+14 dBm
OP1dB	+5 dBm
Max Power Input No Damage	+5 dBm
Operating temperature	-20°C to +60°C

HRG-S-AA

The HRG-S-AA is a dual 10MHz / L-Band Diplexer.

The arrangement is shown in the adjacent wiring diagram. This arrangement is often used in various Satcom configurations for applying 10 MHz along with RF to a BUC and LNB.

The diplexer uses SMA connections for all ports.



Parameter	Specification
Passband (L-Band)	950 MHz to 2450 MHz
Insertion loss (L-Band)	< 1.0 dB
Insertion loss (10 MHz)	< 4.0 dB
Return loss (10 MHz)	> 18 dB
Return loss (950 MHz - 2150 MHz)	> 15 dB
Return loss (700 MHz - 2450 MHz)	> 10 dB
Power Handling	1 W
Operating temperature	-20°C to +60°C

