

HRM3811



Optical Receiver Module

HRM 3811

Product Description

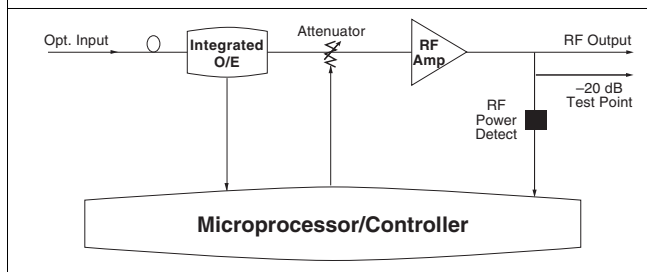
The HRM 3811 is an optical receiver module for the HLP 4200 broadband platform. This module complements Harmonic's MAXLink™ (1550), METROLink™ (DWDM), and PWRLink™ (1310) transmitter families. The HRM 3811 is ideal for supertrunking and hub interconnection.

The HLP 4200 broadband platform is a compact 5-1/4" (3 RU) high, 19" wide rack-mount housing designed to simplify headend operation. The platform provides for plug-and-play installation and operation through a user-friendly front panel display and push-button controls. As with all HLP 4200-compatible modules, the HRM 3811 has built-in element management capabilities.

The HRM 3811 uses state-of-the-art GaAs amplifiers for low noise, low nonlinear distortions, and superior flatness. These amplifiers allow RF output levels in excess of 42 dBmV per channel while maintaining supertrunk-quality performance.

Reliable networks require redundant architectures. The HRM 3811 has been designed to support both primary and secondary links. The module can monitor the total RF output power and generate an alarm when it falls below a user-defined threshold, activating an external RF switch (if present).

Standard Configuration



Advantages

The HRM 3811 receiver module's versatility and high-performance provide the user with many advantages:

- Wide optical input power range (-10 to +5 dBm).
- Outstanding noise, distortion, and flatness specifications for high-quality supertrunk optical links.
- The HRM 3811 shares a common platform (HLP 4200) with MAXLink (1550), METROLink (DWDM), PWRLink (1310), and GIGALight (Gigabit Ethernet) product families. This enables seamless network management integration of diverse equipment, providing user interface commonality and maximizing rack space efficiency.
- Output levels in excess of 42 dBmV per channel eliminate the need for post amplifiers.
- RF output power detection allows for switching in redundant networks.

Applications

- AM supertrunking
- Headend interconnections
- Redundant architectures

Models Available

Standard HRM 3811-AS	SC/APC connector
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Also available HRM 3811-US	SC/UPC connector
HRM 3811-UF	FC/UPC connector
HRM 3811-AF	FC/APC connector
HRM 3811-AE	E-2000 connector

Optical Input

Optical Input Range	≤ -10 to +3 dBm
Wavelength	1250 to 1600 nm
Return Loss	> 45 dB
Noise	< 5 pA/√Hz
Responsivity	> 0.85 A/W @ 1310 nm > 0.95 A/W @ 1550 nm

RF Output

Output Level	> 42 dBmV/channel ¹			
C/N	> 59 dB ^{2,3}			
Optical Input [dBm]	+5	+3	0	-3
C/CSO ^{3,4}	56	62	65	65
C/CTB ^{3,4}	63	65	69	69
Operational Bandwidth	45 to 870 MHz			
Flatness	± 0.5 dB (50 to 550 MHz) ± 0.75 dB (550 to 870 MHz)			
Slope	< 0.5 dB			
Output Stability	±1.0 dB			
Impedance	75 Ω			
Connector	F-Type (accepts 0.51 to 1.07 mm center conductor diameter)			
Return Loss	> 16 dB			
Gain Control Range	> 10 dB			
Monitor Point Level	-20 ± 2 dB			
Connector	Male GSK			

User Interface**Front Panel**

Status LED	Green = Normal, Red = Alarm
Selection LED	Yellow = Selected by HLP 4200WD
Three position switch	Off / Alarm Level / RF Level (used only for HLP 4200ND)

RF Monitor Point

Coupling Loss	20 dB
Flatness	+1 / -2 dB
Return Loss	> 16 dB; 45 to 550 MHz > 14 dB; 550 to 870 MHz
Connector Type	Male GSK

Top Panel

Direction switch	Forward / Return
Unit Personality switch	Primary / Backup

Rear Panel

Optical Input
RF Output
Backup switching connector
RS-485 IN / OUT

Electrical

Voltage	+24 VDC; supplied by HLP 4200 bus
Consumption	< 25 W

Environmental

Operating Temperature Range	-20° to +60° C / -4° to +140° F
Relative Humidity	85% non-condensing

Physical

Dimensions	11.7" L x 4.37" H x 2.616" W / 29.7 cm L x 11.1 cm H x 6.64 cm W
Weight	3.6 lbs. / 1.7 kg
Mounting	HLP 4200; one module slot

Notes:

- 0 dBm optical input at 3.7% modulation index per channel.
- 3 dBm optical input at 3.7% modulation index per channel, 38 dBmV RF output per channel.
- Overall system performance depends on many factors. Consult your Harmonic applications engineer for more information.
- 3.7% modulation index per channel, 38 dBmV RF output per channel.

