

**HIGHLIGHTS**

- **Designed for headend and hub applications and accepts both 1310 and 1550 nm wavelengths, including the complete ITU DWDM channel frequencies**
- **Stand-alone 1-RU 19" rack-mountable design saves valuable space and eliminates the need for additional platform and power supplies**
- **Integrated element management intelligence with SNMP compatibility enables seamless communication with comprehensive network management systems (HRM 7121)**
- **Microprocessor control of all key parameters provides consistent, optimum product performance and monitoring (HRM 7121)**
- **Wide optical input power range (-10 to +3 dBm)**
- **Outstanding noise, distortion and flatness specifications for high-quality supertrunk optical links**
- **Output levels in excess of 38 dBmV per channel eliminate the need for post amplifiers**
- **Master/slave switching capability**

Harmonic's MAXLink™ family of transmitters, optical amplifiers, link extenders and optical receivers is ideal for 1550 nm-based network applications. The MAXLink system provides a cost-effective solution for a variety of applications and architectures, including long-haul transport beyond the reach of 1310 nm transmitters, and fiber-dense architectures that take advantage of high-power optical amplifiers. In addition, this system is ideally suited for new, evolving transport architectures such as redundant rings, broadcast layer transmission, and hub interconnects used in broadband networks.

The HRM 7121/7111 broadband optical receiver offers a wide operational bandwidth to support the high-performance MAXLink transmission products. Two optical receiver models are available.



The HRM 7111 is the standard MAXLink optical receiver, providing superior performance for any MAXLink transmission system. The HRM 7121 offers the same performance plus element management control with SNMP along with an embedded web interface. Each model has switching capabilities either through NMS or TTL logic.

The stand-alone 1-RU design of the MAXLink product line saves valuable rack space and operational costs since an additional platform and power supplies are not needed

Applications include:

- Supertrunking
- Headend interconnections
- Redundant architectures

### Optical Input

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

### RF Output

Output Level	> 38 dBmV/channel <sup>1</sup> Minimum +35 dBmV/channel <sup>1</sup>
C/CSO	65 dB <sup>2</sup> 68 dB <sup>3</sup>
C/CTB	69 dB <sup>2</sup> 74 dB <sup>3</sup>
Operational Bandwidth	45 to 1003 MHz
Flatness	± 0.5 dB (50 to 550 MHz) ± 1.0 dB (550 to 870 MHz) -1.02 to +2.0 dB (870 to 1003 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 (50 to 550 MHz) > 14 dB (550 to 870 MHz) > 12 dB (870 to 1003 MHz)
Gain Control Range	0-15 dB

### User Interface

Front Panel Display (HRM 7121 only)	Optical Status LED Green = Normal, Red = Alarm
RF Monitor Point	
Coupling Loss	20 dB
Flatness	+1 / -1 dB
Connector Type	Male GSK
Rear Panel	Optical Input RF Output Backup switching connector RJ-11 for SNMP (10/100 BaseT) (HRM7121 only)

### Network Management

SNMP Protocol	v1, v2c, v3
HTTP Protocol	HTTP 1.1 (with Web browser-based authentication)

### Power Requirements

AC input	110V / 220V
Internal DC Voltage	-48 VDC
Consumption	< 35 W

### Environmental

Operating Temperature Range	0° to 50° C 32° to 122° F
Relative Humidity	Maximum 85% non-condensing

### Physical

Dimensions (WxHxD)	19" x 1.7" x 11.5" (1-RU) 48.3 cm x 4.3 cm x 29.2 cm
Weight	11 lbs. / 5 kg
Mounting	19" rack

**Notes:**

1. At 0 dBm optical input with 3.7% modulation index and 9 dB pad.
2. At 38 dBmV output level, 80 NTSC CW carriers, optical input = 0 dBm, without transmitter contribution.
3. At 38 dBmV output level, 42 CENELEC CW carriers, optical input = 0 dBm, without transmitter contribution.