

Reliable and cost-effective, the compact Alcatel 7390 LMDS Cross-Polarized Radio Termination (X-Pol RT) customer premises outdoor equipment comprises environmentally sealed transceivers integrated with a 30 cm (12 in.) high gain antenna. These transceivers provide multicarrier, wide bandwidth, low noise amplification and down-conversions, as well as a single carrier up-conversion and power amplification, and can be installed on either a tower or a rooftop. The single antenna, of Cassegrain design, is employed for both contiguous or split-band licensing. The Broadband Wireless Access customer premises equipment can serve a wide variety of customers, such as large and medium-sized businesses, SOHOs, single unit residences and multiple dwelling units.

Highly scalable and fully managed as part of a multiservice solution, Alcatel 7390 LMDS products can be rapidly deployed to provide a powerful, cost-effective access solution for the first mile delivery of a wide range of data, Internet, voice and video services.



Effective
amplification
and conversions



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Technical Summary

Antenna

- ▼ Polarization: vertical or horizontal linear selected at time of deployment
- ▼ Cross-polarization isolation: -30dB, mainbeam; -15dB, side and backlobes
- ▼ Peak gain: +36dBi, co-polarized
- ▼ Beamwidth (3dB): approximately 2.2°
- ▼ Sidelobe levels (typical): -15dB, first sidelobe; -40dB, backlobe

Transmitter

- ▼ Maximum RF power: 100 mW at PldB
- ▼ Typical power delivered to transmitted carrier: +17dBm typical
- ▼ Gain IF-RF: 35dB +/- 4dB
- ▼ Noise figure: 15dB max @ 50° C (122° F), 10dB target
- ▼ Output RF compression: +19dBm min @ P1 dB @ 50° C (122° F)

Receiver

- ▼ Gain RF-IF: 40dB +/- 4dB (nominal gain allowance, frequency flatness)
- ▼ Noise figure: 5dB max @ 50° C (122° F)
- ▼ Input RF compression: -26dBm min @ PldB per single carrier, -39dBm for each carrier with a maximum of 24 carriers

Connectors

- ▼ IF connector - F(f) type: 75Ω (note: the DC input supply is also provided on this connection)

Power/Environment/ Mechanical Data

- ▼ DC supply: +22 to +36V DC @ .8 A (25 W) max
- ▼ DC supply ripple and noise: full performance is required in the presence of 1.8 V peak to peak ripple and noise (DC - 100 MHz)
- ▼ Power consumption: < 15 W
- ▼ Diameter: 30 cm (12 in.)
- ▼ Operating environment: -40° to 50° C (-40° to 122° F), 0% to 100% relative humidity
- ▼ Bellcore GR-2834 Core: (basic electrical, mechanical and environmental criteria)
- ▼ Bellcore TA-NWT-000487: (electronic equipment cabinets requirements)
- ▼ EMC standards: EN 300 385

