

4.4 – 5.0 GHz ODU System Overview Specifications

| | |
|---|--|
| Typical Link Operational Distance | > 40 km for BER 10^{-6} with 0.6 meter antennas |
| ODU-Antenna Connector | Type N Female on the exterior of the ODU housing |
| Operating Frequency Range | 4400 to 5000 MHz |
| Frequency Plan | Per ITU-R 1099 <ul style="list-style-type: none"> • 10 MHz channel spacing • 28 channels • 300 MHz Transmit to Receive spacing • 30 MHz center gap |
| Transmitter Power -- RF power measured at the "N" connector on the ODU housing. | +24 dBm for 16QAM or +30 dBm for QPSK minimum power at "N" connector |
| Transmitter Output Power Range | Greater than 20 dB power adjustment software controlled |
| Maximum Receive Level | -30 dBm operational with BER better than 10^{-9} . up to +20 dBm receiver input with no damage |
| Duplex Method | Frequency Division Duplex, 300 MHz channel separation |
| Modulation | 16 QAM or QPSK |
| Forward Error Correction | Reed Solomon FEC |
| Regulatory Compliance | None, FCC or ETSI available |
| Network Management | GUI or CLI control of all ODU features |
| Local Control of ODU | Ethernet 10/100BaseT |
| User Data Interfaces | Full or fractional E1 and 10/100BaseT |
| Maximum ODU cable length | ~ 100 meters, limited by the Ethernet 10/100BaseT 802.3 specification |
| ODU DC Power Input | 48 VDC nominal, 20 to 75 VDC operating range, either polarity, floating relative to ground. Optional 12 VDC nominal, 10 to 18 VDC operating range. |
| Power Dissipation | Approximately 45 Watts maximum to ODU. Natural convection cooling, no moving parts. |
| Operating Environment - ODU | -40 to +70 C, 0-100% humidity, weather resistant, outdoor mounted metal housing with sun shield optional. |
| Operating Altitude | Up to 5,000 meters |
| Physical Dimensions | Approximately 35 x 18 x 35 cm ODU |
| RF Radiated Bandwidth | User-set RF bandwidths via software control. 1, 2, 5, 10 MHz Channels |
| Minimum Received RF signal for 10^{-6} Bit Error Rate | 1 MHz RF channel -90 dBm 5 MHz RF channel -83 dBm |
| Channel data Throughput, in each direction, full duplex | User-set via software control. Depends on Modulation type and RF Bandwidth. Ranges from 1.024 to approximately 12.2 MBPS, in each direction |