

OptiQwave 8100 Series 5.8GHz ISM Band Spread-Spectrum 4, 8 or 16 x E1/T1 Digital Microwave Radio



Key Features

The OptiQwave 8100 is a license-exempt digital microwave that provides 4/8/16 T1 or 4/8/16 E1 point-to-point wireless connections at the range of 1~65 km with high availability.

Using high quality radios and standard interfaces, Fiber Logic allows you to quickly add backhaul and backbone connections to your infrastructure. Because it is wireless, Fiber Logic's OptiQwave 8140, 8180 and 8116 offer significant cost-savings compared to traditional leased lines. In addition, fast deployment opens up new revenue streams and enables faster customer acquisition. It also provides a time-to-market advantage when installing a leased line is too costly or impossible.

In addition, OptiQwave 8100 utilizes unlicensed frequency, so you can install it when you need it and where you need it. It eliminates regulatory delays and is a lot faster than traditional wired networks. Network management and maintenance features such as various local and remote loopbacks, built-in PRBS, LCD, LED Status Alarms, SNMP, and engineering order-wire help network providers maintain their networks for maximum service levels.

Easy installation and operation allow you to quickly extend your networks and eliminate bandwidth bottlenecks, making OptiQwave 8100 ideal for:

- Cost-effective, rapid broadband deployment in the first mile
- 2G/3G BTS , or remote station backhaul
- Redundant backup channel
- Disaster recovery
- Temporary traffic demand Service providers establishing new Points of Presence in new markets Redundant backup channel

- 8140 model stands for 4 T1/E1
8180 model stands for 8 T1/E1
8116 model stands for 16 T1/E1
- 4/8/16 x T1 or E1 capacity interface
- Software provisionable for T1 or E1 Application
- The 8140 4 T1/E1 supports 3 different channels for interference-free co-location
- High reliability with 99.999% availability
- Modem port supports Alarm auto dial out and Trap IP for Ethernet
- Built-in PRBS, loopbacks for ease of trouble shooting
- FEC for superb system gain
- Rugged size, built in LED status indicators & LCD panel for ease of configuration and maintenance
- Test jack for Tx & Rx signal power level
- Support Menu-driven for console port and PPP for modem port
- Provide high speed outband supervisory channel for fast system management of the remote unit
- Enhanced performance monitoring
- SNMP management & SNMP based GUI
- Wide operational temperature range
- Ease of maintenance reduces operational costs and quick ROI

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FiberLogic
 Broader, Smarter Managed Access

SPECIFICATIONS

System

| | |
|-------------------------|---|
| Frequency Range | 5725~5850 MHz |
| Application | E1 or T1 Software Provisionable |
| Channel Allocation | 3 bands for 8140 1 band for 8180 and 8116 |
| System Capacity | |
| Digital Capacity | 4/8/16 x T1/E1 |
| Antenna Connector | N-Type female |
| RF Output Power | +23 dBm |
| RF Attenuation Range | 24 dB, minimum (S/W adjustable) |
| TX Frequency Stability | ±10ppm |
| RX Sensitivity(4E1) | -84 dBm (BER=1 x 10 ⁻⁶) |
| RX Sensitivity(8E1) | -82 dBm (BER=1 x 10 ⁻⁶) |
| RX Sensitivity(16E1) | -80 dBm (BER=1 x 10 ⁻⁶) |
| Maximum RX Level | -10 dBm with Error Free |
| System Gain | 107 dB for 4E1 ,105 dB for 8E1 and 103 dB for 16E1 |
| Co-channel Interference | 8db for 4E1 , 9db for 8E1 and 13 dB for 16E1 |
| Range(6' Antenna) | 1 to 65 Km |

Auxiliary Connections

| | |
|---------------------|---|
| Orderwire Handset | 2-wire, RJ-11 |
| Test Points | Near End Tx & Rx Signal Level Voltage |
| Auxiliary Data Port | RS-232, Clear Service Channel, |
| Console Port | RJ45, up to 38.4 Kbps |
| Network | Management Port RJ45, 10/100BaseT Ethernet |
| Modem Port | RS-232 for External MODEM |
| Office Alarm Port | DB-9, Dry contact relay |

Performance Monitoring

| | |
|---------------------------------|---|
| Data Collection | T1/E1 : CV, ES, SES, UAS |
| Data Storage | 15-minute, 95 15-minute 1 day and 7 days |
| Data Reporting | LCD, Console & Ethernet |
| Threshold Crossing Notification | Automatically generated and reported to Console and OS |

T1 Interface

| | |
|--------------------|--|
| Line Rate | 1.544Mbps ± 50ppm |
| Line Code | B8ZS/AMI |
| Impedance | 100Ω±5% resistive, ymmetrical pair. |
| Pulse Shape | Complied with ITU-T G.703 |
| Jitter Requirement | Complied with ITU-T G.824 |
| Connector | RJ 45 |

E1 Interface

| | |
|--------------------|--|
| Line Rate | 2.048Mbps ± 50ppm |
| Line Code | HDB3 |
| Impedance | 20Ω±5% resistive, symmetrical pair. |
| Pulse Shape | Complied with ITU-T G.703 |
| Jitter Requirement | Complied with ITU-T G.823 |
| Connector | RJ 45 |

Power/Environment

| | |
|-----------------------|--|
| Power | DC: -36~-72VDC or AC: 90~260 VAC, 47~63 Hz With auto-sensing |
| Power Consumption | < 70 Watts |
| Operating Temperature | 0~+55°C |
| Humidity | 0~95%, non-condensing |
| Physical size(WxDxH) | 445 x 326 x 88 mm |
| Weight | 7.5 kg |
| Mounting | 19 and 23 inch EIA rack mount |
| Regulatory | FCC Part 15, Class A |
| Compliance | CISPR EN55022 |
| Reliability | >40,000 hours, FITs |

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www.fiberlogic.com

E-mail:sales@fiberlogic.com

Fiber Logic Communications, Inc.

HeadQuarter
 5F-3, No.9 Prosperity Road One, Science-Based Industrial Park, Hsinchu, TAIWAN
 Tel:+886-3-563-8889 Fax:+886-3-563-8899

Sales and Marketing
 2F, No.37-1, Sec.1 Jing-Shan South Road, Taipei, TAIWAN
 Tel:+886-2-2356-0588 Fax:+886-2-23568678