



Lynx™ 1500

Digital Microwave Radio



Fast, Cost-Effective Wireless E1 Connectivity

Lynx 1500 is an international digital microwave radio that provides two full-duplex E1 connections at distances beyond 80 km (50 miles)—with 99.999% or better availability.

Operating in the 1.5 GHz licensed frequency band with seven user-selectable channel plans, this radio solution ensures reliable connections for voice and data links over medium and long distances.

Because it is wireless, Lynx 1500 offers significant cost savings compared to fiber and leased-line connections, and provides a time-to-market advantage over building new wireline infrastructure.

Solving Long Distance Communications Needs

Fast installation, exceptional range performance, and low risk of interference from other users of the band make the Lynx 1500 an ideal solution for a diverse range of fixed-wireless connectivity needs, including:

- Long-distance transport links to remote locations that are underserved by traditional wired networks
- Backhaul of cellular traffic to improve and expand coverage for cellular/PCS networks
- Railroad and pipeline communication networks that cover large geographical areas
- Government and public safety wireless transport links to remote population centers
- Wireless backbone for monitoring utility and power distribution networks

About the Lynx® Product Family

The Lynx family of digital microwave radios provides a broad range of point-to-point wireless solutions, delivering a proven and cost-effective alternative to wire and fiber for telephony connectivity applications.

In addition to Lynx 1500, the Lynx product line includes:

Lynx.sc, offering 1 and 2 T1/E1 capacity at distances exceeding 80 km (50 miles).

Lynx.HD, offering 4 to 8 T1/E1 capacity at distances exceeding 64 km (40 miles).

Lynx DS-3, offering DS-3 capacity at distances exceeding 24 km (15 miles).

PRODUCT HIGHLIGHTS

Exceptional Long-Distance Performance

- Range performance in excess of 80 kilometers/50 miles
- Excellent radio system gain adds to robust long-haul performance

Superior transmission performance in the 1.5 GHz band

- Complete immunity to diverse weather conditions such as rain, humidity, and fog
- Unaffected by moderate multipath
- Diffraction at 1.5 GHz allows transmission over partially obstructed paths

Easy to Deploy and Maintain

- Single indoor unit for fast and easy installation
- Flexible power connections, with AC adapter available
- No external adjustments needed for commissioning

99.999% Carrier-Class Reliability

- Field-proven technology (more than 40,000 Lynx radios in use worldwide)
- Superior system gain provides longest distance and highest reliability available
- Compliant with G.703 ITU-T specification

KEY FEATURES

- Frequency Range: 1427.0 MHz to 1517.0 MHz
- Full duplex, 2 x E1 (2 x 2.048 Mbps) connections
- QPSK modulation for robust communications
- Wide DC power input (+/- 20 to +/- 63 VDC)
- Wide temperature range -30 to +65 degrees C
- Built-in far-end monitoring, loopback and orderwire
- Multiple channel plans selectable by the user
- 2-year warranty

Product Specifications

PRODUCT	MODEL NUMBER	FREQUENCY BAND	DIGITAL CAPACITY (FULL DUPLEX)	CHANNEL PLANS	THRESHOLD (BER=1X10 ⁻⁴)	OUTPUT POWER (MINIMUM)	SYSTEM GAIN	DISTANCE (MILES/KM)
Lynx 1500	32100	1.4 - 1.5 GHz	2xE1 (2x2.048 Mbps)	7 (A-G)	-91 dBm	+27 dBm	121 dBm	>60/96

System

Antenna Connector	N-Type female
Full Output Power	≥ +27 dBm
RF Attenuation Range	15 dB, minimum
Maximum Receive Level	-10 dBm, error-free
Regulatory Compliance	ITU-R F.1242

Digital Line Interfaces

Digital Interface	CEPT-1 (E1) 75 ohm, unbalanced
Connector	BNC female
Line Code	HDB3
Blue Code	AIS (Alarm Indication Signal)
Far-end Loopback	Local or remote control Internal or external signal source

Auxiliary Connections

Orderwire Handset	2-wire, RJ-11
VF Orderwire Bridge	600 ohm balanced, 4-wire, 0 dBm, DB25
Diagnostics Port	RS-232/RS-422 (craft/TBOS), DB9
Aux. Data Port (Clear Service Channel)	RS-232/RS-422, ≤9.6K baud, DB9
Alarm Port	2 ea. Form C, 6 TTL, DB25
Test Points	Output power, near- and far-end RSL

Power/Environment

DC Power	±20 to ±63 Volts, <45 Watts
Optional AC Adapter	100-250 Volts, 50-60 Hz
Power Connector	6-pin barrier strip, plug-in
Operational Temperature	-30° to +65° C
Humidity	0 to 95%, non-condensing
Altitude	15,000 feet/5000 meters, max.

Physical

Size (WxHxD)	17.2 x 3.5 x 14.5 inches 43.7 x 8.9 x 36.8 cm
Weight	11 lbs/5 kg

Mounting (Installation)

EIA Rack Mount	19 inch, 2-unit height (mounting brackets supplied)
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Frequency Channel Plan (MHz)

