



Lynx™ HD

Digital Microwave Radio



Wireless T1 or E1 Connectivity for Circuit-Switched Networks

The Lynx.HD provides the industry's broadest, most scalable line of license-exempt Spread Spectrum radios for establishing point-to-point, wireless T1 or E1 connectivity. Lynx.HD delivers the fastest possible implementation and connectivity of multi-T1/E1 access for line-of-sight distances with 99.999%, or better, availability.

Compared to fiber or wired alternatives, Lynx.HD delivers faster time-to-market and more cost-effective deployment for service providers, corporations, and government agencies.

Solving Critical Communications Needs

Lynx.HD radios are ideally suited for creating fixed-wireless connectivity solutions addressing a number of critical communication needs, including:

- Backhaul to central office/switching center
- Cell site interconnectivity to cellular/PCS base stations
- Spur connections for "last-mile" access or extending fiber networks
- New Points of Presence (POP) for service providers
- WAN and/or PABX connectivity from building to building, campus to campus, and for remote locations

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 telco connectivity applications.

In addition to Lynx.HD, the Lynx product line includes:

Lynx.sc, offering up to 2xT1/E1 capacity at distances exceeding 50 miles (80 km).

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

Lynx OC-3, offering 155 Mbps capacity at distances exceeding 7 miles (11 km).

PRODUCT HIGHLIGHTS

Widest Choice of Capacities and Channel Plans

- Ability to co-locate multiple radios without interference
- Flexibility to add more services and users
- Backhaul more network traffic

Fast, Easy, and Cost-Effective Deployment

- Can be installed and operational in the same day, plus it's easy to maintain
- No special operating license required (see Website for details on the countries in which Lynx.HD is homologated)

99.999% Carrier-Class Performance and Reliability

- No risk of interruptions from accidentally severed lines
- Meets or exceeds traditional Telco standards and wireline requirements
- Field-proven technology (more than 40,000 Lynx radios in use worldwide)
- Superior system gain provides the longest distance and highest link reliability available

KEY FEATURES

- 4 or 8 independent T1 or E1 connections
- Point-to-point communications from less than 1 mile/km to greater than 40 miles/64 km
- Multiple capacities from which to choose (4 x T1, 4 x E1, 8 x T1, and 8 x E1)
- Multiple channel options
- Frequency Range (Spread Spectrum):
2.4 GHz ISM: 2400-2483.5 MHz
5.8 GHz ISM: 5725-5850 MHz
- Built-in loopback, far-end monitoring, and private telephone network orderwire
- 2-year warranty
- Monitor Hot Standby configuration available
- SNMP proxy and embedded TBOS network management

Product Specifications

PRODUCT	MODEL NUMBER	FREQUENCY BAND	DIGITAL CAPACITY (FULL DUPLEX)	CHANNEL PLANS	THRESHOLD (BER=1X10 ⁻³)	OUTPUT POWER (MINIMUM)	SYSTEM GAIN	DISTANCE (MILES/KM)
Lynx.HD 4xT1	31350-10	2400-2483.5 MHz	4xT1 (4x1.544 Mbps)	2 (A, B)	-88 dBm	+27 dBm	118 dB	>50/80
Lynx.HD 4xT1	31850-10	5725-5850 MHz	4xT1 (4x1.544 Mbps)	3 (A, B, C)	-88 dBm	+20 dBm	111 dB	>45/72
Lynx.HD 8xT1	31145-10	5725-5850 MHz	8xT1 (8x1.544 Mbps)	2 (A, B)	-86 dBm	+20 dBm	109 dB	>40/64
Lynx.HD 4xE1	31350-20/30	2400-2483.5 MHz	4xE1 (4x2.048 Mbps)	2 (A, B)	-88 dBm	+27 dBm	118 dB	>50/80
Lynx.HD 4xE1	31850-20/30	5725-5850 MHz	4xE1 (4x2.048 Mbps)	3 (A, B, C)	-88 dBm	+20 dBm	111 dB	>45/72
Lynx.HD 8xE1	27705-20	5725-5850 MHz	8xE1 (8x2.048 Mbps)	1 (A)	-83 dBm	+20 dBm	106 dB	>35/56

System

Antenna Connector	N-Type female
Full Output Power (2.4 GHz)	≥+27 dBm, +30 dBm max.
RF Attenuation Range (2.4 GHz)	16 dB, minimum
Full Output Power (5.8 GHz)	≥+20 dBm, +23 dBm typ.
RF Attenuation Range (5.8 GHz)	20 dB, minimum
Maximum Receive Level	-10 dBm, error-free +10 dBm, no damage
Processing Gain	10 dB, minimum
Transmission Delay	
Radio Only	500 μs, maximum
10-Mile Path	550 μs, maximum
30-Mile Path	650 μs, maximum
50-Mile Path	750 μs, maximum
Regulatory Compliance¹	US: FCC Part 15.247, Class B Canada: IC RSS210/139 DSX-1: CCITT G.823, AT&T Pub 62411, Bellcore TR-TSY-000499 CEPT-1: ITU-TG703

Digital Line Interfaces

Digital Interface	CEPT-1 (E1) or DSX-1 (T1)
Connector	BNC female (optional on 4E1 models only) RJ-45 female (all models)
Line Code: T1	B8ZS or AMI selectable
Line Code: E1	HDB3
Line Build Out: T1	0 to 660 feet/200 m, selectable
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

Auxiliary Connections Continued

Diagnostics Port	RS-232/RS-422 (craft/TBOS), DB9
Aux Data Port (Clear Service Channel)	RS-232/RS-422, ≤ 9600 baud, DB9
Alarm Port	2 Form C, 6 TTL, DB25
Test Points	Output power, near- & 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 /5,000 meters max

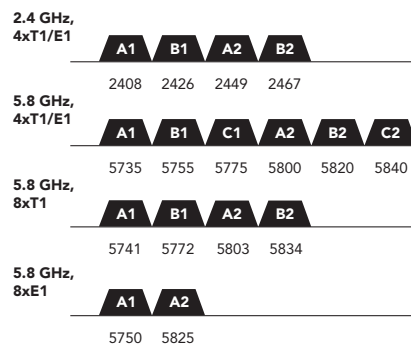
Physical

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

Mounting (Installation)

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



¹Check Website for compliance for other countries