



Lynx.sc

Digital Microwave Radio



Fast, Cost-Effective Wireless Connectivity

Lynx.sc is a digital microwave radio that provides wireless connectivity with capacity up to two T1/E1 lines at distances exceeding 50 miles (80 km)—and is less expensive than leasing lines.

Using high-quality radios and standard telco interfaces, Lynx.sc allows you to quickly connect or extend your infrastructure over long distances. Because it is wireless, Lynx.sc offers significant cost savings compared to leased-line connections, and provides a time-to-market advantage where installing new lines is impossible or too costly.

In addition, Lynx.sc is license-exempt in most countries, so you can install it when and where you need it, without right-of-way limitations, frequency licensing delays, or waiting for your telecommunications provider to deliver new lines.

Extend or Enhance Your Network Virtually Overnight

Easy installation and hassle-free operation allow you to quickly extend networks and eliminate bandwidth bottlenecks, making Lynx.sc wireless radios the ideal solution for:

- Cellular carriers connecting cell towers and backhauling traffic to central offices or leased line access points
- Cellular carriers and service providers needing to build out infrastructure in remote locations where leased lines are unavailable or cost-prohibitive
- Service providers establishing new Points of Presence and direct connections to customers

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.sc, the entry-level Lynx product, the Lynx product line includes:

Lynx.HD, offering up to 8xT1/E1 capacity at distances exceeding 40 miles (64 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

Fast and Easy to Deploy

- License-exempt frequencies eliminate regulatory delays
- Wireless connectivity eliminates the need for leasing or installing lines
- Easy integration with new high-speed switches, legacy data, and voice network products
- Multiple frequency options offer flexibility when co-locating radios

Rapid Return on Investment

- Fast payback compared to leasing T1 lines or building new wireline infrastructure
- Fast deployment opens up new revenue streams and enables faster customer acquisition

99.999% Carrier-Class Reliability

- Meets or exceeds traditional telco wireline standards and requirements
- Transmission rates not affected by weather
- Longer distances and highest reliability due to superior system gain

KEY FEATURES

- 1 to 2 T1/E1 connections
- Frequency Ranges:
 - 2.4 GHz license-exempt;
 - 5.8 GHz license-exempt
- Compliant with industry standards
- Point-to-point communications from less than 1 mile/km to more than 50 miles/80 km
- Wide DC power input (± 20 to ± 63 V), AC adapter available
- Wide operational temperature
- Built-in loopback, far-end monitoring, and private telephone network orderwire
- 2-year warranty

Product Specifications

PRODUCT	MODEL NUMBER	FREQUENCY BAND	DIGITAL CAPACITY (FULL DUPLEX)	CHANNEL PLANS	THRESHOLD (BER=1X10 ⁻⁶)	OUTPUT POWER (MINIMUM)	SYSTEM GAIN	DISTANCE (MILES/KM)
Lynx.sc T1	31250	2400-2483.5 MHz	T1 (1.544 Mbps)	2 (A, B)	-94 dBm	+27 dBm	124 dB	>60/96
Lynx.sc 2xT1	31650	2400-2483.5 MHz	2xT1 (2x1.544 Mbps)	1 (A)	-91 dBm	+27 dBm	121 dB	>55/88
Lynx.sc T1	31000	5725-5850 MHz	T1 (1.544 Mbps)	3 (A, B, C)	-93 dBm	+20 dBm	116 dB	>50/80
Lynx.sc 2xT1	31600	5725-5850 MHz	2xT1 (2x1.544 Mbps)	2 (A, B)	-90 dBm	+20 dBm	113 dB	>48/77
Lynx.sc 1E1	31500	2400-2483.5 MHz	E1 (2.048 Mbps)	2 (A, B)	-93 dBm	+27 dBm	123 dB	>60/96
Lynx.sc 1E1	31400	5725-5850 MHz	E1 (2.048 Mbps)	3 (A, B, C)	-92 dBm	+20 dBm	115 dB	>50/80
Lynx.sc 2xE1	31700	5725-5850 MHz	E1 (2x2.048 Mbps)	2 (A, B)	-90 dBm	+20 dBm	113 dB	>48/77

System

Antenna Connector	N-Type female
Full Output Power (2.4 GHz)	≥ +27 dBm, +30 dBm max
RF Attenuation Range	16 dB, minimum
Full Output Power (5.8 GHz)	≥ +20 dBm, +23 dBm typical
RF Attenuation Range	20 dB, minimum
Maximum Receive Level	-5 dBm, error-free
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 Compliance	US: FCC part 15.247 (ISM), Class B, Canada: IC RSS 210/139 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: E1	BNC female
Connector : T1	RJ-45 female, DB-9 female
Line Code: T1	B8ZS or AMI selectable
Line Code: E1	HDB3
Line Build Out: T1	0 to 600 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, ≤19.2K 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 Plans (MHz)

