

## Specifications LYNX 1.5 GHz 2xE1

**P/N 32100-30**

ver. 1.3  
rev. 7/02/2001

<b>System Parameter</b>	
Frequency Range	1427.25 – 1517.75 MHz
Bandwidth	3.5 MHz
Output power	+ 27 dBm typ.
Power Control Range	15 dB min.
Nominal Receive Level	-30 to -60 dBm
Max receive level	-20 dBm error free
Frequency selection	rear panel DIP switches: A1, A2, B1, B2, C1, C2, D1, D2, E1, E2, F1, F2, G1, G2
Threshold receive level BER = 10 <sup>-6</sup>	-90 dBm min.
RSL voltage	4.5 to 0.5 VDC
Modulation Type	OQPSK
Error Floor	10 <sup>-11</sup>
Transmission Delay	250 usec., maximum for radio only
<b>Antenna/Antenna Coupling Unit</b>	
Mechanics	External Antenna
Antenna Connection	Type – N female
Impedance	50 ohm
<b>Digital Interface</b>	
Data Rate	2 x E1 (2 x 2.048 Mbits/sec)
Digital Interface	CEPT-1
Connector	BNC female , 75 ohm, unbalanced option: RJ-45/8 120 ohm, balanced
	Compliant to ITU-T G.703
Far end Loopback	Internal or external signal source
<b>Auxiliary Connections</b>	
OW interface	2-wire, 4-pin modular jack (female RJ-11)
REN	1.0 dB
DTMF tones	within ± 1.5% of nominal frequency (+0-6 dB)
Ringing Voltage	48 VDC, typical
VF Orderwire bridge	600 ohm balanced, 4-wire, 0 dBm, DB-25, male
Configuration Port	RS-232, DB-9, male
Aux Data Port	RS-232, ≤ 9600 baud, DB-9, female
Alarm relay outputs	2 x Form C, DB-25, female
Test Point	Near-end and far-end RSL
<b>Temperature and Environment</b>	
Operating Temp	-30° to +65 °C
Humidity	95% , non-condensing
Altitude	4500 meters, maximum

<b>Power</b>	
DC Input	±20 to ±63 VDC (nominally -48 VDC or +24 VDC)
Power Consumption	<45 Watts
AC Adapter (external)	100-250 VAC, 50-60 Hz input; -48 VDC output
Connector	Barrier strip, plug-in type
<b>Regulatory Information</b>	
Regulations and Channels Conduct of Use for 1.5 GHz Frequency	Brazil Government, Annex Resolution No. 198, December 16, 1999
<b>Mechanical</b>	
Size	17.2 x 3.5 x 14.5 inches 43.7 x 8.9 x 36.8 cm
Weight	less than 15 lbs.
<b>Front panel</b>	
EOW handset	RJ-11, 2-wire
Test Points	Tx Pwr, RSL, GND
LED Indicators	ON RX SYNC BER Data Loss 1 Data Loss 2 AIS OUT FAN RADIO FAIL FAR END ERROR (Far End Loopback)
Controls	Far End Loopback Enable Far End Loopback Channel Select Display Far End
<b>Rear Panel Connectors</b>	
DC Input Power	Barrier strip, 6-pin
E1	4 x BNC, unbalanced , 75 ohm or, 2 x RJ-45/8, balanced, 120 ohm (different model number)
VF	DB-25, male
Factory Port	DB-9, male
Alarms	DB-25, female
Aux Data	DB-9, female
<b>Rear Panel Controls</b>	
Channel Select	Frequency Pair DIP select
Order Wire	Address Rotary select

**Channel Plans**

<b>Tx/Rx</b>	<b>Channel Assignment</b>	<b>Rx/Tx</b>	<b>Channel Assignment</b>
1429.0 MHz	A1	1494.5 MHz	A2
1432.5 MHz	B1	1498.0 MHz	B2
1436.0 MHz	C1	1501.5 MHz	C2
1439.5 MHz	D1	1505.0 MHz	D2
1443.0 MHz	E1	1508.5 MHz	E2
1446.5 MHz	F1	1512.0 MHz	F2
1450.0 MHz	G1	1515.5 MHz	G2

**Front Panel**

<b>LED</b>	<b>Description</b>	
Radio Fail	Red = BER > 10 <sup>-3</sup>	
BER	Red = received signal bit error rate is above the error threshold of 1 x 10 <sup>-6</sup>	
Data Loss 1	Red = loss of input E1 signal Off = E1 disabled and no E1 present	
Data Loss 2	Red = loss of input E1 signal Off = E1 disabled and no E1 present	
Error	Red = bit error occurred while in loopback mode	
Far End	Red = alarm condition in the far end radio	
Fan	Red = one or both fans have failed	
AIS Out	Red = radio receiver is transmitting AIS (Alarm Indication Signal) on the E1 line transmit output data port, due to loss of received signal	
RX Sync	Red = intended receive signal is not being received	
On	Green = Unit is powered on	
<b>Test Points</b>		
Tx Pwr	Voltage test point related to output transmit power of the radio	
RSL	voltage test point related to Received Signal Level (RSL)	
GND	Test point referenced to chassis ground	
<b>Controls</b>		
Enable	Yellow LED = Loopback enable	Enable far end loopback
Display Far End	Flashing Red = no far end information is available	Displays far end LEDs status on present radio
Channel Select	Flashing Red = indicates the channel selected for loopback	Selects Ch #1 or Ch #2 for far end loopback



<b>Connector</b>		
Orderwire Handset	RJ-11, 2-wire	Address selectable (01-99)