

Software expandable

Spectrum efficient

Carrier class

Strong link security

Variable frequency tuning

Single spare serves both ends

Resilient transmission

Lowest cost per megabit-mile

Tri-band 5GHz:

- 5725 to 5850 MHz
- 5250 to 5350 MHz
- 5470 to 5725 MHz
- 4xT1/E1 + 10/100BaseT Ethernet
- 54 non-overlapping channels (4xT1/E1)
- 2xT1/E1 + 13Mbps user capacity expandable to 200Mbps + 4xT1/E1
- 1MHz tuning resolution
- Secure network management
- SNMPv3
- 20-60 VDC power supply
- >30 miles @ 99.999%*
- 2-year standard warranty**

*Distance based on FCC regulations, average climate & terrain, 6' dish antennas, 3dB transmission system losses at each end with ~100Mbps throughput. Longer or shorter distances will apply for alternative antennas, country regulations, transmission system losses, path topologies and radio configurations.

**Terms and conditions apply. See your Exalt Communications representative for details.

- ✓ **Eliminate** leased line expenses
- ✓ **Connect** locations in days, not weeks
- ✓ **Upgrade** capacity of existing systems
- ✓ **Reduce** installation and maintenance
- ✓ **Carry** native TDM and native IP
- ✓ **Improve** manageability
- ✓ **Secure** wireless backhaul links
- ✓ **Avoid** interference

Education, Medical & Business Users

- Connect your campus locations securely
- Eliminate leased line costs
- Install your connections instantly
- Implement TDM to IP migration
- Seamlessly carry native TDM and native IP data traffic
- Provide growth path for high capacity IP applications

Telecommunications Carriers

- Extend your networks
- Optimize infrastructure budgets
- Add Ethernet connectivity
- Support low capacity applications
- Provide management capability
- Improve interference avoidance flexibility

Government Agencies

- Create secure inter-building networks, rapidly
- Optimize infrastructure budgets
- Connect remote locations
- Support low capacity applications
- Implement backbones for private/public access networks

Energy & Utility

- Create high-speed inter-facility connections
- Seamlessly carry native TDM and native IP data traffic
- Backhaul high-capacity video monitoring systems along with telemetry data
- Connect oil drilling platforms, power stations, utility centers



The EX-5i-*lite* is a 5GHz tri-band wireless backhaul system with software expandable capacity and feature-rich functionality designed for low initial capacity TDM and IP applications. The system provides TDM and IP capacity expansion in a carrier-class, high availability solution.

Using very efficient proprietary modulation techniques, resulting in a very narrow occupied RF bandwidth and utilizing all three unlicensed bands from 5250 to 5850 MHz, the EX-5i-*lite* uniquely provides up to **54 non-overlapping frequency channels with fine-tuning capability across all of the frequency bands**. This results in up to **415 individual center frequencies of operation** with no hardware changes required for retuning. These features result in unprecedented system densities and interference avoidance capability compared to all other carrier-class systems in this band.

Developed specifically to meet the demanding and changing requirements of the carrier-class user, the EX-5i-*lite* may be upgraded from 2xT1/E1 + 13Mbps to 4xT1/E1 + 200Mbps capacity via separately available software license keys. The unique features of the EX-5i-*lite* result in the **lowest cost per megabit-mile in its class**.

System

Frequency Bands ¹	5725-5850MHz 5250-5350MHz 5470-5725MHz		
Tuning Resolution	1MHz		
Output Power (at full power) 5725-5850MHz band	+24dBm, Mode 1 (QPSK) +21dBm, Mode 2 (16QAM)		
5250-5350MHz band	+13dBm		
5470-5725MHz band	+13dBm		
Output Power (at min power)	Full power -20dB		
Power Control Step Size	0.5dB		
Receiver Threshold (BER=10 ⁻⁶)	Mode 1	Mode 2	
8MHz channel	-86dBm	-78dBm	
16MHz channel	-83dBm	-75dBm	
32MHz channel	-80dBm	-72dBm	
64MHz channel	-77dBm	-69dBm	
Maximum RSL (Mode 1)	-25 dBm error-free 0 dBm no damage		
Non-overlapping channels	5.3GHz	5.4GHz	5.8GHz
8MHz channel	10	29	15
16MHz channel	5	14	7
32MHz channel	2	7	3
64MHz channel	1	3	1
Aggregate User Capacity ²	Mode 1	Mode 2	
8MHz channel	13Mbps ³	27Mbps	
16MHz channel	27Mbps	55Mbps ⁴	
32MHz channel	55Mbps	110Mbps ⁴	
64MHz channel	110Mbps	216Mbps ⁴	
Error Floor	10 ⁻¹²		
Latency (T1/E1)	1ms, typical		
Link Security	96-bit Security Key AES encryption		
Management	HTTP GUI CLI/Telnet SNMPv3		
Regulatory Compliance	FCC 15.247 FCC 15.407 IC RSS-210		
Physical			
Physical Configuration	Single-piece Indoor Unit (IDU)		
Dimensions (H x W x D)	1RU 1.75 x 17 x 14 inches 4.5 x 43.2 x 35.6 cm		
Operating Temperature	-40 to +65 degrees C -40 to +149 degrees F		

¹ Not all frequency bands are authorized or available for use in all countries. Consult your Exalt Communications representative for details.

² The figure listed is the actual aggregate user throughput, maximum, as measured at layer 2. T1 or E1 circuits may be enabled one at a time, as needed, and subtract 3.1Mbps (1.544Mbps full-duplex) or 4.1Mbps (2.048Mbps full-duplex), respectively, from the aggregate user throughput. Some combinations of frame size, link distance, T1/E1 enabling, bandwidth, mode and desired latency will result in reduced maximum aggregate throughput. See your Exalt Communications representative for details.

³ Base configuration: 13Mbps (8MHz Mode 1) with 2xT1/E1+10/100BaseT

⁴ Firmware option required for 55Mbps+4xT1/E1, 100Mbps+4xT1/E1 and 200Mbps+4xT1/E1 configurations. Mode 1 and Mode 2 modulations are available.

Physical (continued)

Full Spec Temperature	-25 to +60 degrees C -13 to +140 degrees F
Weight	11.3 pounds; 5.1 kg
Environmental	GR-1089-CORE intra-building
Altitude	15,000 feet; 4.6 km
Humidity	95% non-condensing
Interfaces	
RF	N-type (F)
Impedance	50 ohms
T1/E1 (x2)	RJ48C/RJ45 (F)
T1 Impedance	100 ohms, balanced
T1 Line Codes	AMI, B8ZS, selectable per channel
T1 Clocking Speed	1.544Mbps
T1 Compliance	ANSI T1.102-1987 ITU-T;G.823;GR-499-CORE
E1 Impedance	120 ohms, balanced
E1 Line Codes	HDB3
E1 Clocking Speed	2.048Mbps
E1 Compliance	CEPT-1;G.703;ITU-T-G.703
Loopback Modes	Remote Internal Remote External Local Line
Ethernet (x2)	RJ45 (F), auto-MDIX
Interface Speed	10/100BaseT
Duplex	Half, Full, Auto
Compliance	802.3
Console (Serial)	9-pin Sub-D (F)
Interface Speed	9600 bps
Compliance	EIA-574 (RS-232)
Alarm	9-pin Sub-D (F)
Inputs	(2) TTL/Closure
Outputs	(2) Relay (Form C)
Sync (In and Out)	RJ45 (F)
Signaling	1pps (GPS)
DC Power	6-pin barrier strip
Input Voltage	±20-60VDC
Consumption	<38.5W (48V :<0.8A, 24V:<1.6A)
AC Power Adapter	EIC-to-NEMA 5-15
Input	100-240VAC, 1.5A
Output	48VDC, 1.5A, 72W

System Components

Complete link	Two terminals, each with AC adapter & accessory kit
Single terminal	One terminal with AC adapter & accessory kit
Accessory kit	DC power connector, rack and grounding hardware (spare) AC adapter (spare) GPS antenna and mounting bracket (option)
AC adapter	
GPS sync kit	