



# longreach

The Backhaul Specialists

## UTX Series

### Application Overview

The UTX Series is a Cost Effective, high performance TDM/Ethernet radio, operating at 4.9GHz to 5.8GHz. The solutions provides Ethernet performance up to 48Mb/s full duplex with redundancy and TDM configurations of up to 4 E1, is the ideal platform for users looking to the future of wireless backhaul.

Jaguar 5000 is a broadband wireless transmission system operating over the 5.725 to 5.850 GHz band. It is designed for service providers and enterprises that require immediate deployment in license exempt frequencies.

Jaguar 5000 offers short time to service by eliminating regulatory delays associated with license band deployments. The product offers wireless connectivity instead of leased lines with a compact solution that is easy to install and to operate.

Jaguar 5000 offers Point to Multipoint and Point to point services. A repeater is available to extend the reach of the system beyond 50 km and to improve coverage in Non Line of Sight conditions. Jaguar 5000 supports a wide range of radio settings, which are used to optimize system range and capacity.

### Highlights:

- High-speed Point-to-point Models
- Indoor radio with outdoor antennas architecture
- Data rates up to 54 Mbps
- Aggregate Throughput (UDP) more than 100mbps
- Channel Width: 20 MHz
- Frequency Range: 4.940 to 5.850 GHz (depending on local regulatory restrictions)
- Range: up to 50 km with external antenna option (depending on local regulatory restrictions)
- Compatible with standard 100 Mb/s Ethernet switches and routers
- Configuration and Management: Real-time local and remote configuration, antenna alignment, management and signal strength monitoring tools
- Security: Multilayer link authentication and AES/WEP data encryption for secure communication.



**Multi-Site Connectivity:** Transparent connection of enterprise LAN systems across various campuses that saves connection cost, operating expenses and maintenance.

**Hotspot backhauling:** Last mile connection between Wi-Fi Access Point and data network in a fraction of the cost of leasing E1 lines.

**Wireless ISP (WISP) backhauling:** Connection of the WISP base station to the network operation center.

**Broadband Wireless Access:** Delivery of broadband data services to enterprises and to Multiple Dwelling Units (MDUs).

## Specifications

<b>ARCHITECTURE</b>		
Integrated indoor radio unit with outdoor antenna	RF Cable	LMR 400
	Distance between indoor and outdoor unit	Up to 100ft
<b>RADIO</b>		
Frequency	4.940 – 5.850	
Raw Data Rates	Up to 54 Mbps – user configurable	
User Data Throughput	> 34Mbps (Full Duplex)	
Channel Bandwidth	20 MHz	
Modulation	OFDM – BPSK, QPSK, 16QAM and 64QAM	
Standard Compliance	WiMAX MAC; 802.11a PHY	
Duplex Technique	TDD – Half Duplex / Full Duplex	
Range	Up to 50km with External Antenna	
Transmit Power Level	Raw Data Rate	TX Power Level
	6 – 24 mbps	26 dBm +/-1 dB
	36 mbps	24 dBm +/-1 dB
	48 mbps	22 dBm +/-1 dB
	54 mbps	21 dBm +/-1 dB
Receive Sensitivity	Raw Data Rate	RX Power Level
	6 mbps	-94 dBm +/-2dB
	9 mbps	-93 dBm +/-2 dB
	12 mbps	-91 dBm +/-2 dB
	18 mbps	-90 dBm +/-2 dB
	24 mbps	-86 dBm +/-2 dB
	36 mbps	-83 dBm +/-2 dB
	48 mbps	-77 dBm +/-2 dB
54 mbps	-74 dBm +/-2 dB	
<b>ANTENNA</b>		
Non-Integrated	29 dBi, 32 dBi or higher gain antenna can be provided	
<b>LAN INTERFACE</b>		
Type	10/100 Base-T with auto-Negotiation	
Connectors	RJ-45	
Traffic Handling	MAC Layer Bridging, Self-Learning	
VLAN	Transparent	
QoS	Regulated Maximum Bit Rate	
<b>TDM INTERFACE</b>		
Type	E1/T1, up to 4E1	
Connectors	RJ-45 (75ohm Unbalanced) ; BNC (120ohm Balanced)	
Bits Rate	E1 : 2.048 mbps T1 :1.554 mbps	
Line Code	E1 : HDB3 T1 : AMI or B8ZS	
	Derived from received local TDM signal.	
Timing Source options	Derived from signal received over the air External clock source	
	Internal clock source	
Frame Mode	Unframed (transparent), framed, fractional	
Standard compliance	G.703, G.704, G.823, G.824, G.826	

<b>MANAGEMENT</b>		
Management Tool	GUI-Based Network Management Console HPOV management platform integration	
Protocols	Telnet, SNMP, HTTP	
Software upgrade	FTP Download	
Antenna Alignment Tool	Built-in RSSI, Link Optimization and throughput maximization Utility	
Radio Monitoring	Real-time signal Strength & system up-time; MRTG integration	
LAN Monitoring	Link connected and Active	
<b>ELECTRICAL</b>		
Power feed to data only IDU	AC Source	100-240 VAC
	Indoor Unit (IDU)	15 Watt (Max)
<b>REGULATORY COMPLIANCE</b>		
EMC	FCC Part 15	
Radio	FCC Part 15.407 (UNII, ISM), ETSI (with TPC & DFS)	
Safety	UL, CE	
<b>ENVIRONMENT</b>		
Temperature	0°C to +50°C	
Humidity	90% non-condensing maximum	

**Fully Outdoor Wireless Bridge with TDM intergration:**

- provide maximum of 4xE1 over Ethernet bridge configuration
- Longhaul deployment up to 50Km
- Unique anti-interference mechanism via Dual-Radio mode



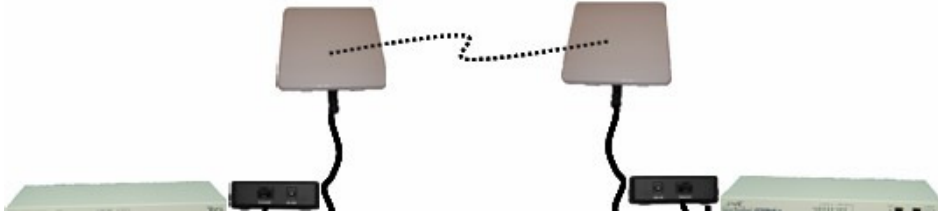
**Fully Outdoor Wireless Bridge with surveillance camera intergration:**

- scalable capacity up to 48Mbps (Full-Duplex)
- Longhaul deployment up to 50Km
- Radio redundancy supported, provide 100% network resiliency
- integrating surveillance camera with Network PTZ, Pan/Tilt



## True Redundancy Capacity of UTX Wireless Bridge:

- provide dual-radio redundancy without hardware changes
- spatial and frequency diversity supported
- high Received-sensitivity, enhanced longhaul radio performance



## Longreach

Longreach is one of the world's most experienced suppliers of microwave radio equipment for a diverse range of frequencies and applications.

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