WinLink™ 1000 Family

High Capacity Carrier Class Radio Systems

WinLink™ 1000 family of products is a carrier-class, high capacity and extremely competitive Point to Point broadband wireless transmission solution. It packs Legacy TDM and Ethernet services over 2.4GHz and 4.9-5.9GHz spectrum bands and is suitable for deployment in FCC and ETSI regulated countries.

WinLink™ 1000 provides high capacity connectivity of up to 54 Mbps and allows for rapid deployment of E1/T1s and Ethernet links at a fraction of any alternatives' cost.

WinLink™ 1000 efficiently addresses service providers and enterprises, requiring immediate deployment of affordable, carrier-class, long range and high capacity connectivity solutions. Available at multiple frequency bands and at various configurations, all WinLink™ 1000 products are highly robust, simple to install and extremely competitive.

Highlights

- High data rate, up to 54Mbps
- Long Range, up to 80 Km
- Integrated solution for nxE1s/T1s and Fast Ethernet
- Carrier-Class in various spectrum bands:
    5.725 – 5.850 GHz
  5.470 – 5.725 GHz
  5.250 – 5.350 GHz
  4.940 – 4.990 GHz
  2.400 – 2.4835 GHz
- Compliant with FCC, IC and ETSI regulations
- Complete SNMP based local and remote management, integrated with SNMPc and HPOV.
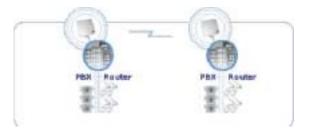
Key Benefits

- Short time to service
- License exempt frequencies remove regulatory overhead and delays
- Wireless connectivity instead of private line leasing from service providers, reducing costs
- Compact integrated solution that is simple to install and operate

Typical Applications

Remote Sites Connectivity

WinLink™ 1000 is offered to enterprises with multiple sites that require a cost effective and transparent connection of their LAN and PBXsystems across their various campuses.

Broadband Access

WinLink™ 1000 provides a broadband access solution, offering broadband Ethernet and Leased Line services to Small and Medium Enterprises (SMEs).

Backhauling

WinLink™ 1000 backhauls traffic from cellular base-stations, Hotspots (WiFi) or points of presence (POPs) of wireless ISPs to the backbone network.

WinLink™ 1000 Family
Product specifications

Configuration

Architecture	Indoor Unit: IDU-E (Enterprise form-factor), IDU-C , AIND (Carrier form-factor)
	Outdoor Unit: ODU
IDU to ODU Interface	Outdoor CAT-5 cable; Maximum cable length: 100m

Radio

Frequency Bands	2.400 – 2.4835 GHz
	4.940 – 4.990 GHz
	5.250 – 5.350 GHz
	5.470 – 5.725 GHz (includes DFS/TPC)
	5.725 – 5.850 GHz
Data Rate	Configurable up to 54Mbps (bi-directional)
Channel Bandwidth	20 MHz
Duplex Technique	TDD
Modulation	OFDM – BPSK/QPSK/16QAM/64QAM
Transmit Power for 4.9GHz	16 dBm max limited @20MHz BW
	15.5 dBm max limited @10MHz BW
	15.6 dBm max limited for @5MHz BW
Transmit Power for 5.4GHz	7.1 dBm max limited @20MHz BW with 22 dBi antenna
	1.2 dBm max limited @20MHz BW with 28 dBi antenna
Transmit Power for 5.8GHz/HP and AIND	29.7 dBm max @ 5MHz, 10MHz, 20MHz BW

Received Dynamic Range	>60dB
Error Correction	FEC k=1/2, 2/3, 3/4
Encryption	AES 128
LAN Interface	
Type	10/100BaseT Interface with Auto-negotiation (IEEE 802.3)
Number of Ethernet Ports	1, 2
Framing/Coding	IEEE 802.3/U
Bridging	Self-learning up to 2047 MAC addresses IEEE 802.1Q
Traffic Handling	MAC layer bridging, self-learning
Data Latency	3msec typical
Line Impedance	100Ω
VLAN Support	Transparent
Connector	RJ-45

E1/T1 Interface

Framing	Unframed (transparent)
Number of E1/T1 Ports	1, 2, 4
Standard Compliance	G.703, G.826
Timing	Independent Tx and Rx timing
Line Code	E1: HDB3 @ 2.048 Mbps
	T1: B8ZS/AMI @ 1.544 Mbps
Latency	8msec
Impedance	E1-120Ω, balanced
	T1-100Ω, balanced
Connector	RJ-45
Jitter & Wander	According to G.823, G.824

Management

Protocol	SNMP based
Network Management	Supports SNMPc and HPOV
Upgrade Capabilities	Local and remote software upgrade
Diagnostics	Local and remote loopback testing

Mechanics

ODU Dimensions (includes 1ft flat integrated antenna)	30.5cm(H) x 30.5cm(W) x 5.8cm(D) Weight: 1.5kg/3.3lb
ODU Dimensions (integrated antenna not included)	24.5cm(H) x 13.5cm(W) x 4.0cm(D) Weight: 1.0kg/2.2lb
IDU-E Dimensions	16.5cm(H) x 23.6cm(W) x 4.5cm(D) Weight: 0.5kg/1.1lb
IDU-C, and AIND Dimensions	43cm(H) x 29cm(W) x 4.5cm(D) Weight: 1.5kg/3.3lb

Power and Mounting

Power Feeding	110/220VAC, 50/60Hz, -48VDC
Power Consumption	ODU with IDU-E, 10W Max ODU with IDU-C, 14W Max AIND, 14W Max
Mounting	Pole and Wall

Environmental

Outdoor Unit Enclosure	All weather cases
ODU Operating Temperatures	-35°C - 60°C / -31°F - 140°F
IDU Operating Temperatures	-5°C - 45°C / 23°F - 113°F
AIND Operating Temperatures	-35°C - 60°C / -31°F - 140°F
Humidity	Up to 90% non-condensing

Antennas

	2.400-2.4835 GHz	4.940-4.990 GHz	5.250-5.350 GHz	5.470-5.725 GHz	5.725-5.850 GHz
1ft Integrated Antenna					
Gain	17dBi - external	N/A	22dBi	22dBi	22dBi
Beam Width	20°		9°	9°	9°
Polarization	Linear		Linear	Linear	Linear
2ft External Antenna					
Gain	24dBi	27dBi	28dBi	28dBi	28dBi
Beam Width	8°	4.5°	4.5°	4.5°	4.5°
Polarization	Linear	Linear	Linear	Linear	Linear

* Higher gain antennas are available upon request

Regulation

	2.400-2.4835 GHz	4.940-4.990 GHz	5.250-5.350 GHz	5.470-5.725 GHz	5.725-5.850 GHz
Radio					
FCC: 47CFR	Part 15, Subpart C	Part 90	Part 15, Subpart E		Part 15, Subparts C&B
IC	RSS-210		RSS-210		RSS-210
ETSI	EN 300 328			EN 300 216 V1.2.1	EN 300 440 V1.3.1
Dynamic Frequency Selection and Transmission Power Control (DFS/TPC)	Supported	Supported	Supported	Supported complies with EN 301 893 V1.2.2	Supported
Safety					
TUV	60950, According to UL 60950				
CAN-USA	C22.2 No.60950				
EMC					
FCC	CFR Part15, Subpart B				
CAN-ETSI	EN 301 489-1				
Environmental					
ETSI	IEC 60721-3-4 Class 4M5 IP67				