# WinLink™1000 Family

## Carrier-Class License Exempt Radio System

## Features

- **High data rate of up to 48Mbps**
- **Long range of up to 80 Km**
- **Integrated solution for n x E1/T1s and Ethernet interfaces**
- **Carrier-class solution**
- **Compliant with FCC, IC and ETSI regulations**

## Description

WinLink1000 family of products is a carrier-class, high capacity and low cost Point to Point broadband wireless transmission system. It packs Legacy TDM and Ethernet services over 2.4GHz and 5.x GHz unlicensed bands and is suitable for deployment in FCC or ESTI regulated countries.

WinLink1000, which provides high capacity connectivity of up to 48 Mbps, allows for the rapid deployment of E1/T1s and Ethernet links at a fraction of alternatives cost.

WinLink1000 is the right solution for customers requiring immediate deployment of affordable carrier-class high capacity connectivity in the license exempt frequencies.

## Benefits

### *Short Time to Service*

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

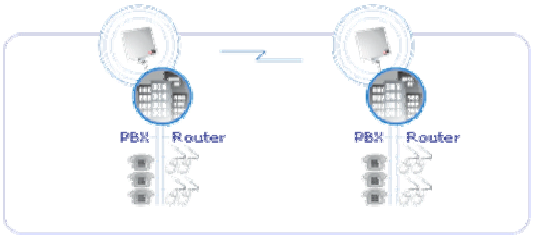
### *Carrier Class Solution*

- High reliability and availability based on robust air-interface
- TDM transmission complies with all Telecom requirements.

## Typical Applications

### *Remote Sites' Connectivity*

WinLink1000 is offered to enterprises with multiple sites that require a cost effective and transparent connection of their LAN and PBX systems across their various campuses




### *Broadband Access*

WinLink1000 provides broadband access services, such broadband Ethernet and Leased Lines, to Small and Medium Enterprises (SME).

### *Backhauling*

WinLink1000 backhauls traffic from cellular base stations, Hotspots or point of presence (POP) of wireless ISP's to backbone network.

# Specifications

## Configuration

- **Architecture**
  Indoor Unit (IDU) and
  Outdoor Unit (ODU)
- **IDU to ODU Interface**
  Outdoor CAT-5 cable
  Maximum length of
  100m

## Radio

- **Frequency**
  5.725 – 5.850 GHz
  5.470 – 5.725 GHz
  2.400-2.483 GHz (specific spectrum band is country dependent)
- **Data Rate**
  Configurable up to 48Mbps
  **Channel BW**
  20MHz
- **Duplex Technique**
  TDD
- **System Gain**
  160dB
- **Modulation**
  OFDM - BPSK, QPSK,
  16QAM, 64QAM
- **Transmit Power**
  FCC: 18dBm (max)
  ETSI: 7dbm (Max, limited by the regulation)
- **Received Dynamic range**
  >60dB

## Antennas

| | 2.400-2.483 GHz | 5.725-5.850 GHz |
|---|---|---|
| **Integrated** | | |
| Gain | 17dBi | 22dBi |
| Beam width | 20 | $9^0$ |
| Polarization | Linear | Linear |
| **External, 2-foot** | | |
| Gain | 24dBi | 28dBi |
| Beam width | 8 | $4.5^0$ |
| Polarization | Linear | Linear |

## LAN Interface

- **Type**
  10/100BaseT,
  Auto-negotiation
- **Framing/Coding**
  IEEE 802.3/U
- **Bridging**
  Self-learning up to 2000 MAC addresses
- **Traffic Handling**
  MAC layer bridging, self-learning
- **Data Latency**
  2msec typical
- **Line Impedance**
  100Ω
- **VLAN Support**
  Transparent
- **Connector**
  RJ-45

## E1/T1 Interface

- **Framing**
  Unframed (Transparent)
- **Timing**
- Plesynchronous (Independent Tx and Rx timing)
- **Latency**
  8 msec
- **Line Impedance**
  120/100Ohm, balanced
- **Number of Ports**
  1, 2, 4, 6
- **Connector**
  RJ-45
- **Jitter & Wander**
  G.823, G.824

## Management

- **Protocol**
  SNMP based
- **Network Management**
  Based on SNMPC
- **Management Interface**
  Ethernet 10/100BT
  RS-232
- **Upgrade Capabilities**
  Local and over the air remote software download
- **Diagnostic**
  Local and Remote
  loopback testing

## Mechanics

- **ODU Dimensions (with Integrated Antenna)**
  Height: 12 in
  Width: 12 in
  Depth: 2.3 in
  Weight: 3.3 lb
- **IDU-E Dimensions**
  Height: 1.7 in
  Width: 9.3 in
  Depth: 6.5 in
  Weight: 1.1 lb

## General

- **Power Feeding**
  110/220 VAC
  50/60Hz; 48VDC
- **Power Consumption**
  25W max
- **Mounting**
  Pole and Wall

## Environmental

- **Outdoor Unit Enclosure**
  All-weather cases
- **ODU Temperatures**
  -35 – 60°C
  -31–140°F
- **IDU Temperatures**
  -5 – 45°C
  23 - 113°F
- **Humidity**
  Up to 90%
  Non-condensing

## Standards

| | **2.400-2.483 GHz** | **5.725-5.85 GHz** |
|---|---|---|
| **Radio** | | |
| FCC | 47CFR Part 15, subpart C | 47CFR Part 15, subpart C |
| IC | RSS-210 | RSS-210 |
| ETSI | EN 300 328 | N.A. |
| **Safety** | | |
| TUV | 60950, according to UL 60950 | |
| CAN-CSA | C22.2 No. 60950 | |
| **EMC** | | |
| FCC | 47CFR Part 15, §15.247 and subpart B | |
| ETSI | EN 300 386<br>EN 301 489-1 | |
| **Environmental** | | |
| ETSI | IEC 60721-3-4 Class 4M5 | |
| | IP 67 | |

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