

OSBRIDGE EvolutionN 500

Long Range High Capacity Wireless MiMO Gigabit Ethernet Bridge



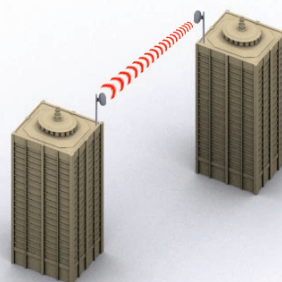
PRODUCT HIGHLIGHTS AND ADVANTAGES

- Licence Exempt ETSI and FCC 5 GHz Frequency – eliminates regulatory delays.
- 11 (ETSI), 4 (United Kingdom), 5 (USA), 236 (Unregulated Countries) non-overlapping channels allows many units to be deployed in the same area.
- User selectable channel width – 20, 18, 16, 14, 12, 10, 5 or 40 MHz for scalable deployment and interference resiliency.
- **Superior interference immunity** allow efficient operation in even extremely noisy areas.
- Over **240 Mbps real TCP/IP speed**, up to **300 Mbps raw data rate** and over **60,000 packets per second**.
- N-Type antenna connectors for external **High Gain Dual Polarized Antenna** for ultra long range high speed operation.
- Next day deployment enables rapid service activation and payback.
- Cost effective alternative to leased lines.
- Outstanding software features: bridging, routing, SNMP, VLAN management, WEB Management and high grade encryption.
- Optimal cost / performance ratio: highly cost efficient solution.
- Dynamic Frequency Selection (DFS) complies with ETSI EN 301 893 and OFCOM regulations to allow co-existence with Radar systems.
- Robust metal enclosure and UV protected integrated antenna radome: ensures unprecedented reliability and years of operation.
- Superior Atheros XSPAN AR9280 powered OFDM radio – enables NLOS (near line of sight) operation in dense urban environments.
- Non-compromising security - over the air 128 bit key AES encryption.
- Built-in Software Spectrum Analyzer helps selecting proper channel for best performance.
- Compact integrated solution – easy to install and operate.



The **OSBRIDGE EvolutionN 500**, a member of OSBRIDGE EvolutionN products family, is a **Long Range High Performance 5GHz Gige MiMo** outdoor wireless bridge, designed to provide secure and reliable point to point operation for Carriers, Internet Service Providers, Business Enterprises and Government organisations.

maximize data rate and improve spectral efficiency. These inherent advantages of the **OSBRIDGE EvolutionN 500** enable service providers to offer an effective **Point to Point** solutions to a significantly larger subscriber base, at very high effective speeds, even in high interference areas, that would otherwise be inaccessible or very hard to reach.



Features such as Packet Aggregation let **OSBRIDGE EvolutionN 500** bridges operating in Point to Point mode handle over 60,000 packets per second. Combining high frequency reuse, selectable channel width with advanced interference management and immunity techniques, **OSBRIDGE EvolutionN 500** conserve valuable spectrum by allowing service provider to cover an extensive geographical area with minimum number of channels.

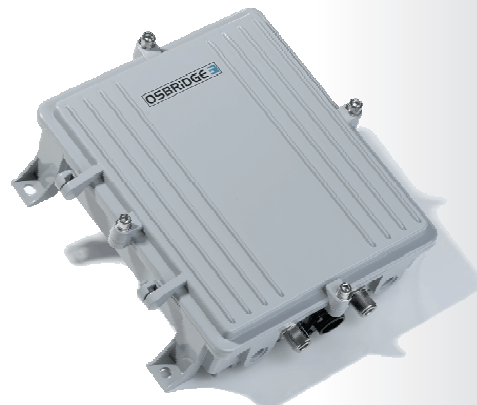
The **OSBRIDGE EvolutionN 500** is capable of operating as a multi-mac ethernet L2 bridge to another **OSBRIDGE EvolutionN 500**, supporting over **240 Mbps TCP/IP Net Throughput** at **300 Mbps Raw Data Rate**. The **OSBRIDGE EvolutionN 500** leverages both robust outdoor technologies and Orthogonal Frequency Division Multiplexing (OFDM) modulation with **2Tx2Rx Atheros XSPAN MiMo Technology** - with features such as Forward Error Correction coding and **OSBRIDGE** proprietary **MAC protocol eXtensions**, the product operates seamlessly and efficiently in challenging and high noise environments providing stable throughput. The system also features advanced algorithms for automatic selection of modulation schemes and antenna chains to

OSBRIDGE EvolutionN 500 software features such as bridging, routing, Point to Point Bridge mode, VLAN Management, SNMP, Packet Aggregation, Built-in Spectrum Analyzer, WEB GUI Management, high grade encryption, and built-in troubleshooting utilities make this device one of the most flexible and cost effective broadband wireless platforms available today.

All **OSBRIDGE EvolutionN 500** products are robust outdoor units, built to perform in difficult climatic environments and withstand even the harshest weather conditions. Built in 802.3at Power over Ethernet system allows only one ethernet cable to be used for both data and power transmission for up to 305 feet.

Datasheet

OSBRIDGE EvolutionN 500



Interface

Ethernet Interface	1000BASE-TX Ethernet (RJ-45) with 802.3at PoE
Wired LAN Protocol	IEEE 802.3 (CSMA/CD)
Wireless Interface	OFDM
Wireless LAN Protocol	IEEE 802.11n

Radio

Supported Frequencies (User Configurable)	Europe (ETSI):	5500 - 5700 MHz (11 channels) with DFS (Dynamic Frequency Selection)							
	USA (FCC):	5745 - 5825 MHz (5 channels)							
	UK (OFCOM FWA):	5735 - 5835 MHz (4 channels) with DFS (Dynamic Frequency Selection)							
	Africa&Asia (OTHER):	4920 - 6100 MHz (236 channels, 5MHz step)							
Modulation Technique	BPSK, QPSK, 16QAM, 64QAM, HT20, HT40								
Channel Width	User Selectable – 40, 20, 18, 16, 14, 12, 10 or 5 MHz								
Output Power (at the N connectors)									
	ETSI:	≤ 26 dBm							
	OFCOM:	≤ 26 dBm							
	FCC, Africa:	≤ 26 dBm							
Bit Data Rate (40 MHz channel, 2 Streams, GI=1)	300 Mbps	270 Mbps	240 Mbps	180 Mbps	120 Mbps	90 Mbps	60 Mbps	30 Mbps	
Receive Threshold (including built-in antenna)	-78 dBm	-80 dBm	-82 dBm	-86 dBm	-89 dBm	-92 dBm	-94 dBm	-97 dBm	

System

Processor	MIPS 24Kc 1GHz Processor Core
Memory	16MB FLASH, 64MB SDRAM
RF Module	Atheros 2Tx2Rx XSPAN MIMO

Software

Operational Modes	Point to Point Bridge Master, Point to Point Bridge Slave
Security	Association Protocol – ESSID/BSSID, WEP 40/128, TKIP, AES
Features	Bridge, Router, VLAN Management, Packet Aggregation, Spectrum Analyzer
Management	WEB Interface, SNMPv2

Physical

Dimensions	250 mm X 210 mm X 90 mm
Operating / Storage Temperature	-40°C - +70°C / -40°C - +85°C
Enclosure	IP65 Rated, Aluminium UV Protected, Outdoor Mountable, Weather Protected
Power Adapter	802.3at 1000BASE-TX PoE (Power over Ethernet Injector and Adapter included)
LEDs	2 – Power, Ethernet LAN Activity
Mounting	Adjustable Pole Mounting

Antenna

Type	Two N-type female connectors for external Double Polarized Antenna
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Operational Distance

Bit Data Rate	300 Mbps	270 Mbps	240 Mbps	180 Mbps	120 Mbps	90 Mbps	60 Mbps	30 Mbps
OSBRIDGE EvolutionN 500 (distance in meters)	28320	36300	42200	50400	59700	66300	74900	86500

Regulatory Compliance

CE Mark, ETSI EN 301 893 Compliant, FCC Part 15 Compliant, RoHS Compliant

Warranty

Two Years, Limited

1) Distance may vary depending on several factors including interference, obstacles and fresnel zone clearance.

2) Actual throughput may vary depending on several factors including signal strength, interference, obstacles and fresnel zone clearance.

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