

OSBRIDGE 2Si

High Power Outdoor Wireless Access Point / Bridge

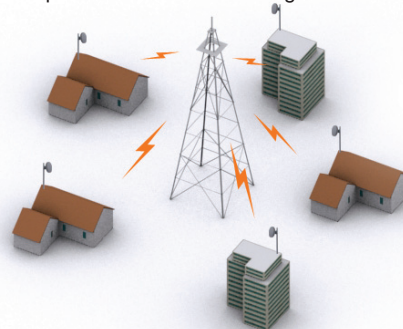


PRODUCT HIGHLIGHTS AND ADVANTAGES

- Licence Exempt ETSI and FCC Frequency – eliminates regulatory delays.
- High Power radio - **28 dBm (600 mW)** Output Power (**38 dBm** EIRP) for long range LOS and NLOS operation.
- User selectable channel width – 5 MHz, 10 MHz, 20 MHz or 40 MHz for scalable deployment and interference resiliency.
- Up to 34 Mbps TCP/IP speed and up to 10000 packets per second.
- Next day deployment enables rapid service activation and payback.
- Cost effective alternative to leased lines.
- Built in software Spectrum Analyzer for best possible deployment in noisy areas.
- Outstanding software features: TDMA Polling Protocol, Bridging, Routing, NAT routing, VLAN tagging and filtering, CPE and PtP Bridge modes, SNMP, Web Management, Advanced QOS, DHCP client/server, Firewall, PPPoE client and High Grade Encryption.
- Backward compatible with other vendors 802.11b/g compliant devices.
- Built in Dual Polarized antenna for user selectable operation in Vertical or Horizontal polarization.
- Built in External SMA connector for high gain antenna.
- 24V PoE support for easy installation and reliable long ethernet cable runs.
- Built in LED based wireless signal indicator for optimal aiming.
- Optimal cost / performance ratio: highly cost efficient solution.
- Robust outdoor architecture: ensures unprecedented range and reliability, minimizes RF cable loss connecting to antenna thus providing outstanding performance and communication distance.
- Superior Atheros 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.
- Compact integrated solution – easy to install and operate.



The OSBRIDGE 2Si, a member of OSBRIDGE products family, is a high power 2.4 GHz outdoor wireless access point and client bridge designed to provide secure and reliable point to multipoint operation for Carriers, Internet Service Providers, Business Enterprises and Government organisations



The OSBRIDGE 2Si is capable of operating as wireless router or multi-mac bridge to another OSBRIDGE 2Si and other standard 802.11b/g Access Points, supporting up to 34 Mbps Net TCP/IP Throughput over its air interface. The OSBRIDGE 2Si leverages both robust outdoor technologies and Orthogonal Frequency Division Multiplexing (OFDM) modulation in the same product - with features such as Forward Error Correction coding, used to combat multi-path and noisy environments, the product operates seamlessly and efficiently in challenging environments with stable throughput. The system also features advanced algorithms for automatic selection of modulation schemes to maximize the data rate and improve spectral efficiency using latest technology based on Atheros® Radio Technology. These inherent advantages of the OSBRIDGE 2Si enable service providers to provide an effective PtMP solution to a significantly higher subscriber base that would otherwise be inaccessible.

Using Features such as Packet Aggregation two OSBRIDGE 2Si devices

operating as PtP bridges can handle up to 10000 packets per second. Combining high frequency reuse, selectable channel width with advanced interference management and immunity techniques, the OSBRIDGE 2Si bridges conserve valuable spectrum by allowing service provider to cover an extensive geographical area with a minimum number of channels.

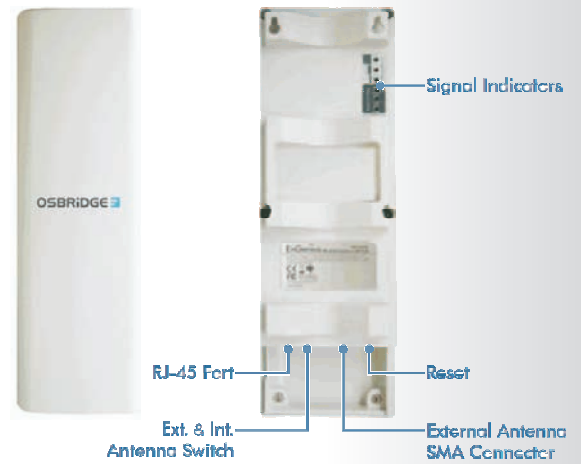
OSBRIDGE 2Si can be configured to utilize proprietary polling protocol (supporting both Polling Base Station and Polling Client modes) that overrides shortages of the standard 802.11b/g mode. OSBRIDGE proprietary WPM (Wireless Polling MAC) is a full featured TDMA/TDD protocol implementation on top of Atheros® hardware, using Packet Aggregation, Adaptive Polling Algorithm and disabling of the CSMA Backoff Mechanism. WPM provides link adaptation technology and improves bandwidth, robustness, and overall performance for each subscriber effectively allowing up to four times more CPE devices per single Access Point compared to general 802.11b/g based hardware.

Software features such as bridging, routing, NAT routing, Access Point, CPE and PtP Bridge modes, VLAN tagging and filtering, SNMP, web management, advanced QOS, DHCP client/server, firewall, PPPoE client, high grade encryption, port forwarding, remote syslog and built in troubleshooting utilities make the OSBRIDGE 2Si one of the most flexible and cost effective broadband wireless CPE/AP platform available today.

All OSBRIDGE 2Si products are robust outdoor units, that are built to perform in difficult climatic environments and withstand even the harshest weather conditions. Built in passive Power over Ethernet system allows only one ethernet cable to be used for both data and power transmission for up to 330 feet (100 meters).

Datasheet

OSBRIDGE 2Si



Interface	
Ethernet Interface	100 base-T Ethernet (RJ-45) with PoE
Wired LAN Protocol	IEEE 802.3 (CSMA/CD)
Wireless Interface	OFDM, TDD
Wireless LAN Protocol	IEEE 802.11b/g, WPM (Wireless Polling MAC)

Radio	
Supported Frequency Ranges (User Configurable)	Europe (ETSI): 2412-2483,5 MHz (13 channels)
	USA (FCC): 2412-2462 MHz (11 channels)
	Africa&Asia (OTHER): 2317-2502 MHz (37 channels, 5 MHz step)
Modulation Technique	BPSK, QPSK, 16QAM, 64QAM, DBPSK, DQPSK, CCK
Channel Width	User Selectable – 802.11b/g: 20 MHz, 10 MHz or 5 MHz, 802.11b/g Turbo: 40 MHz
Bit Error Rate (BER)	Better than 10 ⁻⁵
Output Power	≤28 dBm (600mW / ±3 dBm), ≤38 dBm EIRP, User Selectable Transmit Power
Bit Data Rate	54 Mbps 48 Mbps 36 Mbps 24 Mbps 18 Mbps 12 Mbps 9 Mbps 6 Mbps 1 Mbps
Receive Threshold (including built-in antenna)	-84 dBm -86 dBm -89 dBm -91 dBm -94 dBm -97 dBm -101 dBm -102 dBm -107 dBm

System	
Processor	Atheros AR2316, 180MHz MIPS 4Kc Processor with Embedded Cache
Memory	8MB NOR FLASH, 32MB SDRAM
RF Module	Atheros Ar2316

Software	
Operational Modes	Access Point, Access Point Client, Infrastructure Client, PtP Bridge, Polling Base, Polling Client, WDS Client
Security	Association Protocol – ESSID/BSSID, WEP 40/128, WPA, WPA2, AES
Features	Bridge, Router, NAT Router, VLAN Filtering/Tagging, PPPoE, Port Forwarding, Firewall, QOS, Spectrum Analyzer
Management	WEB Interface, SNMPv2

Physical	
Dimensions	84 mm X 260 mm X 55 mm
Operating Temperature	-20°C - +70°C
Enclosure	Weather and UV Protected, Outdoor Mountable
Power Adapter	24V / 0.6A DC, Passive Ethernet (Power over Ethernet injector included, pairs 4,5+; 7,8 return)
LEDs	Power, Ethernet LAN Activity, Wireless Activity, Wireless Link Quality (3 levels)
Mounting	Outdoor Pole Mounting

Antenna	
Built-in 10 dBi Dual Polarized Antenna (User selectable Vertical/Horizontal Polarization)	
RP-SMA connector for External High Gain Antenna	

Operational Distance	
Bit Data Rate	54 Mbps 48 Mbps 36 Mbps 24 Mbps 18 Mbps 12 Mbps 9 Mbps 6 Mbps 1 Mbps
Distance(using built in antenna)	10500 m. 14400 m. 18700 m. 23100 m. 27600 m. 29100 m. 31000 m. 32300 m. 35500 m.

Regulatory Compliance	
CE mark, ETSI EN 301 893 Compliant, FCC Part 15 Certified	

Warranty	
12 Months, Limited	

Contact Information:

OSBRIDGE

OSLiNK Sp. z o.o

ul. Jana Pawła II 6C • 89-604 Chojnice • Poland

tel. +48-52-3962500 • fax. +48-52-3962501 • sales e-mail: sales@osbridge.com • technical enquiries: support@osbridge.com • http://www.osbridge.com