

MiMoStation 5Ni-H

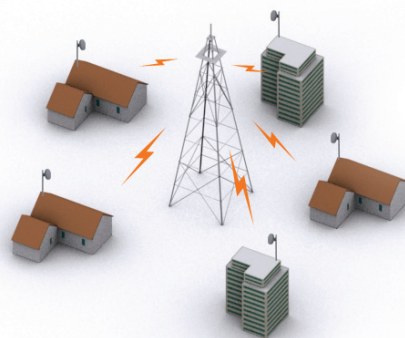
Outdoor Wireless MiMO Ethernet Bridge



PRODUCT HIGHLIGHTS AND ADVANTAGES

- Licence Exempt ETSI and FCC 5GHz 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.
- Selectable channel width – 5, 10, 12, 14, 16, 18, 20, 22, 24 or 40 MHz for scalable deployment and interference resiliency.
- **Superior interference immunity** allow efficient operation in even extremely crowded areas.
- Up to **80 Mbps TCP/IP true speed**, up to **150 Mbps raw datarate** and up to **25000 packets per second**.
- Next day deployment enables rapid service activation and payback.
- Cost effective alternative to leased lines.
- Outstanding software features: bridging, routing, NAT routing, Access Point, Client and PtP Bridge modes, SNMP, VLAN tagging and management, WEB Management, advanced QOS, DHCP client/server, firewall, PPPoE client and high grade encryption.
- Backward compatible with other 802.11a/n compliant devices.
- 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 outdoor architecture: ensures unprecedented reliability and years of operation.
- Superior Atheros XSPAN AR7240 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 **MiMoStation 5Ni-H**, a member of OSBRIDGE 5N products family, is a high performance, low cost 5GHz MiMO outdoor wireless bridge, designed to provide secure and reliable point to multipoint operation for Carriers, Internet Service Providers, Business Enterprises and Government organisations.



The **MiMoStation 5Ni-H** is capable of operating as wireless router or multi-mac bridge to another **MiMoStation 5Ni-H** device, or as a 802.11a/n Access Point, supporting up to **90 Mbps TCP/IP Net Throughput** over its air interface and up to **150 Mbps raw datarate**. The **MiMoStation 5Ni-H** leverages both robust outdoor technologies and Orthogonal Frequency Division Multiplexing (OFDM) modulation with Atheros **1Tx1Rx XSPAN MiMo** Technology - with features such as Forward Error Correction coding, the product operates seamlessly and efficiently in challenging and high noise environments with stable throughput. The system also features advanced algorithms for automatic selection of modulation schemes and antenna chains to maximize data rate and improve spectral efficiency. These inherent advantages of the **MiMoStation 5Ni-H** enable service providers to offer an effective PtP and PtMP solutions to a significantly higher subscriber base, at very high effective speeds, in high interference areas, that would otherwise be inaccessible.

Using Features such as Packet Aggregation two **MiMoStation 5Ni-H** bridges operating in Point to Point mode handle over 20,000 packets per second. Combining high frequency reuse, selectable channel width with advanced interference management and immunity techniques, the **MiMoStation 5Ni-H** conserve valuable spectrum by allowing service provider to cover an extensive geographical area with a minimum number of channels.

MiMoStation 5Ni-H can operate as **Polling Base Station**, utilizing OSBRIDGE proprietary **polling protocol** that overrides shortages of the standard 802.11a/n modes. OSBRIDGE proprietary WPM (**Wireless Polling MAC**) is a full featured **TDMA/TDD** protocol implementation on top of Atheros® AR9130 hardware, using Packet Aggregation, Adaptive Polling Algorithm and disabling of the CSMA Backoff Mechanism. WPM also provides link adaptation technology and improves bandwidth, robustness, and overall performance for each subscriber. A cluster of 10 or more OSBRIDGE 5Ni-V devices mounted on one wireless PoP allows Network Operator to build a full featured base station and achieve real total TCP/IP speed of over 700 Mbps.

MiMoStation 5Ni-H software features such as bridging, routing, NAT routing, Access Point, Access Point Client, Polling Base/Client and PtP Bridge modes, VLAN Tagging, Filtering and Management, SNMP, WEB GUI Management, Advanced QOS, DHCP client/server, Firewall, PPPoE client, high grade encryption, port forwarding, remote syslog and built in troubleshoot utilities make this CPE one of the most flexible and cost effective broadband wireless platforms available today.

All **MiMoStation 5Ni-H** products are robust outdoor units, 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 200 feet.

Datasheet

MiMoStation 5Ni-H



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 802.11a/n, 802.11a/n Turbo, WPM (Wireless Polling MAC)

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 MHz, 24 MHz, 22 MHz, 20 MHz, 18 MHz, 16 MHz, 14 MHz, 12 MHz, 10 MHz, 5 MHz								
Output Power	ETSI:	≤ 30 dBm EIRP							
	OFCOM:	≤ 33 dBm EIRP							
	FCC, Africa:	≤ 41 dBm EIRP							
Bit Data Rate (40 MHz channel, GI=1)	150 Mbps	135 Mbps	120 Mbps	90 Mbps	60 Mbps	45 Mbps	30 Mbps	15 Mbps	
Receive Threshold (including built-in antenna)	-96 dBm	-100 dBm	-102 dBm	-104 dBm	-107 dBm	-110 dBm	-114 dBm	-115 dBm	

System

Processor	AR720 MiPS 24Kc Processor
Memory	4MB FLASH, 32MB SDRAM
RF Module	Atheros XSPAN 1Tx1Rx MiMO

Software

Operational Modes	Access Point, Polling Base, Access Point Client, Polling Client, Point to Point Bridge, Infrastructure Client
Security	Association Protocol – ESSID/BSSID, WEP 40/128, TKIP, AES
Features	Bridge, Router, NAT Router, VLAN Tagging, PPPoE Client, Port Forwarding, Firewall, QOS, DHCP Server
Management	WEB Interface, SNMPv2

Physical

Dimensions	187 mm X 190 mm X 70 mm
Operating / Storage Temperature	-40°C - +70°C / -40°C - +85°C
Enclosure	IP65 Rated, UV Protected, Outdoor Mountable, Weather Protected
Power Adapter	15V / 1.2A DC, Passive Ethernet (Power over Ethernet Injector included)
LEDs	3 – Power, Ethernet LAN Activity, Wireless Activity
Mounting	Adjustable Pole Mounting

Antenna

Type	19dBi Flat Panel Antenna, Horizontal Polarization	
Built-in Antenna Patterns	E-Plane	H-Plane

Operational Distance

Bit Data Rate (40 MHz channel, GI=1)	150 Mbps	135 Mbps	120 Mbps	90 Mbps	60 Mbps	45 Mbps	30 Mbps	15 Mbps
OSBRIDGE 5Ni-H (distance in meters)	6300	6900	7900	8800	9600	11800	12200	12900

Regulatory Compliance

CE mark, ETSI EN 301 893 Compliant, FCC Part 15 Compliant

Warranty

One year, Limited

Contact Information:

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