



Outdoor Wireless Router W4N-BSI



WI4NET 
WIRELESS DEVICES

Wi4Net MIMO Family

Wireless Router products family, the perfect solution for all Wireless Broadband Networks. Made with robust Alloy Steel IP67 enclosure, Multistandard 802.11 a/h/n, Frequency 5GHz, Hyperlan, Carrier radio module, W4N-BS's are the best solutions to deploy large Broadband Wireless IP Network and easily maintain it with the fully correlated software tools.

TOPICS

- 2X2 MIMO spatial duplexing Antenna
- Up to 300 mbps
- High sensitivity
- Integrated Antennas
- 802.11n standard
- Easy to install

W4N MIMO Family

W4N-BSI90H7

Wireless base station 802.11a/h/n - 1 radio module
Dual polarized integrated antenna 90°

W4N-BSI90H77

Wireless base station 802.11a/h/n - 2 radio module
Dual polarized integrated antenna 90°

W4N-BSI120H7

Wireless bridge router 802.11a/h/n - 1 radio module
Dual polarized integrated antenna 120°

W4N-BSI120H77

Wireless bridge router 802.11a/h/n - 2 radio module
Dual polarized integrated antenna 120°

All Outdoor Conditions

Wi4Net products are the perfect solutions for all outdoor wireless conditions.

Backhauling, Point-to-Point, Point-to-Multipoint or Mesh network are easily implementable with the extreme modular Wi4Net wireless family.

Wireless ISPs, Local Utilities, Municipalities, Enterprises and Hot Spot solutions can achieve the best performance from Wi4Net products family together with the associated antennas.

Wireless ISPs can easily build up broadband Internet infrastructure for rural zone, together with VoIP telephony access and wi-fi coverage for nomadic access.

Enterprises can connect different building or provide remote control of their machinery in all the outdoor areas.

Municipalities can easily implement wireless IP networks to connect remote offices and to increase public safety, by installing remote real time videosurveillance systems.

Local Utilities can rapidly take control over the remote equipment for Water, Gas and Electricity as well as Environment stations for pollution control and monitoring.

Hot Spot solutions are plug-and-play with the Wi4Net products embedded software and can share earnings with banner, walled garden web site or advertisement portal page.

Hot spots can be implemented in Hotel, Residence, Marine Ports, Camping, sea front tourist places.





Mikrotik® RouterOs® Software Functionality

Layer 2 features

- Ipv4 and IPv6 support

Bridging

- IEEE 802.1D spanning tree protocol
- IEEE 802.1w rapid spanning tree protocol
- Multiple bridge interface
- Bridge firewalling
- MAC NAT

Switch

- Port switch
- Tagging
- Replication

VLAN

- IEEE 802.1Q VLAN tagging on Ethernet and wireless interfaces
- Multiple VLANs
- VLAN bridging

Layer 3 features

Routing

- Static routing
- ECMP equal cost multipath routing
- Policy based routing
- RIP v1/v2
- OSPF v2/v3
- MPLS, MPLS-TE
- Multicast
- BGP
- VRF

QoS Management

- Hierarchical HTB QoS system with burst
- Per IP / protocol / subnet / port / firewall mark
- PCQ, RED, SFQ, FIFO queue
- CIR, MIR, connection ratios, dynamic client rate equalizing (PCQ), burst, peer-to-peer protocol limitation

Firewall and NAT

- Stateful packet filtering
- Peer-to-peer protocol filtering
- Source and destination NAT
- Packet classification by:
 - Source MAC
 - Interfaces
 - IP address and subnets
 - Ports and port range
 - Protocols
 - Protocol options (ICMP type, TCP flags and MSS)
 - ToS (DSCP)
 - Packet content (matching sequence/frequency)
 - Packet size
 - Time

Tunnelling protocol

- PPTP, PPPoE and L2TP access concentrators and clients
- PAP, CHA MSCHAP1, MSCHAP2 authentication protocols
- RADIUS authentication and accounting
- MPPE encryption; compression for PPPoE
- Data rate limitation
- Differentiated firewall
- PPPoE dial on demand
- IPIP tunnels
- EoIP (Ethernet over IP)

NTP

- Network time protocol server and client

IPSec

- IP security AH and ESP protocols
- MODP Diffie-Hellman groups 1,2,5
- MD5 and SHA1 hashing algorithms
- DES, 3DES, AES-128, AES-192, AES-256 encryption algorithm
- Perfect Forward Secrecy (PFS) MODP groups 1,2,5

Proxy

- FTP and HTTP caching proxy server
- HTTPS proxy
- Transparent DNS and HTTP proxying
- SOCKS protocol support
- DNS static entries
- Support for caching on separate drives
- Access control list
- Caching lists
- Parent proxy support

DHCP

- DHCP server and client per interface
- DHCP relay
- Multiple DHCP networks
- Static and dynamic DHCP leases
- RADIUS support

VRRP

- Virtual Router Redundancy Protocol (VRRP) for high availability

UPnP

- Universal Plug & play support

Management

Monitoring/accounting

- SNMP read-only
- SSH and Telnet CLI
- WEB GUI
- Windows based Winbox GUI

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Tools

- Ping
- Traceroute
- Bandwidth test, server and client
- Ping flood
- Packet sniffer
- Torch
- Dynamic DNS update tool

Storage

FTP Server

- Secure Copy
- Redundant storage
- Mini SD optional slot (preassembled on request)

Wireless features

Operation Modes

- Access Point (infrastructure mode)
- Bridge point-to-point and point-to-multipoint
- WDS (Wireless Distribution System)
- Station (client mode)
- WDS dynamic/static mesh
- Multiple SSID/BSSID and virtual AP
- AP bridging
- Nstreme and Nstreme2 protocols for dual radio full duplex link
- Compression mode
- CSMA disable for P-to-P performance increase
- DFS: dynamic Frequency Selection
- TPC: Transmit Power Control
- Layer 2 Hybrid Wireless Mesh protocol (HWMP+) Mikrotik implementation

HotSpot features

- HotSpot portal gateway with Radius authentication and accounting
- Local database users or external Radius db
- Plug & play with transparent local IP mapping
- Data rate limitation
- Traffic quota
- Real-time status update
- Walled-garden IP or URL
- Login pages customizable
- iPass support
- SSL authentication with certificate
- Pop-up advertisement
- Guest users

Security

- WEP 40 bit and 104 bit
- WPA and WPA2
- PSK
- AES-CCN and TKIP
- Access control list
- Client connect list with single WPA key, rate and time limit
- Std FIPS 197 AES

Authentication

- Radius
- EAP and EAP-TLS

User Manager

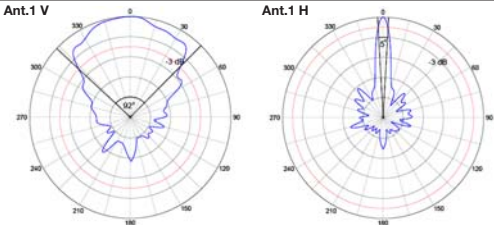
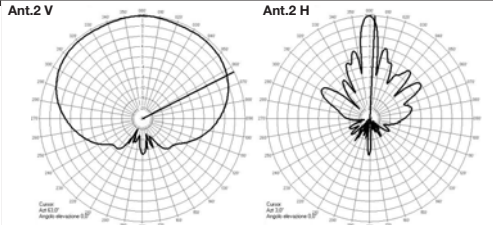
Features

- Radius server web interface
- Billing information
- Online Session information
- Logging information
- Auto create users, with mail confirmation
- Hierarchical administration structure
- Authorize.net and PayPal payment portal
- Thermal printer voucher setup
- Customizable credit definition
- Rate, time and traffic amount limit



Hardware Specifications

Product Code	W4NBSI90H7, W4NBSI90H77, W4NBSI120H7, W4NBSI120H77					
Radio characteristics		Receive Sensitivity		Max Output power		
5GHz 802.11a/h data rates	6 / 24	-97 dBm (± 2dB)		25 dBm (± 2dB)		
	36	-90 dBm (± 1.5dB)		24 dBm (± 2dB)		
	48	-86 dBm (± 1.5dB)		22 dBm (± 2dB)		
	54	-84 dBm (± 1.5dB)		21 dBm (± 2dB)		
5GHz 802.11n data rates		Receive Sensitivity	Max Output power		Receive Sensitivity	Max Output power
	MCS 0	-97 dBm	25 dBm	MCS 8	-98 dBm	25 dBm
	MCS 1	-96 dBm	25 dBm	MCS 9	-97 dBm	25 dBm
	MCS 2	-93 dBm	25 dBm	MCS 10	-94 dBm	25 dBm
	MCS 3	-91 dBm	24 dBm	MCS 11	-92 dBm	24 dBm
	MCS 4	-87 dBm	23 dBm	MCS 12	-88 dBm	23 dBm
	MCS 5	-84 dBm	22 dBm	MCS 13	-85 dBm	22 dBm
	MCS 6	-78 dBm	21 dBm	MCS 14	-79 dBm	21 dBm
	MCS 7	-75 dBm	19 dBm	MCS 15	-76 dBm	19 dBm

		W4NBSI90H7, W4NBSI90H77		W4NBSI120H7, W4NBSI120H77	
Antenna gain pattern (23 dBi model)					
Antenna characteristics	Gain	16 dBi		15 dBi	
	Frequency	5150 ÷ 5950 MHz		5150 ÷ 5950 MHz	
	Polarization	Vertical & Horizontal		Vertical & Horizontal	
	Backward radiation	30dB		30dB	
	Vertical beamwidth	90°		120°	
	Horizontal beamwidth	9°		8°	
	VSWR	<=1,5:1			
	Impedance	50 Ohm			
Wind loading	288 km/h				
Standards	IEEE802.11a/h				
Frequency Bands	802.11a/h hiperlan: 5,15 ~ 5,35GHz 5,47~5,725GHz with country regulations				
Channel	802.11a/h: 11 non overlapping (outdoor)				
Processor	680Mhz				
Modulations	802.11a/h: OFDM (64-QAM, 16-QAM, QPSK, BPSK)				
Media Access Protocol	Wireless CSMA/CA, TDMA - Ethernet CSMA/CD				
External connector interface	1 ETH/POE (+ 2 Nf aux connector on W4NBSI90H88 and W4NBSI120H77)				
Configuration and Management	Management options Via Telnet, SSH, Web page, Windows utility - Configuration upload/download Software upgrade and configuration FTP/TFTP download up/download - SNMP agent SNMP V1 Client, MIB II, Bridge MIB				
Dimensions	Mounting (WxDxH): 51 x 14 x 9 cm Mounting bracket: 38-51mm				
Weight	1 kg approx				
Power Specs	10 to 28 Vdc with passive POE Power consumption: 7 to 12W				
Environment Specs	Operating: -20°C + 55°C Storage: -40°C + 80°C		Relative Humidity : up to 70% (non condensating) Water proof rate: IP66		
Regulatory approvals	EN 60950-1:2001+A11 (EN 60950) - Product Safety EN 301 489-1 V1.8.1/ EN 301 489-17 V2.1.1- EMC requirements for radio equipment EN 301 893 v 1.5.1- Technical requirements for 5 GHz radio equipment RoHS complaints				
Package contents	Antenna with integrated device Pole mount with nuts and bolts		ETH cable insulator Power supply with integrated POE		
Accessories	IDU-BATT: Indoor Unit with battery backup and 55W power supply (Short circuit, over load and over voltage protection) up to 8 hours without power supply				
Warranty	Standard warranty: 12 months from date of purchase - Extra warranty: 36 months total				

All the informations reported are subject to changes without any prior notification.

W4N-BSI-0713



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