



WLS 2100 Micro Cellular-Mesh Wi-Fi Sector Base Station

GO Nets' Mobile Broadband Wireless 2000 Series

Rural - Suburban - Metropolitan Scale Superior Wi-Fi Performance, Coverage, and Economics



Key Features

- Industry's first micro cellular-mesh Wi-Fi sector base station
- Superior dual-radio 802.11 b/g access powered by xRF™ smart antenna technology
- Dedicated 802.11a radio for high-performance, reliable mesh networking
- Multiple virtual APs with multiple BSSIDs
- MBW EMS/NMS for real-time Element, Network and RF Optimization

The MBW Advantage

- Superior range and coverage
- Maximum subscriber access and performance
- Reduce wireless networking equipment requirements
- Realize immediate upfront CAPEX savings and recurring OPEX savings

The Mobile Broadband Wireless (MBW) 2000 Series

GO Net Systems is an innovative leader in carrier-class outdoor Wi-Fi solutions. The GO Net Systems MBW 2000 series, companion MBW 1000 series and the companion MBW 500 series are the foundation for an innovative set of cellular-mesh Wi-Fi architectures. The MBW 2000 series comprises the WLS 2100 Micro Cellular-Mesh Wi-Fi Sector Base Station (WLS 2100). The WLS 2100 is a 120 degree multi-radio sector panel designed for building sides, rooftops, towers and utility poles. The WLS 2100 is equipped with two xRF™ powered adaptive beamforming 802.11 b/g access radios for high-performance coverage and a separate 802.11a radio for high-performance mesh networking. With xRF™ adaptive beamforming smart antenna technology, the WLS 2100 delivers unparalleled range, coverage, subscriber access, and performance. And like all of GO Net Systems' products, the WLS 2100 is fully manageable by GO Net Systems' MBW EMS/NMS platform. With the MBW management tools operators can perform device management as well as address system-wide network and RF optimization in real-time.

Cellular-Mesh Wi-Fi

The MBW 2000 series, together with the MBW 1000 and MBW 500 series of cellular-mesh Wi-Fi products, form the foundation for an innovative, high-performance set of architectures for Wi-Fi networking and service delivery. Combining the performance and scale of cellular-style wireless networking architectures with the flexibility and installability of Wi-Fi mesh-networking, the GO Net Systems solution delivers superior performance, coverage, and economics for networks of any size. The MBW 2000 series serve as micro sector base stations ideal for providing top-down Wi-Fi coverage. The MBW 1000 series is designed for pico base station applications ideal for cost-effective street-level coverage; while the MBW 500 series is purpose-built for simple, economical femto cell

deployments ideal for ad hoc networks and other on-demand capacity needs. All MBW Series systems are equipped with separate radios for mesh-networking enabling simple, dependable, and high-performance internetworking.

The xRF™ Smart Antenna Advantage

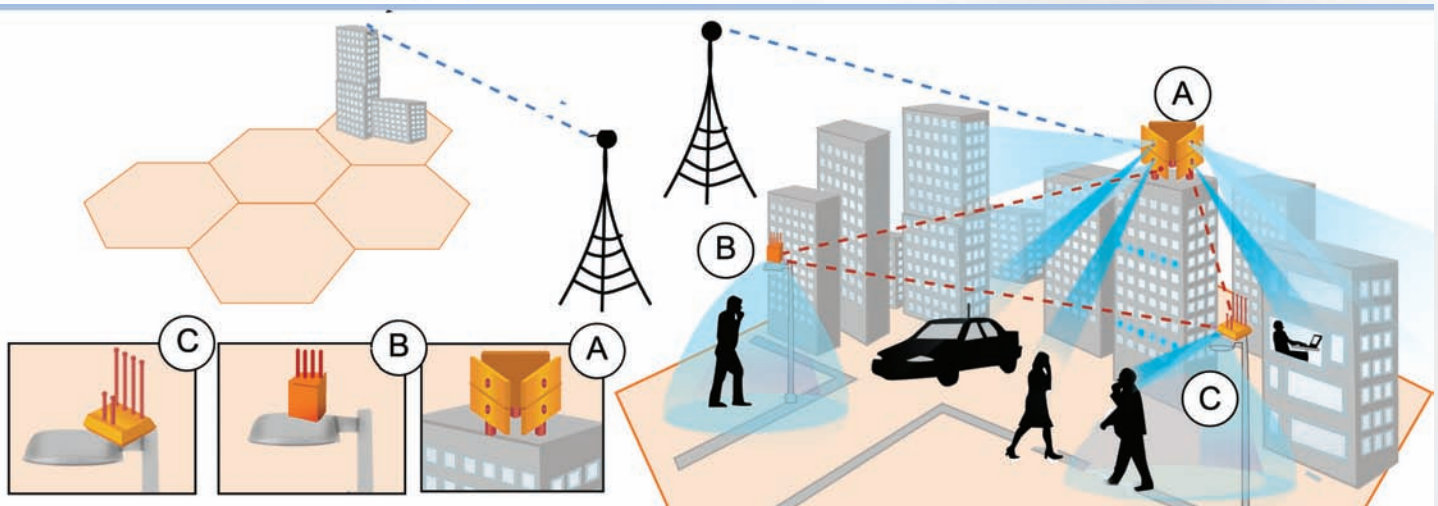
At the heart of the WLS 2100 is GO Net Systems' innovative xRF™ smart antenna technology. xRF™ technology leverages state-of-the-art beamforming RF capabilities to deliver unmatched subscriber access, performance, coverage, and interference mitigation. With xRF™ technology, the WLS 2100 can overcome irregular interference and adapt to challenging topographies. This means better network performance with fewer access points.

Superior Performance, Coverage, and Economics

GO Net Systems' innovative cellular-mesh Wi-Fi solutions based on the MBW 2000, 1000, 500 series products and xRF™ smart antenna technology deliver superior performance, coverage, and economics. With GO Net Systems' solution, Wi-Fi networking equipment requirements can be reduced, translating into real savings today and into the future. For any size deployment — rural, suburban, or metropolitan, GO Net Systems' solutions can deliver immediate upfront CAPEX savings and recurring OPEX savings. See the difference GO Net Systems can make with your network.



GO Net Cellular-Mesh Wi-Fi Solution





About GO Net Systems

GO Net Systems provides cost-effective carrier-class Mobile Broadband Wireless (MBW) solutions for rural, suburban and metropolitan scale deployments based on 802.11 (Wi-Fi) standards. GO Net Systems' MBW solutions comprise products and services aimed at delivering superior wireless performance, coverage, and economics for service providers, mobile operators and municipalities worldwide. With GO Net Systems' innovative xRF™ adaptive beamforming smart antenna technology coupled with highly-scalable broadband architectures, wireless networking infrastructure requirements can be reduced delivering immediate upfront CAPEX and recurring OPEX savings. And with GO Net Systems' comprehensive design and deployment services, customers can deploy wireless IP networks of any size with ease and confidence.

Wireless

- Wireless Network Standards: IEEE 802.11a/b/g
- Radio Interfaces:
 - Dual Simultaneous Access: 802.11b/g interface
 - Mesh: 802.11a interface
- Frequency bands: 2.412-2.472, 5.470-5.725, 5.725-5.825 GHz
- xRF™ smart antenna technology
- Antennas:
 - Internal Sector Directional 2.4GHz antennas
 - ETSI : 120° Horizontal 40° Vertical 14 dBi
 - FCC : 120° Horizontal 27° Vertical 17 dBi
 - 5GHz antenna: RP-TNC connector for multiple antenna options
- Modulation:
 - 802.11b – DSSS (DBPSK , DQPSK, CCK):
 - 802.11a/g – OFDM (BPSK, QPSK, 16-QAM, 64-QAM)
- Tx Power (typical EIRP)
 - ETSI: 20 dBm @ 2.4GHz , 30dBm @ 5Ghz
 - FCC: 42 dBm @ 2.4GHz, 30dBm @ 5Ghz
 - MII: 27 dBm @ 2.4GHz, 30dBm @ 5Ghz
- Rx Sensitivity (FCC):
 - 802.11b: -102 dBm @ 1 Mbps, -99 dBm @ 2 Mbps, -95 dBm @ 5.5 Mbps, -89 dBm @ 11 Mbps
 - 802.11g: -96 dBm @ 6 Mbps, -94 dBm @ 9 Mbps, -92 dBm @ 12 Mbps, -90 dBm @ 18 Mbps, -88 dBm @ 24 Mbps, -86 dBm @ 36 Mbps, -82 dBm @ 48 Mbps, -80 dBm @ 54 Mbps
 - 802.11a: -92 dBm @ 6 Mbps, -91 dBm @ 9 Mbps, -91 dBm @ 12 Mbps, -89 dBm @ 18 Mbps, -87 dBm @ 24 Mbps, -84 dBm @ 36 Mbps, -80 dBm @ 48 Mbps, -77 dBm @ 54 Mbps

Networking

- 802.11s draft compatible meshing
- WDS CPE support
- Multiple ESSIDs' & BSSIDs'
- QoS, traffic classification
- WME
- 802.11q VLAN
- Layer 2, 3 support
- DHCP Client

Management

- GO Net Systems private, standard MIBs
- Local CLI via serial port
- Remote configuration upload/download
- SNMP v2 (NMS)
- Telnet/SSH CLI (configuration, statistics and alarms)
- (remote initial IP configuration) DHCP client
- Remote software upgrade
- FTP, TFTP, Web

Authentication & Security

- WPA/WPA2 (WPA-PSK, WPA-EAP)
- WEP 40/128 bit encryption
- MAC filtering
- Standard RADIUS server interface
- AES Mesh encryption

Interfaces

- IP67 Weatherproof RJ-45 100Base-T Ethernet with auto cross over
- IP67 Weatherproof RJ-45 Serial port (configurations)

Hardware

- Dimensions: 40 x 60 x 7 cm, 15.7 x 23.6 x 2.7 in (W x H x D)
- Weight: 7.6 kg, 16.75 lbs
- Power input: -48VDC
- Operating Temperature: -40° to 55°C, -40° to 131°F
- Storage Temperature: -40° to 60°C, -40° to 140°F
- Operating relative humidity (non-condensing): 15% - 100%
- Non-operating relative humidity (non-condensing): 5% - 95%
- Supplied Accessories:
 - Base Station power supply (AC to DC, -48 VDC, 48W)
 - Pole mounting kit

Standards

- Xin Bu Wu [2002] #353
- EMC Standards
 - US: FCC Part 15.107 and 15.109
 - Europe: EN 301.489-1 and -17
- EMI and Susceptibility (Class B)
 - US: FCC Part 15.107 and 15.109
 - Europe: EN 301.489-1 and -17
- Safety
 - US, Canada: UL 1950
 - US, Canada: UL 60950-1
 - Europe: EN 60950-1
- Environmental
 - Wind survivability: >165 mph (Up to 100 mph sustaining, up to 165 mph gusts)
 - Europe: EN 300.019-2-4 class 4.1 and EN 300.019-2-2 class 2.3



Ordering Information

Part Number	Item
MBW-WLS-2100F	FCC WLAN Micro Base Station
MBW-WLS-2100E	ETSI WLAN Micro Base Station
MBW-WLS-2100M	MII WLAN Micro Base Station
MBW-WLS-WMK-3020	WLS Wall Mounting Kit
MBW-WLS-LP-3001	Lightning Protector