The NetWave® industrially hardened wireless Ethernet transmission link can be configured through the embedded User Interface as a Client or as an Access Point. This point-to-multipoint model allows multiple Ethernet endpoints to be connected to a central Access Point. Up to 15 endpoints can be linked to a central access point. The NW1 and NW2 support up to 95Mbps throughput using MIMO technology. The units can be powered by an IEEE 802.3af PoE compliant device or through the supplied power injection module. The NW1 is FCC certified for use in North America and the NW2 is ETSI, DFS and TPC certified for use in the European Union.

**FEATURES**
- Lifetime Warranty
- Up to 95Mbps Throughput
- 802.11a/n Compliant
- Distances up to 2 mi (FCC) or 2km (ETSI)
- Powered by the included power injection module or by an IEEE802.3af PoE compliant device
- Environmentally Hardened -40º to +75ºC
- Meets class IP67 dust and water immersion protection standards
- ETSI Standards (EU Region only):
  - DFS Dynamic Frequency Selection
  - TPC Transmit Power Control
- Secure transmission: WPA2 – AES or TKIP encryption
- ComNet Antenna alignment feature eases installation and setup
- RF Spectrum Survey Tools
- Antenna Alignment Tools
- LED array displays unit operational status along with received signal strength
- Optional Antenna Configurations Available

**APPLICATIONS**
- Point to Multi-Point topologies whereby several Clients connect to one Access Point
- Simple to deploy and cost-effective alternative to physical connections to Ethernet edge equipment
- Integration of Ethernet where right-of-way issues mandate wireless communications
- ITS traffic signalization networks and Video Detection Systems (VDS)
- ITS roadside and city center CCTV surveillance, and surveillance of high-value or mission-critical assets
- Wireless communications in manufacturing, petrochemical refineries, wastewater treatment facilities, and other industrial automation and control applications operating in harsh or out-of-plant environments
- Electrical substation video and perimeter surveillance
NW1/NW2

Industrially Hardened Point-to-Multipoint Wireless Ethernet Link

SPECIFICATIONS

**Wireless Radio**

<table>
<thead>
<tr>
<th>EIRP</th>
<th>NW1 (FCC): Up to +36dBm for point to multipoint deployments, +45dBm for point to point deployments with MAC-lock feature enabled</th>
<th>NW2 (ETSI): +30dBm</th>
</tr>
</thead>
<tbody>
<tr>
<td>RF Output</td>
<td>+26dBm Rated Transmitter</td>
<td></td>
</tr>
<tr>
<td>Operational Frequency</td>
<td>5500GHz - 5825GHz, Region-dependent. Contact ComNet for frequencies supported in your region.</td>
<td></td>
</tr>
<tr>
<td>Bandwidths</td>
<td>20 and 40MHz</td>
<td></td>
</tr>
</tbody>
</table>

**Standard Internal Antenna**

<table>
<thead>
<tr>
<th>Antenna</th>
<th>Internal 19dBi Dual Polarized Directional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gain</td>
<td>19dBi</td>
</tr>
<tr>
<td>Azimuth</td>
<td>17° Horizontal/Vertical</td>
</tr>
<tr>
<td>Elevation</td>
<td>17° Horizontal/Vertical</td>
</tr>
</tbody>
</table>

**IA870 Optional Internal Antenna**

<table>
<thead>
<tr>
<th>Antenna</th>
<th>Internal 8dBi Dual Polarized Directional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gain</td>
<td>8dBi</td>
</tr>
<tr>
<td>Azimuth</td>
<td>70° Horizontal/Vertical</td>
</tr>
<tr>
<td>Elevation</td>
<td>30° Horizontal/Vertical</td>
</tr>
</tbody>
</table>

**Connectors**

| 10/100 Ethernet | 2 × RJ-45, Sealed Cable Gland                                                                                                       |

**Indicating LEDs**

| Power On, Ethernet Link, Signal Strength |

**Software Features**

- Addressing: Static IP / DHCP Client / DHCP Server
- SNMP: V3
- Telnet Server: Syslog
- Dynamic DNS: 802.1q VLAN support
- Embedded Firewall: QoS support
- Ability to Assign Static Routes: NTP Client
- Spanning Tree Protocol support
- 802.1x Port-Based Network Access Control
- User-Configurable Watchdog and Auto-Reboot Mechanism
- Multi-Level Configuration and Monitoring Login Accounts
- User Configurable Long Range Parameters

**Power**

- Operating Voltage: 42 to 57 VDC
- Power Consumption: 5.5W Max
- PD Power: IEEE802.3af PD compliant

**Mechanical**

- Size (L × W × H): 10.6 × 10.6 × 2.9 in (27 × 27 × 7.5 cm)
- Shipping Weight: <2lbs/0.9kg

**Environmental**

- MTBF: >100,000 hours
- Operating Temp: -40° C to +75° C
- Storage Temp: -40° C to +85° C
- Relative Humidity: 5% to 95%

**NOTE:** In a continuing effort to improve and advance technology, product specifications are subject to change without notice.

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NW1</td>
<td>Industrially Hardened Point-to-Multipoint Wireless Ethernet Unit, Supports distances up to 2 mi/3.2 km, FCC certified for North America</td>
</tr>
<tr>
<td>NW2</td>
<td>Industrially Hardened Point-to-Multipoint Wireless Ethernet Unit, Supports distances up to 2 km/1.25 mi, ETSI certified for European Union</td>
</tr>
</tbody>
</table>

**Included Accessories**

- Power Kit with Power Supply and Passive Power Injector
- Pole Mounting Hardware Kit
- NWBKT - Articulating Wall or Pole Mounting Kit. Supports up to 3in/76mm diameter poles. (Sold Separately)
- Add /IA870 for 8dBi/70° beamwidth internal antenna option (Recommended for multipoint Access Points. Extra charge, consult factory.)
- Add /C for Conformally Coated Circuit Boards (Extra charge, consult factory)
NW1/NW2

TYPICAL APPLICATION

Point-to-Multipoint Topology

LEGEND

WIRELESS

CAT5

POWER

ETHERNET DATA

Point-to-Point Topology Utilizing Dual Ports