

# Industrially Hardened High Throughput and Scalable Dual Radio Wireless Bridge with Optional External Antenna

NW1DR[IC]

















Shown with NWADA1 antenna (sold separately)

The NetWave® industrially hardened narrow bandwidth dual wireless radio is is used for redundant ring and drop & repeat topologies when used with an external antenna. Radio 1 is a 20 dBi 17° internal antenna while radio 2 has dual N-Female connectors for an external 5GHz antenna. The wide range of channel spectrum widths available on the NW1DR[IC] series of radios gives you the option of using wide channel widths for high throughput deployments that have little interference and noise while the narrow channel widths will increase the number of available non overlapping channels and improve stability in crowded RF environments but decrease maximum throughput. The NW1DR is FCC certified for use in North America. The NW1DRIC is IC certified for use in Canada.

## **FEATURES**

- Narrow Channel Spectrum Widths for large and noisy deployments
- > 5,10,20 and 40 Mhz Channel Bandwidth Support
- > Up to 240 Mbps Throughput
- > 802.11a/n Compliant
- Distances up to 2 miles
- > IEEE802.3at PoE Compliant PD on port 1
- > IEEE802.3af power source (PSE) available on port 2
- > Environmentally Hardened -40° to +75°C
- Meets class IP67 dust and water immersion protection standards
- > Secure transmission: WPA2 AES or TKIP encryption
- ComNet Antenna alignment feature eases installation and setup
- > RF Spectrum Survey Tools
- > Antenna Alignment Tools
- > Radio Internal Components covered by Lifetime Warranty.
- > Enclosure covered by Three Year Warranty.

## **APPLICATIONS**

- > Installations that require redundant ring or linear drop and repeat topologies
- Large deployments where there is significant channel overlapping causing interference
- 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

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## **SPECIFICATIONS**

### **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** 

## Wireless Radio

EIRP NW1DR[IC] (FCC, IC): Up to +36 dBm for point to

multipoint deployments, +49 dBm for point to point deployments with MAC-lock feature enabled NW1DRE (ETSI): ETSI Unit Not Available

RF Output +30 dBm Rated Transmitter

Operational Frequency 5180 MHz - 5825 MHz, Region-dependent.

Not all frequencies are supported in all regions.
Contact ComNet for frequencies supported in your

region.

Bandwidths 5, 10, 20 and 40 MHz

#### Standard Internal Antenna

Antenna Internal 20 dBi Dual Polarized Directional

Gain 20 dBi

Azimuth 17° Horizontal/Vertical Elevation 17° Horizontal/Vertical

#### **Connectors**

10/100 Ethernet Port 2 RJ-45, Sealed Cable Gland Gigabit Ethernet Port 1 RJ-45, Sealed Cable Gland

External Antenna (Radio 2) 2 × N-Type 50 ohm

#### Power

Operating Voltage 42 to 57 VDC Power Consumption 5 W Max

PD Power IEEE802.3af/at PD compliant
PSE Power IEEE802.3af PSE compliant

#### Mechanical

Indicating LEDs Power On Ethernet Link Signal Strength Size (L  $\times$  W  $\times$  H) 10.6  $\times$  10.6  $\times$  2.9 in (27  $\times$  27  $\times$  7.5 cm)

Shipping Weight: < 4.4 lb / 2 kg

#### **Environmental**

 MTBF
 >100,000 hours

 Operating Temp
 -40° C to +75° C

 Storage Temp
 -40° C to +85° C

Relative Humidity 5% to 95%, non-condensing<sup>1</sup>

#### Warranty

Internal Components Lifetime Enclosure 3 Year





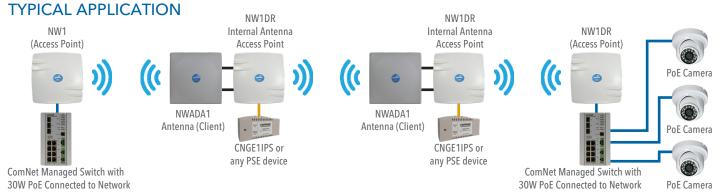
## ORDERING INFORMATION

#### Part Number Description NW1DR Industrially Hardened Dual Radio Narrow Bandwidth Wireless Bridge, Supports distances up to 2 mi/3.2 km, FCC certified for North America NW1DRIC Industrially Hardened Dual Radio Narrow Bandwidth Wireless Bridge, Supports distances up to 2 mi/3.2 km, IC certified for Canada **Included Accessories** Pole Mounting Hardware Kit Compatible External NWAVBSA1 - Dual Polarization Variable Beamwidth Sector Antenna for NetWave Wireless Ethernet Devices (Sold Separately) Antennas NWADA1 - Dual Polarization 4.9-5.8GHz 19dBi 17 degree Beamwidth Antenna for NetWave Wireless Ethernet Devices (Sold Separately) NWAODA1 - External Omni Directional Dual Band Antenna for NetWave Wireless Ethernet Devices (Sold Separately) Options NWBKT - Articulating Wall or Pole Mounting Kit. Supports up to 3in/76mm diameter poles. (Sold Separately) PIM1 - Hardened Power Injection Module supporting 24-48V DC and 24VAC Input, Includes 24V 12W power supply

CNGE1IPS - Hardened 35 W Midspan Power Injection Module for Passthrough PoE Applications supporting 90-264V AC and 56V DC Input

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

[1] Add suffix '/C' for Conformally Coated Circuit Boards to extend to condensation conditions (Extra charge, consult factory)





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