



## QUICK START USER GUIDE



COMMERCIAL WIRELESS ETHERNET

**This manual serves the following  
ComNet Model Numbers:**

NW3  
NW4  
NWK3  
NWK4

Thank you for purchasing NetWave™ from ComNet. This quick start guide is designed to walk you through installation.

This guide applies to the following models:

NW3: Commercial Multipoint, FCC Version, User Configurable

NW4: Commercial Multipoint, ETSI Version, User Configurable

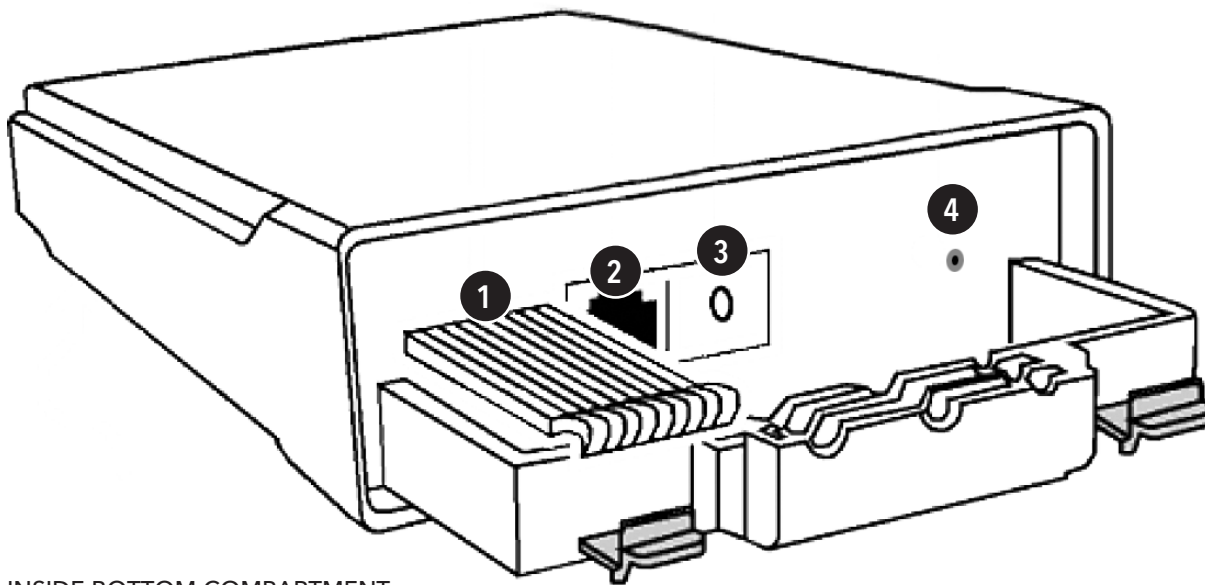
NWK3: Commercial Point to Point Kit, FCC Version (Includes NWK3\_AP and NWK3\_CL)

NWK4: Commercial Point to Point Kit, ETSI Version (Includes NWK4\_AP and NWK4\_CL)

An easy to read LED array displays unit operational status along with received signal strength ensuring optimal installation and operation. See **Figure 2** on **Page 2** for LED Indicator explanations.

See **Figure 3** on **Page 3** for mounting instructions.

FIGURE 1 - NETWAVE ACCESS POINT



INSIDE BOTTOM COMPARTMENT

VIEW	DESCRIPTION
1	Status Indicating LEDs - See Figure 2 for LED Indications.
2	LAN Port - 10/100Mbps Ethernet and passive PoE input connection. 24 VDC
3	Surge Protection (Optional) - Connect ground wire to earth point.
4	Reset Button
	Reboot: Press Button Once
	Reset Password: Press and Hold Button for <b>5 Seconds</b> , then Release. Restore Factory Settings: Press and Hold Button for <b>8 Seconds</b> , then Release.

FIGURE 2 - STATUS LED INDICATIONS



LED	VISUAL CUE	INDICATION
POWER	SOLID GREEN	Power is supplied to the NW3/NW4
	OFF	No power is supplied to the NW3/NW4
ETHERNET LINK	SOLID GREEN	Ethernet connection is established
	FLASH GREEN	Ethernet connection is established and there is activity present
	OFF	No Ethernet connection established
RSSI1	SOLID RED	Poor signal strength
RSSI2	SOLID YELLOW	Acceptable signal strength
RSSI3	SOLID GREEN	Good signal strength
RSSI4 / STATUS	FLASH GREEN	Unit is booting up
	SOLID GREEN	Excellent signal strength

SIGNAL STRENGTH:



MINIMUM SIGNAL



MAXIMUM SIGNAL

FIGURE 3 - POLE MOUNT INSTRUCTIONS



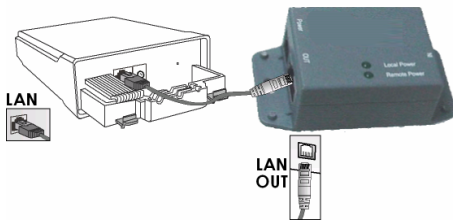
Step 1.

Unpack the two (2) cable ties from the box.



Step 2.

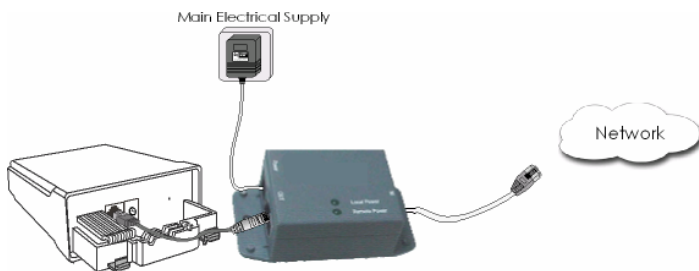
Loop each cable tie through the mounting bracket hole at the top and bottom. Wrap them around the pole and tighten the cable ties to secure the unit to the pole.



Step 3.

Connect one end of an RJ-45 Ethernet cable to the LAN OUT port of the Power Injection Module (PIM) and the other end to LAN of the access point.

Maximum length of the RJ-45 CAT5 cable is 100meters.\*  
 \* Up to 200mW radio. For higher power radio upgrade to higher rating power adapter.



Step 4.

Connect the RJ-45 Ethernet cable attached to the PIM to a network device, such as to a switch or to the PC you will use to configure the access point.

Connect the power adaptor to the main electrical supply and the power plug into the socket of the PIM.

PoE power input: Passive PoE (24 VDC)

## INSTALLATION REQUIREMENTS

Shielded CAT 5 or better should be used for all out of plant Ethernet connection and should be properly grounded through the PoE AC ground. Industrial grade shielded Ethernet cable is recommended to help prevent ESD damage commonly experienced with outdoor installations. Visit [www.comnet.net/comnet-products/cables](http://www.comnet.net/comnet-products/cables)

## CONFIGURING NETWAVE

1. Connect an Ethernet cable from the port labelled as IN on the power Injection Module to either a laptop or a PC LAN port.
2. Connect the second Ethernet cable from the OUT port on the Power Injection Module to the NetWave LAN port.
3. Apply 24VDC to the Power Injection Module with the provided power supply. You should notice the green LED illuminate in the Power Injection Module and the power LED on the NetWave unit.
4. Set the IP address of the laptop being used to configure NetWave to static and the subnet to 192.168.10.x/24 subnet.
5. Point the browser to 192.168.10.100 for the Access Point or 192.168.10.101 for all other models. These are the default addresses.
6. A login prompt will pop up. Enter:  
ID: **admin**  
Password: **admin**
7. Select the NETWORK SETTINGS tab and set the desired network settings.  
Hit Apply Settings  
Hit Save

NOTE: This will be the network address for the NetWave web server. It is not necessary to set to the same subnet as the operating network but it is recommended.

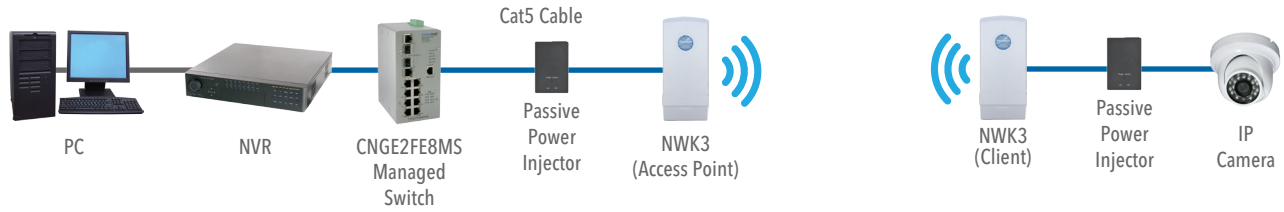
- 8 Select the WIRELESS SETTINGS tab and set:
  - Wireless mode - Set to AP or Client (Only need to do this on the NW3 and NW4 models)
  - Country code - Only required if setting up the NW4 and NWK4 (ETSI) models

NOTE: It is the user's responsibility to ensure that the correct country is chosen. ComNet accepts no liability for incorrectly set up equipment.

- Output RF power - if RSSI is greater than 70, it is recommended to reduce RF TX power.
- Set SSID - if changing from the default setting
- Channel Spectrum Width - May want to reduce to 20M from the default 20/40M if the 5GHz spectrum is crowded
- Wireless Security - if changing from default settings
- Hit Apply Settings
- Hit Save

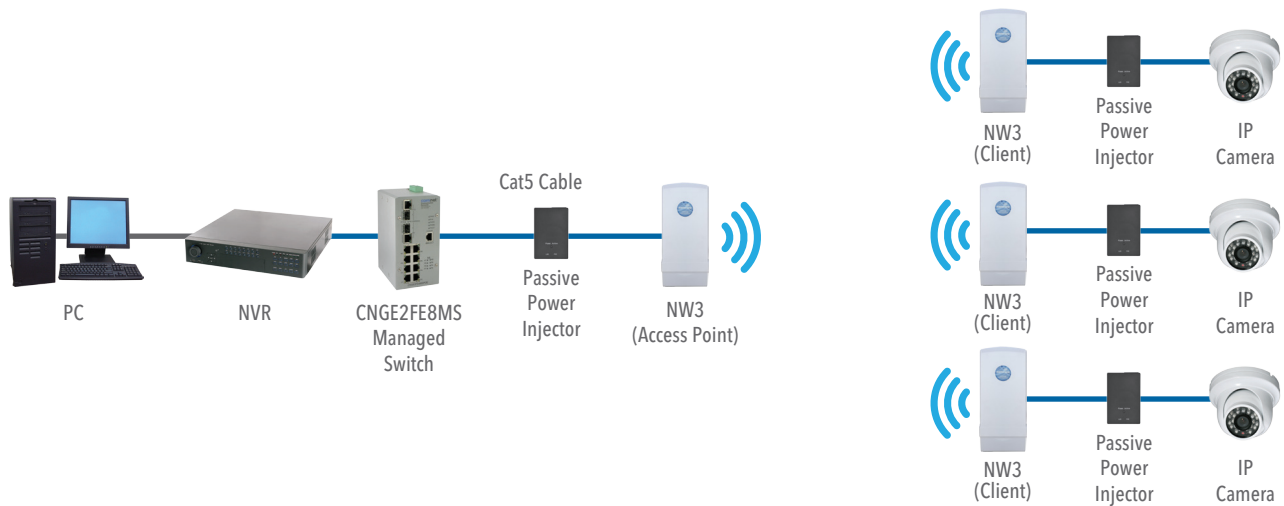
### TYPICAL POINT-TO-POINT CONFIGURATION

NOTE: NWK3 and NWK4 point to point kits have been set up at the factory and locked to each other. No need to set Wireless Mode and may not need to set the IP address. These are designed to connect to each other once powered and properly aligned.



### TYPICAL POINT-TO-MULTIPOINT CONFIGURATION

NOTE: NW3 and NW4 Multipoint nodes will need to have the Wireless Mode set to either AP or Client (default is Client). And the IP addresses will need to be all set to different addresses (default address is 192.168.10.101). Once this is done, all the clients will connect to the multipoint AP with all other setting kept at default.



**DEFAULT CONFIGURATIONS**

IP Address of Web Server	192.168.10.100 for NWKx_AP and 192.168.10.101 for all other models
LAN Mode for Web Server	Static Addressing
Web Server User ID	admin
Web Server Password	admin
Web Server Guest User ID	guest
Webserver Guest Password	guest
SSID	NetWave-1
WPA Pre-shared Key	12345678
Channel-Frequency (AP)	Auto
Channel Spectrum Width	20/40M
Long Range Parameters	Enabled and defaulted to 1000m

NOTE: A Reset to defaults (performed on the ADMIN page) will erase all user configurations including the factory set MAC lock on Point to Point (NWKx) models.

## AGENCY COMPLIANCE

### FCC

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operations of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### Industry Canada

This Class A digital apparatus complies with Canadian ICES-003. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (EIRP) is not more than that permitted for successful communication. This device complies with Industry Canada license-exempt RSS standard(s).

Operation is subject to the following two conditions:

- This device may not cause interference, and
- This device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 Canada. Pour réduire le risque d'interférence aux autres utilisateurs, le type d'antenne et son gain doivent être choisies de façon que la puissance isotrope rayonnée équivalente (PIRE) ne dépasse pas ce qui est nécessaire

pour une communication réussie. Cet appareil est conforme à la norme RSS Industrie Canada exempts de licence norme(s). Son fonctionnement est soumis aux deux conditions suivantes:

#### 17 Compliance

- Cet appareil ne peut pas provoquer d'interférences et
- Cet appareil doit accepter toute interférence, y compris les interférences qui peuvent causer un mauvais fonctionnement du dispositif.

### RF Exposure Warning

The antennas used for this transmitter must be installed to provide a separation distance of at least 2.52m from all persons and must not be located or operating in conjunction with any other antenna or transmitter.

Les antennes utilisées pour ce transmetteur doivent être installées en considérant une distance de séparation de toute personnes d'au moins 2.52m et ne doivent pas être localisées ou utilisées en conflit avec tout autre antenne ou transmetteur.

### CE Marking

CE marking on this product represents the product is in compliance with all directives that are applicable to it.

This equipment may be operated in the following countries:

Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Malta, Netherlands, Norway, Portugal, Romania, Czech Republic, Croatia, Slovakia, Slovenia, Sweden, UK

### Installer Compliance Responsibility

Devices must be professionally installed and it is the professional installer's responsibility to make sure the device is operated within local country regulatory requirements.

### RoHS/WEEE Compliance Statement

European Directive 2002/96/EC requires that the equipment bearing this symbol on the product and/or its packaging must not be disposed of with unsorted municipal waste. The symbol indicates that this product should be disposed of separately from regular household waste streams. It is your responsibility to dispose of this and other electric and electronic equipment via designated collection facilities appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. For more detailed information about the disposal of your old equipment, please contact your local authorities, waste disposal service, or the shop where you purchased the product.

**Need Additional Assistance?**

Visit our website <http://www.comnet.net> or contact Comnet tech support:

Tel: (203) 796-5300

Toll free: (888) 678-9427

Email: [techsupport@comnet.net](mailto:techsupport@comnet.net)

**Additional Technical support contact details can be found at:**

<http://www.comnet.net/services/technical-support.html>

**Or Visit our pre-sales design center:**

<http://www.comnet.net/services/design-center.html>

**Or our customer care:**

<http://www.comnet.net/services/customer-care.html>

**Additional Downloads**

Datasheets, Installation manuals and other product documentation can be found at:

<http://www.comnet.net/comnet-products/ethernet/wireless/>



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