# NXB-CCG NetLinx® Clear Connect™ Gateway (434 MHz - US/Canada Only)

## Overview

The NXB-CCG NetLinx Clear Connect Wireless Gateway (**FG2606**) connects NetLinx Controllers with Lutron's Clear Connect Dimmers, Switches, Occupancy/Vacancy Sensors and Keypads. The Gateway includes a web interface for simplified integration, configuration, and programming of Clear Connect devices. When integrated with an AMX NetLinx Controller, installers now have a simple and cost-effective path to offer smart room automation that includes light and AV control from a single interface, occupancy sensing, scheduled shutdown and energy management.
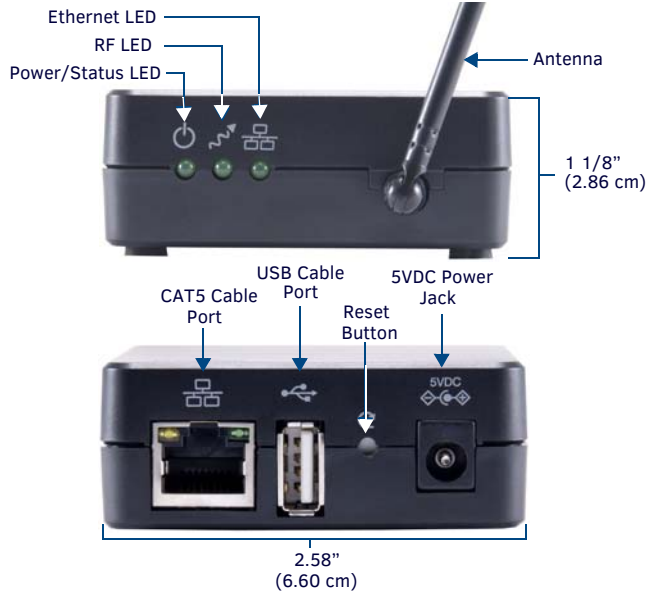


**FIG. 1** NXB-CCG CLEARCONNECT WIRELESS GATEWAY

## Product Specifications

| NXB-CCG SPECIFICATIONS | |
|---|---|
| Power Requirements: | • **Power Consumption:** 600mA @ 5VDC, DC adapter included (5V DC, 2A).<br>• **Surge Protection:** To withstand surge voltages without damage or loss of operation, in accordance with IEEE C62.41-1991 Recommended Practice on Surge Voltages in Low-Voltage AC Power Circuits.<br>• **Power Failure Memory:** Should power be interrupted, the NXB-CCG will return to its previous state when power is restored. |
| **Front Panel Components:** | |
| Power/Status LED: | Displays power status and other system status indicators. |
| RF LED: | Displays the Tx / Rx activity on the RF link. |
| Ethernet LED: | Displays the connection status and Tx / Rx activity on the Ethernet link. |
| **Rear Panel Components:** | |
| CAT5 Cable Port: | Maximum cable length: 328 ft (100 m) |
| USB Cable Port: | Manufacturer use only. |
| Reset Button: | Press and hold for 20 seconds to restore the system to the Factory Default settings. |
| Power Jack (to DC adapter) | (IEC PELV / NECR Class 2). To be connected to a class 2 power source only. |
| Operating Environment: | • 32 °F to 104 °F (0 °C to 40 °C), 0% to 90% humidity, non-condensing.<br>• Indoor use only. |
| ESD Protection: | ESD protection to withstand electrostatic discharge without damage or memory loss, in accordance with IEC 61000-4-2. |
| Communications: | • The NXB-CCG communicates to other Clear Connect devices through RF.<br>• All devices (except wired accessory dimmers/switches) must be located within 30 feet (9 m) of the NXB-CCG. |
| Auto Discovery: | Supports the ZeroConf auto discovery protocol. |

| NXB-CCG SPECIFICATIONS (CONT.) | |
|---|---|
| Dimensions (HWD): | • Without antenna: 1 1/8" x 2 5/8" x 4 7/16" (2.86 cm x 6.60 cm x 11.23 cm)<br>• With antenna: 6 1/2" x 2 5/8" x 4 7/16" (17.15 cm x 6.60 mm x 112.27 mm) |
| Weight: | 0.3 lbs (136.08 g) |
| Certifications: | • FCC FCC Title 47 Part 15 Subpart B and C<br>• IC<br>• cULus UL 60950-1 |
| Included Accessories: | • 5VDC Adapter (**WA-10J05FU**)<br>• CAT5 Suppression Ferrite |
| Other AMX Equipment: | • CCD3-OCRB-P-WH, 868 MHz Ceiling Mount Occupancy/Vacancy Sensor (**FG2606-44-WH**)<br>• PS-CCG 5 VDC, 3A Power Supply With 2.1mm Barrel Connector (**FG423-61**) |

## FCC/IC Information

This device complies with part 15 of the FCC Rules and Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) This device may not cause interference, and

(2) this device must accept any interference, including interference that may cause undesired operation. Modifications not expressly approved by Lutron Electronics Co., Inc. could void the user's authority to operate this equipment.

*Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:*

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Proper orientation of the antenna helps ensure maximum range and the best performance. The NXB-CCG should be positioned centrally to the devices being controlled, and as high and clear of obstructions as possible. The NXB-CCG utilizes an omni-directional antenna, which produces a circular pattern perpendicular to the antenna. For best performance, the antenna should be positioned vertically (tip up or down, not sideways). Try to keep the antenna at least 2 feet from metallic objects.

## Important Notes

*Codes: Install in accordance with all local and national electrical codes.*

*Cleaning: To clean, wipe with a clean damp cloth. DO NOT use any chemical cleaning solutions.*

*WARNING: Using a DC adapter not rated at the proper specifications could damage the NXB-CCG and possibly overheat the DC adapter. Use only the Lutron DC adapter listed above.*

*RF Device Placement: All dimmers, switches, keypads and shades / draperies must be located within 30 ft (9 m) of the NXB-CCG (FIG. 2).*
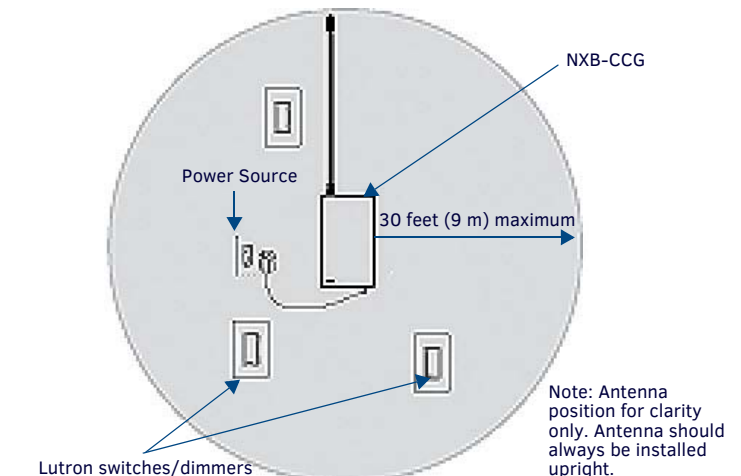


**FIG. 2** RF CONFIGURATION

## Installation

1. Find a suitable location for the NXB-CCG.
   *NOTE: Proper orientation of the antenna helps ensure maximum range and the best performance. The NXB-CCG should be positioned centrally to the devices being controlled, and as high and clear of obstructions as possible. For best performance, the antenna should be positioned vertically (tip up or down, not sideways). Try to keep the antenna at least 2 feet from metallic objects.*

2. Mount vertically or horizontally (FIG. 3), using two #6 (M3) screws. When mounting, allow 7 in (177.8 mm) clearance for the antenna and ensure convenient access to the power plug. In order to achieve proper RF performance, do not mount unit in a metal enclosure.

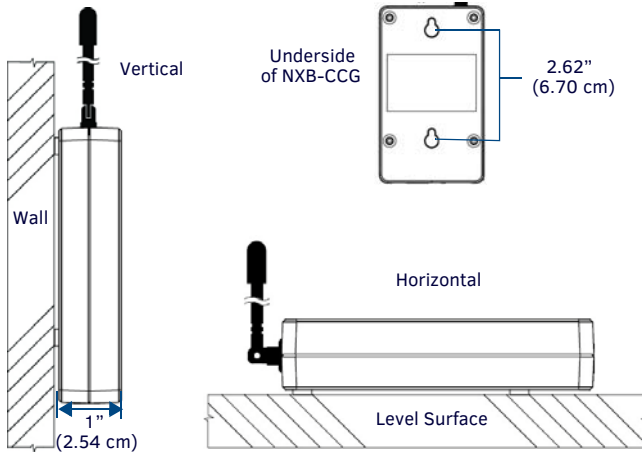3. Attach the DC adapter cord to the power jack on the NXB-CCG and insert the DC adapter plug into a receptacle.



**FIG. 3** INSTALLATION DIAGRAM

4. Use CAT5 Ethernet cable to connect the NXB-CCG to the chosen network's Master. Please refer to the Ethernet Pin Numbering diagram (FIG. 5).

5. Clip the included CAT5 Suppression Ferrite around the Ethernet cable, 2 to 3 inches (51-76 mm) from the NXB-CCG's Ethernet port (FIG. 4).
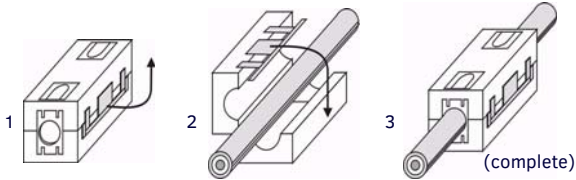


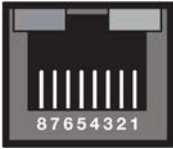**FIG. 4** INSTALLING THE CAT5 SUPPRESSION FERRITE

## Returning an NXB-CCG to Factory Default Settings

*Note: Returning an NXB-CCG to factory default settings will erase all programming from it and will require the device to be reprogrammed into the system. Devices connected to the NXB-CCG will need to be reset separately to their factory defaults before they can be reconnected.*

1. Press and hold the **Reset** button (FIG. 1) on the device for 20 seconds.

2. The Power/Status LED will start flashing slowly for approximately10 seconds, after which it will start rapidly flashing for approximately 20 seconds and then remain on.

3. The device has been returned to its factory default settings.

## Ethernet Pin Numbering

The numbering for pins in the Ethernet port is as follows:

| ETHERNET PIN NUMBERING | | |
|---|---|---|
| **Ethernet:** | **Pin #:** | |
| T+Ve | 1 | |
| T-Ve | 2 | |
| R+Ve | 3 | |
| R-Ve | 6 | |



## Web Interface Pages

The NXB-CCG feature a built-in zero-configuration networking client that allows you to determine the unit's IP address via NetLinx Studio v3.0 (or higher), or a similar zero-configuration client or browser. Entering the device's IP address in an enabled browser (Microsoft Internet Explorer, Mozilla Firefox and Apple Safari for PCs and Firefox and Safari for Macintoshes) allows the device to be accessed in that browser. Once contact is established, and a username and password entered, the Web interface pages may be reached and updated.

Zero-configuration (or Zero-Config) technology provides a general method to discover services on a local area network. In essence, it allows you to set up a network without any configuration.

### Accessing the Web Interface Pages

*NOTE: This product contains licensed software; see the SOFTWARE NOTICES AND LICENSES link on the web page interface login screen for software notices and license information.*

To access the Web interface pages:

1. From any computer or Netbook that has access to the LAN on which the NXB-CCG, open a web browser and type the IP address of the target NXB-CCG unit in the Address Bar.

2. In the *Login* page, enter your username and password. (The default username and password are *admin* and *1988*.)

### Configuring the NXB-CCG

Once logged in, the Web interface automatically opens to the *Settings* tab of the *Configure* page. From here, the administrator may access other tabs and pages to add or change Web and integration logins and passwords, change network or security settings, add devices to a network, or control the programming of buttons on an individual device.

### Adding Integration Logins

To add a new user login:

1. From the *Configure* page, select the *Integration Logins* tab.
2. Click the **New Integration Login** button.
3. Enter the new username and password and click **Create**.
   *NOTE: The user login must be alphanumeric, with no spaces or punctuation.*
4. The new username will appear in the *Integration Logins* tab.

### Changing Integration Passwords

To change a user's password:

1. From the *Configure* page, select the *Integration Logins* tab.
2. In the appropriate user entry, select **Change Password**.
3. Enter the new password and click **Change**.
4. The new password is now enabled.

### Removing Integration Logins

To remove a user login:

1. From the *Configure* page, select the *Integration Logins* tab.
2. In the appropriate user entry, select *Delete User*.
3. Confirm that you wish to remove this user by clicking **Yes**.

For more information on using the Web interface pages, please refer to the *NXB-CCG Operation Reference Guide*, available from **www.amx.com**.