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# AL-IME2-PIE Plug-In Expander Installation Instructions



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## OVERVIEW

The Trilogy Network™ **AL-IME2-PIE Plug-in Expander** greatly extends the coverage area of version 2 series Gateways. The **AL-IME2-PIE** is a "plug-in" version of the **AL-IME2-EXP Expander**; both models are functionally identical. Installation is simple, with the **AL-IME2-PIE** only requiring a connection to a standard 120VAC wall outlet.

**AL-IME2-PIE** Expanders are cost-effective, require no wiring, and feature a simplified 'Plug and Play' setup where the Networkx system *automatically* identifies all newly powered Expanders and quickly determines the best wireless signal pathways. Up to 7 Expanders can be added to one version 2 series Gateway.



at least one new version 2 Gateway must be up and running before an **AL-IME2-PIE Plug-In Expander** can be used.

**IMPORTANT:** **DL-Windows version 5.4.2** or later is required to support version 2 Gateways and Expanders. The **AL-IME2-PIE Plug-In Expander** is compatible with Alarm Lock and Continental Access products. Refer to the documentation supplied with your software for integration details.

## AL-IME2-PIE SPECIFICATIONS

### NETWORK RANGE

**Note:** Actual range varies with building construction.

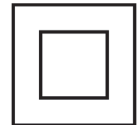
- Gateway/Expander to Locks: Clear field range 500'.
- Typical indoor range: Networkx 75-175'; ArchiTech Networkx: 50-125'.
- Gateway/Expander to Expander: Clear field range 500'. Typical indoor range, 75- 175'.

### AL RADIO LINK

- 902 - 928MHz
- 13.5mW typical RF power

### POWER

- Input Voltage: 120VAC @ 60Hz
- Peak Supply Current: 10mA
- Occupies one 120VAC outlet



### ENVIRONMENTAL

- Operating Temperature: -20° to 60°C (-4° to 140°F)
- Storage Temperature: -40° to 85°C (-40° to 185°F)

### PHYSICAL

- Enclosure Size: 4.3"H x 2.5"W x 0.875"D, (5"H with *Mounting Tab*)
- Weight: 0.35lbs.

### Why use AL-IME2-PIE Expanders?

- Less costly, Expanders allow large coverage areas without using additional Gateways
- Does not require network access / Ethernet cables
- Can be added to existing systems to improve signal strength in weak signal areas
- Allows for greater flexibility when positioning version 2 Gateways
- Allows large area signal coverage with a single network connection to the Gateway

**Note:** Expanders are available in two different designs: The **AL-IME2-PIE Plug-In Expander** and the **AL-IME2-EXP Expander** (identical in operation; see WI2156 for more information).

### Version 2

The **AL-IME2-PIE** "version 2" Expanders (notice the "2" in the model name) are the next generation of Networkx wireless devices. Because **AL-IME2-PIE** Expanders *only* work with version 2 Gateways, a version 2 Gateway must be installed and operational in your system for **AL-IME2-PIE** Expanders to function (**AL-IME2-PIE** Expanders cannot communicate with older "non-version 2" Gateways).

**Note:** Although the version 2 Gateways and **AL-IME2-PIE** Expanders CAN be mixed into an existing system that includes older "non-version 2" Gateways,

## EXPANDER LOCATION GUIDELINES

Once your version 2 Gateway location has been selected, the next step is to determine **where** to install Expanders. However, the following must be taken into consideration:

- Although wood and wallboard construction can have little effect upon signal strength, concrete or brick can reduce signal strength by up to 35%. Steel-reinforced concrete or metal lath and plaster can reduce signal strength as much as 90%!



**NOTICE – Local Regulations in Canada do not permit use of a Mounting Tab. In Canada, do not use the Mounting Tab to attach the unit to an outlet. Avis – Les réglementations locales au Canada ne permettent pas l'utilisation d'une patte de montage. Au Canada, il est interdit de raccorder l'appareil à une prise de courant au moyen d'une patte de montage.**

- Generally, depending on construction, the Expanders should be typically mounted within approximately 100 feet of the Gateway or another Expander
- Expanders should be typically located within approximately 75 feet from the intended wireless lock locations
  - Open areas will increase range while concrete building construction, walls, ceilings and narrow corridors will decrease range
  - ArchiTech series locks generally have shorter range to and from an Expander
- Any standard un-switched 120VAC outlet can be used. Be aware signal levels can be affected by outlet locations
  - (Optional) Use the **Mounting Tab** (see Fig. 1) to prevent unauthorized access to the **AL-IME2-PIE** by securing the unit to the wall outlet (replace the existing center outlet cover screw with the supplied screw)
- Installing in computer closets or server rooms can negatively impact range and performance

### Helpful Tips

- The **AL-NSM** Networkx Signal Meter and the **AL-NSG** Networkx Signal Generator can assist with identifying optimal Gateway locations relative to Expanders and locks. See WI2092 for complete information about how to properly use these devices.
- We recommend obtaining a floor plan and subsequently creating a layout of your intended system identifying all proposed installation locations, also noting building construction materials
- **AL-IME2-PIE**s are also handy for quickly determining a suitable location for **AL-IME2-EXP Expanders** (if required for your system). Simply plug in an **AL-IME2-PIE** in a convenient location and perform a Expander discovery. If the **AL-IME2-PIE** appears in your DL-Windows list of discovered Expanders, you can replace the plug-in **AL-IME2-PIE** with an **AL-IME2-EXP** (or leave the **AL-IME2-PIE** where it is).

**IMPORTANT:** Be sure to read the "**INSTALLATION STEPS**" section on this page **before** powering your Expanders.

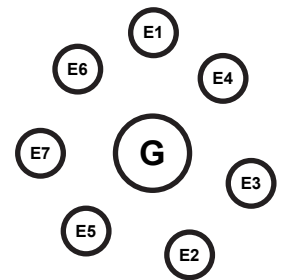
Follow these tips for each additional Expander added to the system; see below for Expander installation configurations.

## INSTALLATION CONFIGURATIONS

Gateways / Expanders will automatically determine the optimal routing pathways between one another, ensuring optimal signal levels. The following are NOT "required" configurations, but are simply examples of typical Expander configurations.

### Gateway centrally located:

When a single version 2 Gateway is located in the center, surrounded by up to 7 Expanders (maximum), this configuration covers a large area around a centrally located Gateway.



### Gateway located at one end of a row of Expanders:

Useful for covering very long distances. Connects several Expanders in series with a 100 foot maximum distance between the Gateway and the first (and between each subsequent) Expander. In this example, the signal is easily extended over 700 feet in one direction, and provides coverage for door locks located along this range:



The below example shows the Gateway centrally located within a line of Expanders (a typical corridor configuration).



**Note:** The labels "E1" through "E7" are used only for illustration purposes and do not necessarily reflect Expander "numbers" nor the manner in which the Expanders will self-configure. In addition, the examples above are just 3 possible scenarios; in theory, endless automatic (self-configuring) installation configurations are possible!

## INSTALLATION STEPS

### 1. Blue and White ID Cards

We recommend that when installing **any** model Gateway, a **blue-colored "Gateway ID Card"** (OI357) be completed, and when installing the **AL-IME2-PIE Plug-In Expander**, a **white-colored "Expander ID Card"** (OI388) be completed.

Gateway and Expander physical locations may easily be forgotten. These ID cards may prove to be very useful when replacing Gateways or Expanders, when using DL-Windows to select a particular Gateway or Expander to discover locks, or whenever an installed Gateway or Expander needs to be physically located.

### 2. Set "Expander Group" Value

On the inside surface of the Expander are two rotary "Expander Group" dials. When the **AL-IME2-PIE** is held in your hand in the orientation shown in Fig. 1, use these dials to set the "Expander Group" value ("00" through "99" are valid selections). All version 2 Gateways include an identical set of dials. *The dial value set on your Gateway MUST match the dial value set on your AL-IME2-PIE.*

**IMPORTANT:** Each Gateway in your system **MUST**

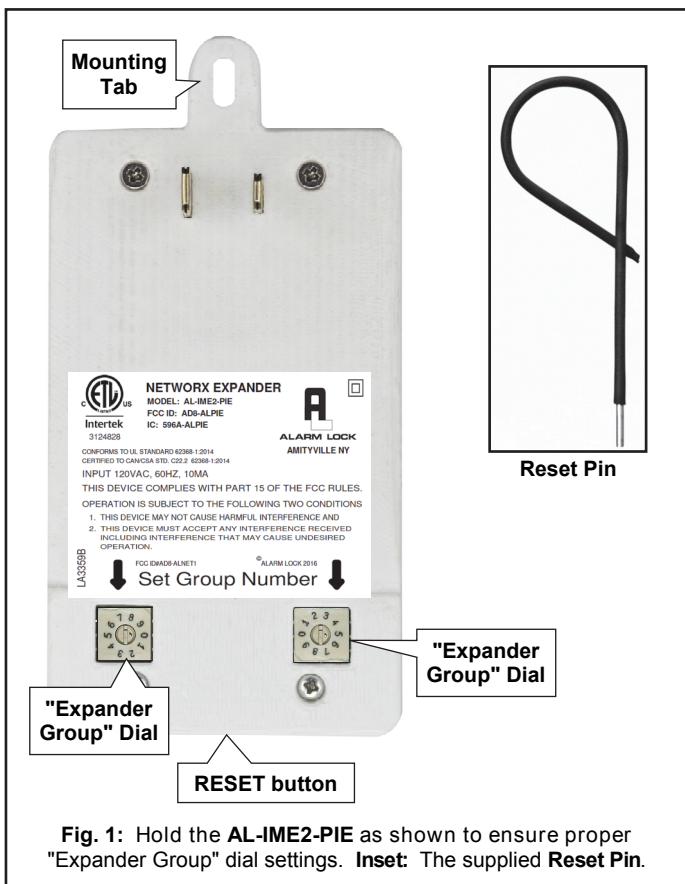


Fig. 1: Hold the **AL-IME2-PIE** as shown to ensure proper "Expander Group" dial settings. Inset: The supplied **Reset Pin**.

be set to a different "Expander Group" value (along with its associated Expanders). The "Expander Group" value determines which Expanders are associated with each Gateway, thus preventing Gateways from discovering unintended Expanders. **Note:** The small "selection arrow" on each dial must be pointing directly to the desired value. Hold the **AL-IME2-PIE** with the label "up" as shown in Fig. 1.

**Example:** Fig. 2 (below) displays the "Expander Group" value set to "50". Use a small flat-head screwdriver to turn the dials and make the selections.

### 3. Power the Expander

After setting the "Expander Group" values dials, simply plug the **AL-IME2-PIE** into a standard un-switched 120VAC wall outlet, then observe the LEDs (see step 4 below).

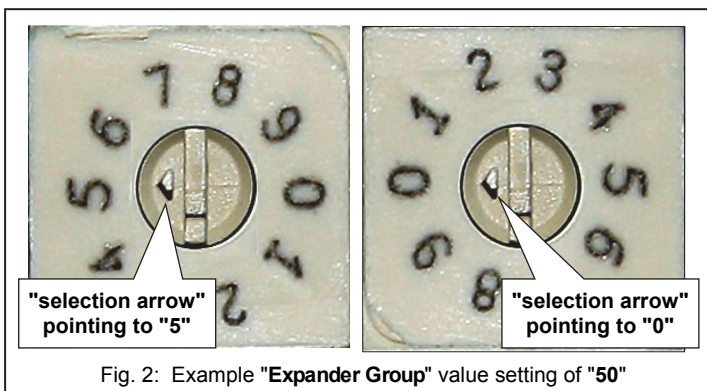


Fig. 2: Example "Expander Group" value setting of "50"

### 4. Observe the LEDs

Upon power up:

- **Red solid** (momentarily)...
- **Yellow blinks** counting out "Expander Group" setting (no blink = zero)...
- **Yellow solid + green rapid flicker**

Next, reset the Expander as follows:

### 5. Reset the Expander!

**IMPORTANT:** ALWAYS reset the Expander memory, even if the Expander is new "out of the box" and/or has never been used previously. The **RESET** button described below can be accessed through a small hole in the unit (location shown in Fig. 1). To depress the **RESET** button, simply insert supplied **Reset Pin** into the hole. Proceed as follows:

**WHILE THE UNIT IS POWERED AND PLUGGED INTO THE OUTLET:**

- Press and hold the **RESET** button...
- ...Continue holding until the red LED turns on solid...
- ...Release and verify the green LED flickers rapidly

This "resetting" of the **AL-IME2-PIE** Expander clears all memory and ensures that any previous data (such as factory test data) is cleared from the unit.

## EXPANDER LED INDICATIONS

<b>Yellow</b>	Upon Power up, displays "Expander Group" dial setting (in two sequences)
	Receiver On (i.e. normal operation)
<b>Red</b>	Flickering during communications
<b>(Expander Status)</b>	
<b>Green</b>	Not configured = Rapid blinking / flickering
	Idle / configured = Approximately 1 blink per second
	2 blinks repeated = Expander to lock communication error
	4 blinks repeated = Expander to Expander communication error

**Congratulations! You're finished!** Now go to the DL-WINDOWS™ for Networx™ V5 USER'S GUIDE (OI383) for instructions about discovering your Expanders from DL-Windows.

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