Honeywell

INNCOM DIRECT D-578 EDGE ROUTER

INSTALLATION INSTRUCTIONS

ABOUT THIS GUIDE

This Guide provides information about the Installation details of the INNCOM D-578 Edge Router to the system integrator, technicians, and end-users. All the electrical engineers and technicians working with the product must have basic training on HVAC Sensors, Smart sensors, and Room Controllers and their application.

GENERAL SAFETY INFORMATION

Follow the safety instructions provided in this manual while doing any operation such installation, mounting, or starting.

- The INNCOM D-578 Edge Router must be installed and mounted by authorized and trained personnel.
- In the case of any modification, except by Honeywell, the operation and safety warranties become void.
- Observe all applicable local standards and regulations.
- Use only Honeywell supplied or approved accessories.

CERTIFICATION AND REGULATION

Waste Electrical and Electronic Equipment (WEEE)

- At the end of the product life, dispose of the packaging and product in an appropriate recycling center.
- Do not dispose of the device with the usual domestic refuse.
- Do not burn the device.

FCC Part 15 compliant

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 caused by undesired operation.

Power Supply Guidelines and Requirements

INNCOM D-578 Router uses 12 VDC power from a UL Listed Class- 2 transformer or IEC 61558 listed transformer.

INTRODUCTION

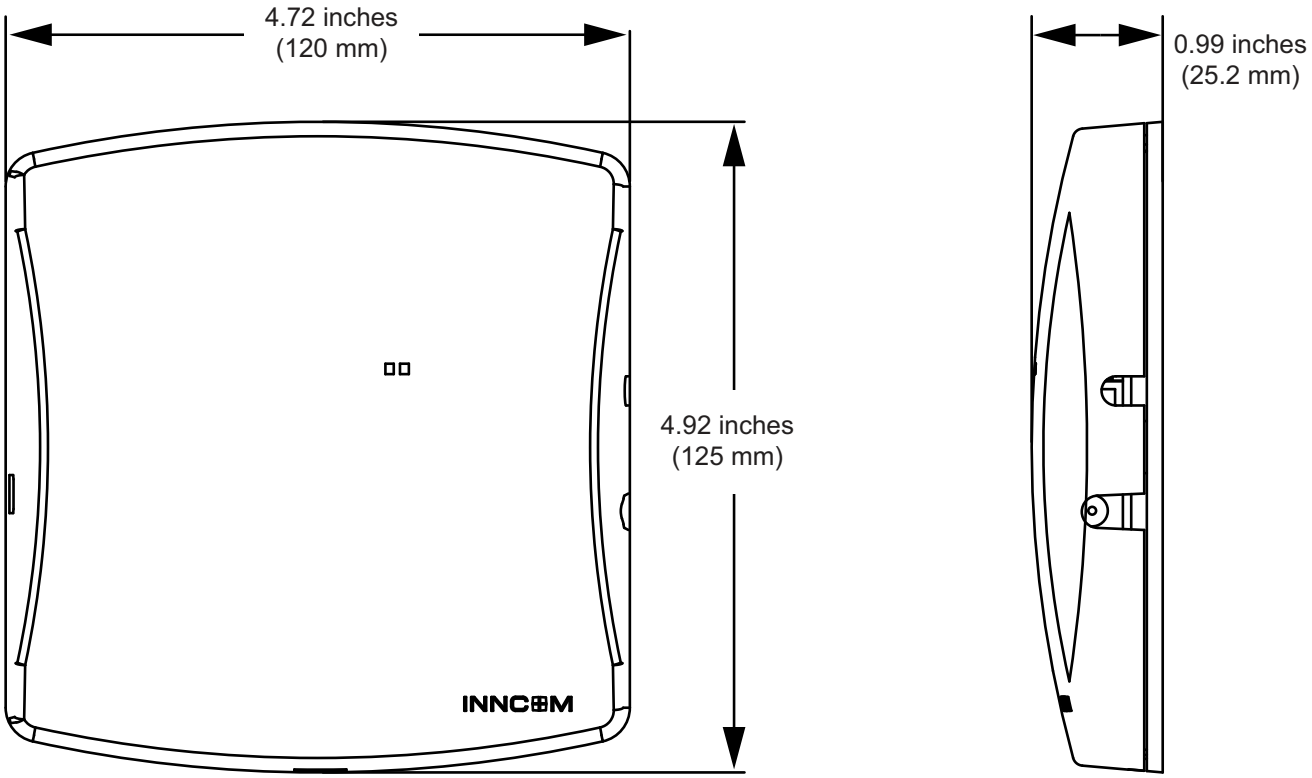
The D-578 acts as a router between the INNCOM RF Room Gateway device installed in each guestroom and the INNCOM Deep Mesh server. Control of which individual RF Room Gateway devices communicate through each D-578 is controlled by configuring the same PAN ID and RF Channel into the D-578 and RF Gateway devices. The expanded addressing facilitates transport reliability and multicasting. The Edge Router enhances security and offers RF-to-Ethernet protocol conversion, with the availability of a PoE power supply for Power over Ethernet applications.

Features

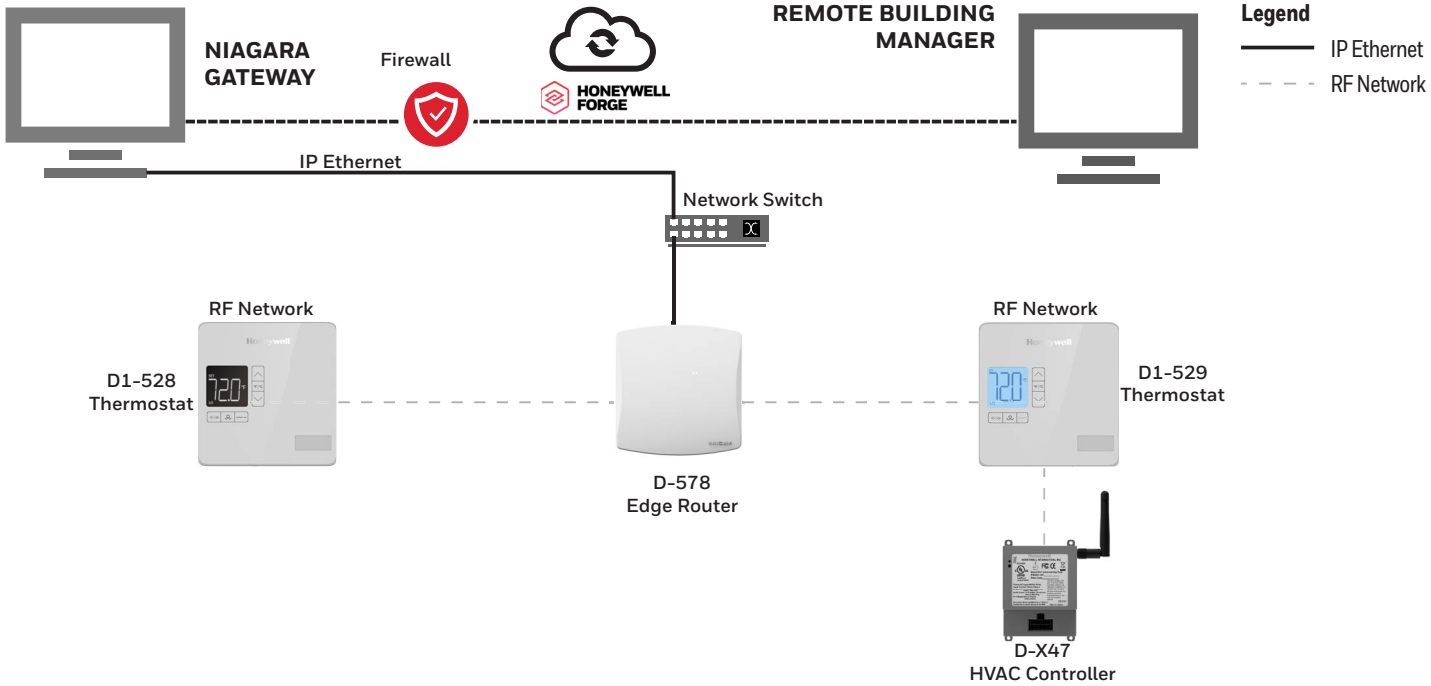
The D-578 Edge Router provides

- RF Wireless Communication.
- Compact physical dimension
- Integrated with the INNCOM Room Automation System over the Deep Mesh Network

Dimensions



System Architecture



Intended Audience

The information in this document is written primarily for Systems Integrators. To make the most of the information in this book, readers should have some training on working with INNCOM D-578 Edge Router.

SPECIFICATIONS

General

Parameter	Description
RF Data Rate	250 kbps
Indoor RF Range	100 ft
RF Transmit Power	50 mW (+17 dBm)
RF Receive Sensitivity	94.6 dBm
Frequency Band	2.4 Ghz
Frequency Channels	11-26
Protocol	802.15.4
Network Topology	Deep Mesh
802.15.4 ZigBee Frequency Channels	11-26. Channels 15, 20, 25 and 26 are preferred
Supported Network IP Protocols	UDP, ICMP, DHCP
Network Connection	Supports 10/100 Mbps
Encryption	AES-128

Electrical

Parameter	Description
Power Requirements	D578 can be powered with an external 12 VDC power supply using DC jack (J1). D578 is alternatively an IEEE 802.3af compliant powered device. The D578 is an IEEE class 2 device. Requires the 02-9499 PoE module connected to M1 of the D578 mainboard.
Supply Voltage	12 VDC
Current Consumption	200 mA peak, 100mA RMS

Environmental Specifications

Parameter	Description
Operating Temperature	32 °F to 104 °F (0 °C to 40 °C)
Storage Temperature	33 °F to 149 °F (1 °C to 65 °C)
Humidity	15-99 % RH noncondensing

Weight and Dimensions

Parameter	Description
Dimensions	4.72 inches x 4.92 inches x 0.99 inches 120 mm x 125 mm x 25.2 mm Wall Mounted
Mounting	Standard Double Gang Junction Box (4x4)
Shipping Weight	0.304 lbs (0.138 kg)

Standards and Approvals

FCC ID: GTC201104TXR (FCC Part 15 subpart B and C class B)	
IC ID: 1609A-201104TXR	
Prop65	
2011/65/EU	Hazardous substances (RoHS I + II),amended by (EU) 2015/863 (RoHS III)

INSTALLATION

Important Safety Information and Installation Precautions

Read the below instructions carefully for safety and installation.

Local codes and practices

Always install equipment in accordance with the National Electric Code and a in manner acceptable to the local authority having jurisdiction.

Electrostatic sensitivity

This product and its components may be susceptible to Electrostatic Discharge (ESD).

Use appropriate ESD grounding techniques while handling the product. When possible, always run the product by its non-electrical components.

High voltage safety test

Experienced electricians, at first contact, always assume that hazardous voltages may exist in any wiring system. A safety check using a known, reliable voltage measurement or detection device should be made immediately before starting work and when work resumes.

Lightning and high-voltage danger

Most electrical injuries involving low-voltage wiring result from sudden, unexpected high voltages on usually low-voltage wiring. Low-voltage wiring can carry hazardous high voltages under unsafe conditions. Never install or connect wiring or equipment during electrical storms. Improperly protected wiring can have a fatal lightning surge for many miles. All outdoor wiring must be equipped with adequately grounded and listed signal circuit protectors, which must comply with local, applicable codes. Never install wiring or equipment while standing in water.

Wiring and equipment separations

Install all the wiring and controllers to minimize the possibility of accidental contact with other potentially hazardous and disruptive power and lighting wiring. Never place 24 VAC or communications wiring near other bare power wires, lightning rods, antennas, transformers, or steam or hot water pipes. Never place the wire in any conduit, box, channel, duct, or other enclosure containing power or lighting circuits. Always provide adequate separation of communications and another electrical wiring according to code. Keep wiring and controllers at least six feet from large inductive loads (power distribution panels, lighting ballasts, motors, etc.). Failure to follow these guidelines can introduce electrical interference and cause the system to operate erratically.

Warning

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⚠ CAUTION

Disconnect the power supply before beginning installation to prevent electrical shock or equipment damage. All wiring must comply with local codes and ordinances.

Before Installation

1. Read instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check the ratings given in the instructions and on the product to make sure the product is suitable for your application.
3. D-578 Edge Router must be installed and mounted only by authorized and trained personnel.
4. It is recommended to keep the device at room temperature for at least 24 hours before applying power. This allows any condensation resulting from low shipping/storage temperatures to evaporate
5. After installation is complete, check product operation as provided in these instructions.

NOTE:

All wiring must agree with applicable codes, ordinances, and regulations as specified in installation wiring diagrams.

Restricting Access to Network

Prevent unauthorized access to the network that the Edge Router uses. With any system, preventing physical access to the network and equipment reduces the risk of unauthorized interference. When using open protocols care should be taken to ensure that the physical network is protected from unauthorized access.

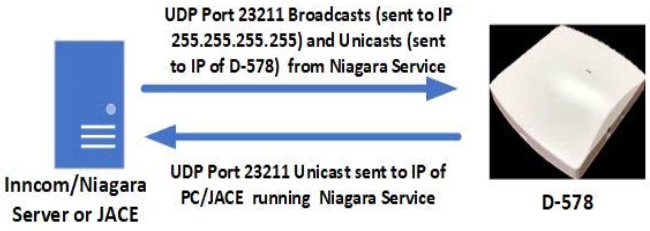
IT / Network Requirements

The D-578 routs data between the INNCOM “Room Gateway” device (D1-528 or D-X47) installed in each room and the Niagara service running on the INNCOM/Honeywell server PC (or Niagara JACE device in the future).

- By default at any INNCOM Direct installation, it is expected that the D-578 is connected to a PoE capable network switch and is powered by the PoE switch port. So the switch port intended for the D-578 should be a PoE port.
  The D-578 is an IEEE 802.3af compliant Class 2 PoE Powered Device (PD) with a current mode switching regulator.
  - Minimum power output required from the PoE Switch port powering the D-578 is 7.0 Watts
  - The Maximum power consumed by a PoE powered D-578 is 3.84-6.49 Watts.
- If a PoE switch port is not available, the D-578 can be powered from the provided 12VDC power supply connected to the J1 12VDC power jack on the D-578. The DC Plug of the power supply connecting to J1 must be a Type A: 5.5 mm OD, 2.5 mm ID center pin positive.

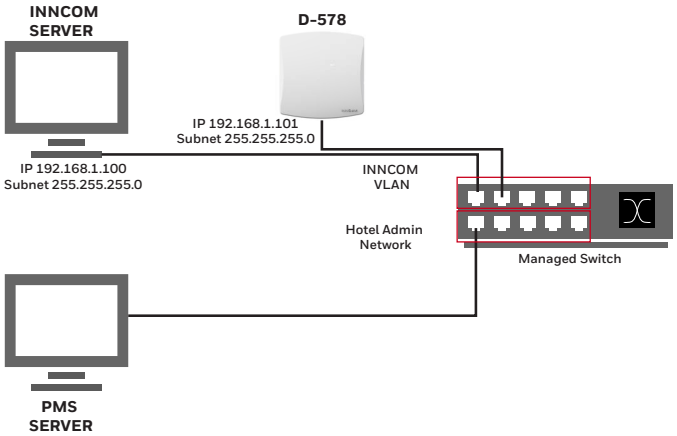
NOTE:
Do not connect the D-578 to a PoE switch port that is providing power and 12V DC to the D-578 J1 12VDC jack at the same time.

- The data packets send between the D-578 and the Niagara service are via UDP Port 23211. This port is fixed and cannot be changed. If there is a firewall between the INNCOM\Honeywell server PC / JACE and the network connection of the D-578, an exception must be made for UDP Port 23211.
- The D-578 MAC address is always 00:06:05:XX:XX:XX, where XX:XX:XX is unique for each D-578. The complete MAC address is on a label affixed to the D-578.
- By default, the D-578 expects to get its IP address and subnet mask from a DHCP server so there must be DHCP server on the network the D-578 uses. This is the base assumption and requirement for an INNCOM Direct installation. If required, INNCOM can provide an available freeware DHCP server. The D-578 can be assigned a static IP address, but that is outside of the scope for INNCOM Direct. If you must use a static IP address, contact INNCOM for details.
- The D-578 communicates at either 10 Mbps or 100 Mbps on its network connection. It will auto select.
- The D-578 has no mechanism, setting or default gateway configuration to tell it the IP address of where the Niagara service is running so it can connect to Niagara. Instead, a “beacon” mechanism is used. The Niagara service sends a UDP 23211 beacon broadcast (sent to IP 255.255.255.255) once/minute. When a newly connected / powered D-578 receives this beacon packet from Niagara, it pulls the “From” IP Address from the packet and assumes that is the IP address being used by the Niagara service and initiates a connection to that IP Address. Niagara now knows the IP address of the D-578 and any further packets sent to the D-578 are sent as unicast packets from the IP address of Niagara to the IP Address of the D-578. The D-578 now begins to send unicast packets from its IP address to the IP Address of Niagara.
  To allow the above process to occur, the following must be allowed on the network used by Niagara and the D-578.



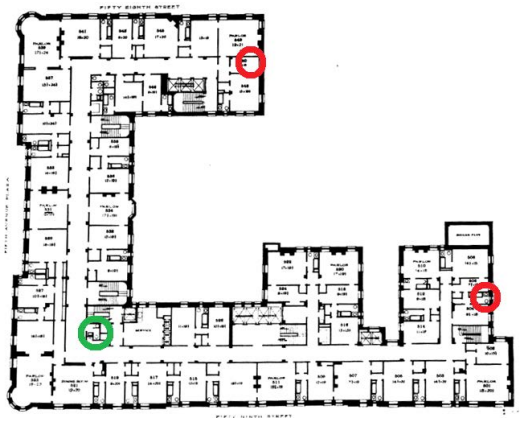
If the hotel uses 3rd party ISP (Internet Service Provider) to manage the hotel network and network switches/equipment, the following is recommended:

1. Create a VLAN that includes the Switch port INNCOM server/JACE connects to and the switch port the D-578 connects to.
2. The VLAN should offer DHCP for both the INNCOM server/JACE and the D-578 and assign them IP addresses within the same subnet.
3. The VLAN must allow network UDP 23211 broadcasts and uni-casts sent from the IP address of the INNCOM server/JACE to reach the D-578, and allow UDP 23211 uni-casts sent from the IP address of the D-578 to reach the INNCOM server/JACE.



D-578 Mounting Location

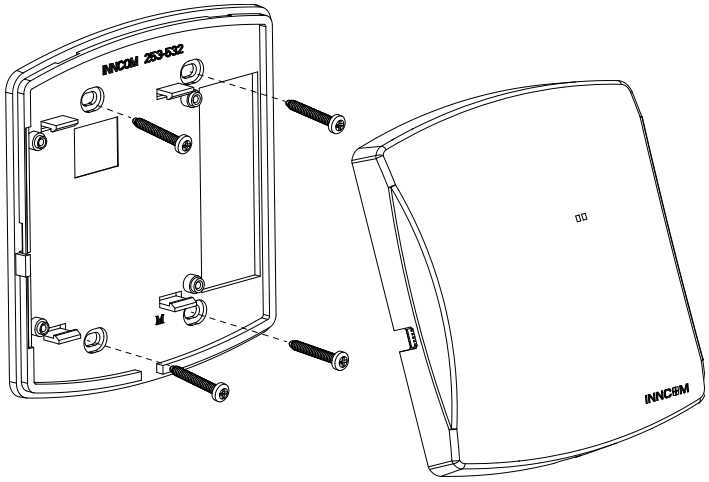
- You must consider where the D-578 is mounted in relation to metal objects and the location of installed D1-528/D-X47 devices that will communicate through the D-578. If mounting the D-578 to a metal wall box, be aware that this will shield RF signals to/from the D-578 radio, especially from any areas behind D-578 where the metal box is acting as a shield.
- Ideally the D-578 should be mounted in a central location equally vertically and horizontally surrounded by the D1-528/D-X47 room gateway devices installed in the rooms. For example if it is a 3 floor hotel, and there is an IT closet with an available network connection in the middle of the 2nd floor, that would be a good centrally located place to install the D-578.
  As another example, if there is an IT closet with an available network connection at the Green circle location, that would likely be a good central location to mount the D-578. Less-optimal locations are the red circled.



- Depending on the particular hotel, Hotel IT resources and available network connections, you may be forced to install the D-578 in sub-optimal location. If forced to do this, if possible, install and configure ALL of the D1-528/D-X47 devices in all of the rooms first, then install and configure the D-578.
  The D-578 and D1-528/D-X47's establish an RF Mesh network. RF packets sent from the D-578's radio hop between other installed D1-528/D-X47 radios until they reach the intended D1-528/D-X47, and RF packets sent from an installed D1-528/D-X47's radio hop between other installed D1-528/X47 radios until they reach the D-578.
  If very few D1-528/D-X47's are installed and the D-578 is not located in an optimum location to allow the mesh network to form, there can be poor or no communication between the D-578 and certain rooms. Therefore, install and configure all of the D1-528's or D1-529/D-X47's first so that there is a good mesh network, then install the D-578.

Mounting

The D-578 can be mounted to a 4" x 4" electrical box or directly to a wall or other surface using appropriate fasteners and the 4 mounting holes. Four 6 x 32 machine screws are provided with the D-578.



NOTE:
Do not mount the D-578 inside a metal box, panel or enclosure.

For optimal RF Signal transmission/reception, the D-578 should be mounted in a vertical or horizontal orientation.

Wiring Connections

The D-578 requires the network cable connection between the D-578 Ethernet port and the port assigned for the D-578 on the assigned hotel network switch.

If powering the D-578 from the PoE switch port then no other wiring connection is required. Simply connect the D-578 to the assigned power on the network switch with a network patch cable.

By default at any INNCOM Direct installation, it is expected that the D-578 is connected to a PoE capable network switch and is powered by the PoE switch port. So the switch port intended for the D-578 should be a PoE port.

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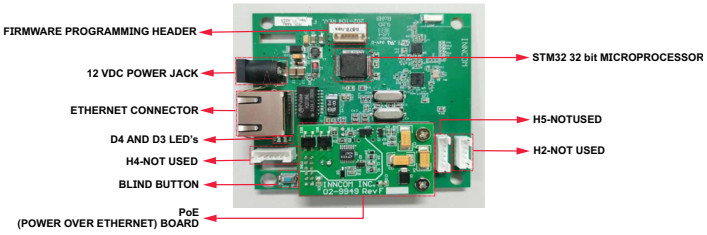
NOTE:
Do not connect the D-578 to a PoE switch port that is providing power and 12V DC to the D-578 J1 12VDC jack at the same time.

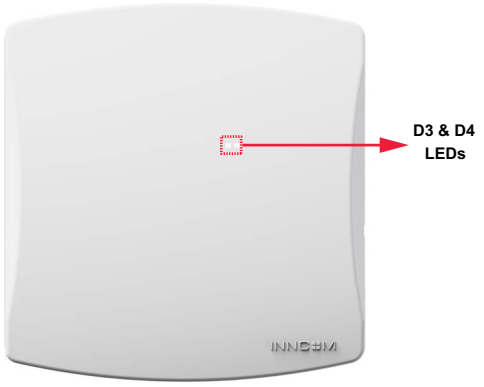
GETTING STARTED

D-578 Connectors, Leds and Buttons

D-578 LED indications

The D-578 comes with both a red D3 and amber D4 status indicator LED's . These LEDs are used in various combinations or independently to alert a user to the status of operation. The first image below is with the top cover of the D-578 removed. Plastic light pipes in the top cover allow the status of these LED's to be seen with the top cover installed as shown in the second image.





Power Cycle

On power cycle, the D-578 will rapidly alternate between flashing the red and amber LEDs for five seconds, then begin the blink pattern described below.

Prior to the D-578 connecting to Niagara

If the D-578 is powered but has not yet connected to Niagara, it will blink the D4 amber LED 4 times over 2 seconds, then remain off for 2 seconds then repeat.

Also, until the D-578 has obtained its IP address from the DHCP server, the Red D3 LED will remain solid ON. When the D-578 has been assigned its IP address from the DHCP server, the Red D3 LED will turn Off.

After connecting to Niagara

When the D-578 has received its IP address and has connected to the Niagara service running on the INNCOM\Honeywell server PC (or Honeywell JACE in the future) via UDP Port 23211, the amber D4 LED will begin a rapid, steady blink pattern.

D-578 placed into Property Key distribution mode

When you place the D-578 into property key distribution mode by pressing the blue button 6 times, the Red D3 LED will begin to rapidly blink.

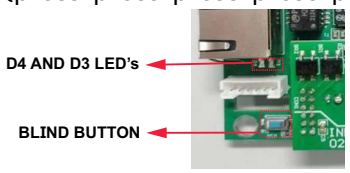
IMPORTANT:
While in service mode, link security is disabled. This should only be used once during the commissioning process. Any other use will leave the link vulnerable to cyber-attack.

D578 EDGE ROUTER CONFIGURATION

NOTE:
It is not required to install and configure the D-578 prior to installing and configuring the D1-528, D1-529 and D-X47 room devices. It is actually highly recommended to have all or most of the D1-528 and D-X47 room gateway devices already installed and configured prior to installing and configuring the D-578. The D1-528 and D-X47 radios form an RF mesh network that transports messages to and from the D-578 and D1-528 and D-X47 devices. With few D1-528 and D-X47 devices installed to form a robust RF mesh network , the D-578 may have difficulty communicating with the D1-528 and D-X47 room gateway devices.

1. With the D-578 powered and connected to the network, perform the initial configuration of the D-578 as outlined in 4.3.3 Edge Router Configuration in the INNCOM Direct Gateway Configuration Guide 31-00708.
   This step actually configures the D-578 and verifies it is communicating with Niagara. If you are looking at the D-578 during this step, you should see the Yellow D4 LED on the D-578 begin to rapidly blink indicating it has been configured and has connected to Niagara.
2. With all of the D1-528, D1-529 and D-X47 room devices installed and configured, deploy the unique Property Key to these devices from the D-578.

a. On the D-578, press the blue Bind button 6 times (press-press-press-press-press-press).



b. The D3 Red LED will start to rapidly blink indicating it is in key distribution mode.

c. The D-578 will begin to broadcast its unique property key. Any D1-528 or D-X47 that receives this broadcast will immediately adopt and start using the new key. The D-X47 will also send the key to its battery powered D1-529 partner.
Also, when these room devices receive the unique property key, they will establish a "contract" with the D-578 that is based on the D-578's unique network MAC address. This contract establishment will prevent these devices from accepting property keys from another D-578 edge router (either by accident or on-purpose) installed in an adjacent hotel that is also using INNCOM Direct. This is useful for the scenario where property keys are being deployed in a building (with its own D-578 edge router) which is next to another building already using its own property keys (and that has its own D-578 edge router).

d. The D-578 will remain in Key Distribution mode for 10 hours. You can at any time manually exit out of Key Distribution mode by again pressing the Blue Bind button 6 times (press-press-press-press-press-press). The D3 Red LED will stop blinking.

e. If you add any additional D1-528,D1-529, D-X47 devices in the future, you will again need to place the D-578 into Key Distribution mode, allow the new devices to receive the property key, then exit Key Distribution mode.

Why the Property Key is Required:

If there is a nearby hotel also using INNCOM's RF network and RF devices, there is a possibility that interference and crosstalk can occur between the INNCOM RF devices in both hotels. To prevent this, the radios in the D1-528,D1-529 and D-X47 devices are assigned a unique, automatically generated hotel specific property key. Any RF messages sent between the D1-528,D1-529, D-X47 devices and D-578 Edge Router in one hotel contain this unique property key and will be ignored/rejected in any other nearby INNCOM installations.

REPLACING A D-578 AND CONTRACT INVALIDATION

D1-528, D1-529 and D-X47 devices, once they have a contract established with one D-578, will not accept property keys coming from any other D-578. So, if you have to replace the D-578 with a new one it will not work right away. The contract between the D1-528, D1-529 and D-X47 devices needs to be invalidated first before they are able to accept new property keys from the new D-578 and establish a new contract.

There are two ways to invalidate the contract in a D1-528, D1-529 and D-X47 room device:

1. **Manual self-invalidation**: This will invalidate the contract only on the device from which this manual self-invalidation process is triggered.
2. **Invalidation by broadcast**: D1-528 or a D-X47 can be used to broadcast a periodic invalidation command. All others D1-528s,D1-529 and D-X47s, when receiving this command, will invalidate their contract. This invalidation command is a deep mesh packet so, the mesh should help for the propagation of this command.

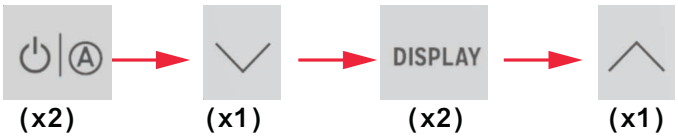
Steps to replace an existing D-578 that had unique property key with a new D-578:

1. Remove the previous D-578 and install the new D-578 and connect it to the PoE network switch and verify it powers up. You must then perform the steps outlined in section 4.3.3 Edge Router Configuration in the INNCOM Direct Gateway Configuration Guide 31-00708 to configure the new D-578.
This step actually configures the D-578 and verifies it is communicating with Niagara. If you are looking at Yellow D4 LED on the D-578 begin to rapidly blink indicating it has been configured and has connected to Niagara.
2. Place the new D-578 into key deployment mode by pressing its blue bind button 6 times (press-press-press-press-press-press). The D3 Red LED will start to rapidly blink indicating it is in key distribution mode.
3. Invalidate the existing contract stored in the D1-528s, D1-529 and D-X47 devices that had been previously established with the prior D-578 that got replaced.
It is recommended to use the Invalidation by broadcast method.
If at all possible, get access to the D1-528 or D1-529 in several rooms that are evenly distributed throughout the hotel. The more rooms that can be visited to activate the key invalidation will speed up the process.
    a. On the D1-528 or D1-529 in the rooms where you want to activate the key invalidation process, enter service parameter mode by pressing

and holding the F/C button on the D1-528 or D1-529 for 4 seconds. The display will show rid indicating service mode was entered.

b. Go to the rUn service parameter and press DISPLAY. P and 0 will appear.

c. Press the DOWN arrow button to change the displayed P value to 170, press DISPLAY, then press the following button sequence on the thermostat.

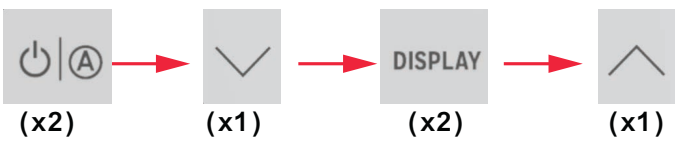


Fan button 2 times, Down arrow button 1 time, DISPLAY button 2 times and Up arrow button 1 time.
If you did the sequence correctly, the thermostat will Beep 1 time and change back to displaying rUN.
All of the D1-528 thermostats that were placed into key invalidation mode will begin broadcasting a key invalidation mode command toward all of the other installed D1-528's.
If using D1-529 battery thermostats with D-X47 partner, the D1-529 will tell the D-X47 to begin broadcasting a key invalidation mode command toward all of the installed D-X47's.
The D1-528 or D-X47 will automatically stop broadcasting the key invalidation commands after 10 hours.
You can manually stop broadcasting the key invalidation commands by repeating step 3 again, but use value 171 in step 3.c instead of 170.

4. Eventually, all D1-528,D1-529,D-X47 devices should go online using the new property key EXCEPT the devices in the rooms where you initiated the key invalidation. This is because those devices were broadcasting the key invalidation commands to other rooms but NOT invalidating the old property key stored in them. So you must re-visit the rooms where you initiated the key invalidation process and do the following steps:

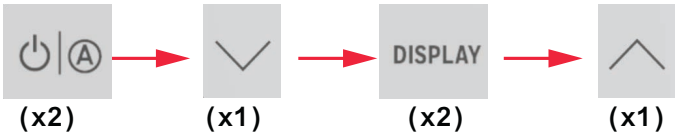
   a. Enter service mode on the D1-528 or D1-529 and go the rUn parameter if not already there and press DISPLAY. P and 0 will appear.

   b. Set the displayed P value to 171, press DISPLAY, then press the following button sequence on the thermostat to stop the broadcasting of the key invalidation:



The thermostat should beep 1 time and change back to displaying rUn. The D1-528 will immediately stop broadcasting key invalidation command, and the D1-529 battery thermostat will tell the D-X47 partner to stop broadcasting the key invalidation command:

c. Now you must invalidate the key in those same D1-528 or D-X47's so that they adopt and start using the new key being broadcast from the new D-578 edge router.
With rUn menu displayed on the D1-528 or D1-529, press DISPLAY. P 0 will be displayed. Set the displayed value to 140, press DISPLAY, then press the following button sequence:



The thermostat should beep 1 time and change back to displaying rUn.
As soon as the D1-528 thermostats that were previously broadcasting the key invalidation command receive the new key from the D-578, they will start using the new key and begin communicating with the D-578.
As soon as the D-X47's that were previously broadcasting the key invalidation command receive the new key from the D-578, they will start using the new key and begin communicating with the D-578 and send a command to the D1-529 partner to start using the new key.

To review, a summary of the rUn menu key invalidation values is:

rUn menu option	Task Executed
170	Start broadcast of invalidation command
171	Stop broadcast of invalidation command
140	Perform self-invalidation of command

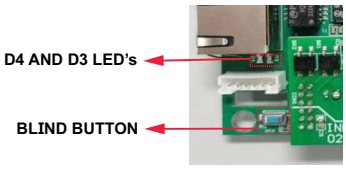
Updating the D-578 Firmware

Refer to Section 5 INNCOM Direct OTA Firmware Upgrade of the INNCOM Direct Gateway Configuration Guide - 31-00708.

Factory Reset

If required or directed to Factory Reset (Boot) the D-578, perform the following steps:

1. Get access to the D-578 and remove the top enclosure cover.
2. Find the Blue Bind/Reset button located on the lower left corner to the right of the Network jack.
3. Press the button 2 times (press-press), then press and hold the button. The amber D4 LED will turn ON solid. Continue to hold the button until the amber D4 LED turns off then release the button. It takes pressing the button for ~ 20 seconds, but just keep the button pressed until the D4 LED turns OFF.



⚠ WARNING

Factory ReBooting the D-578 erases any previous configurations AND makes the D-578 shift to using a new security key. Therefore, if you ReBoot the D-578, you must re-do the security key distribution process starting at step 3 of the Configuration /Commissioning section where you must visit the D-578 and press its Blue bind switch 6 times to make it start to broadcast the new Security key.

All installed D1-528 or D1-529/D-X47's initially will stop communicating through the D1-578 and with Honeywell Remote Building Manager (RBM), so all the rooms will go offline in RBM. But as the new security key being broadcasted by the D-578 reaches the installed D1-528 or D1-529/D-X47's, they will start using the new key and start to come back online in RBM.

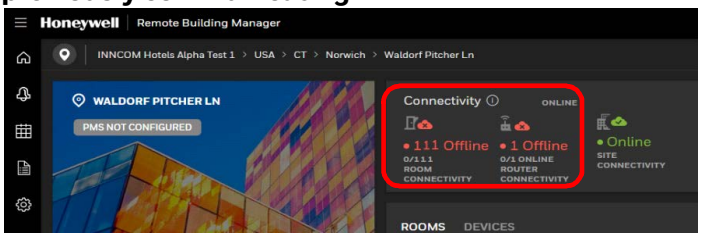
You DO NOT have to perform the rUn 170/140 key invalidation steps covered in the " Replacing a D-578 and Contract Invalidation" section. This is only required if you replaced the existing D-578 with a new one.

MAINTENANCE

In general, no maintenance is required for the D-578. It has no moving parts or no fan or fan filter to be cleaned. The only maintenance required is to replace the D-578 if it gets damaged or fails.

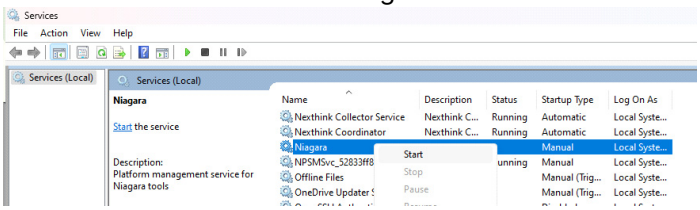
TROUBLESHOOTING

The D-578 and all rooms indicate Offline in Niagara RBM (Remote Building Manager). The Site indicates Online and the D-578 was previously indicating Online and communicating and rooms were previously communicating

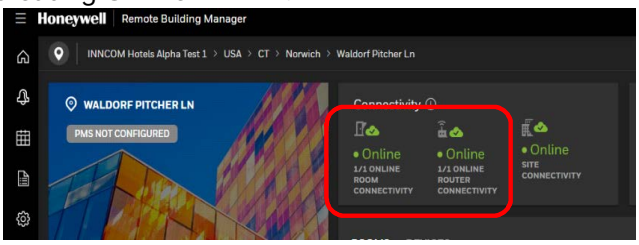


1. Verify the Niagara Service is running on the INNCOM server PC (initial INNCOM Direct installations) or on the Niagara JACE hardware (future versions of INNCOM Direct) by opening the Windows Services manager.
   Open the Windows Services manager:
   a. Right-click the Windows start button
   b. Select Run to open the Run window
   c. Type services.msc in the Open field, then click the OK button to open the Windows Services screen.

Find "Niagara" in the list of services and look at its status in the Status column. If it indicates Stopped or Paused. Right click on the Niagara item and click Start from the menu to start the Niagara service.

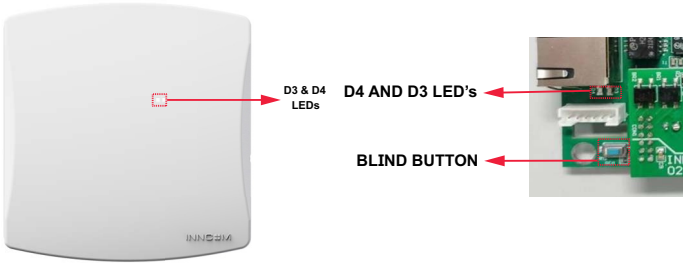


If you had to start Niagara service, wait a few minutes then see if the Edge Router and rooms change to indicating Online in RBM.



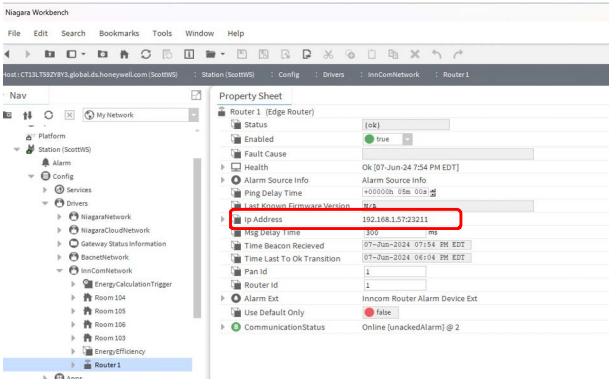
2. Verify the D-578 is connected to its assigned network switch port and is powered.
   Go to the location of the D-578 and verify it is powered and connected to the required network switch port. By default at any Inncom Direct installation, the D-578 is supposed to be powered from a PoE capable switch. If the D-578 is getting power from the PoE switch, the amber D4 LED should either be rapidly blinking indicating it has connected to Niagara, or blinking 4 times every 2 seconds if it

has not yet connected to Niagara.



If the yellow D4 LED blinking 4 times every 2 seconds, the D-578 has power but is NOT connected to the Niagara service. Check the following:

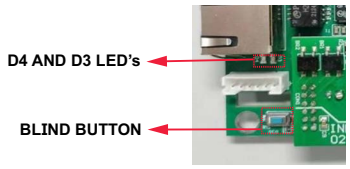
- By default, the D-578 is configured for DHCP to automatically obtain its IP address from the hotels DHCP server. Is there a DHCP server enabled on the network being used or did something happen to it?
- Can you Ping the D-578's IP address with a DOS Ping command. You can obtain what is supposed to be the D-578's IP address from Niagara Workbench from Station > Config > InncomNetwork > Edge Router Name (Router 1 in this example), and open the properties sheet to view the details. It is 193.168.1.57 in the below example. Contact Inncom customer service if you are not sure how to check this.



The site is Online in RBM and the D-578 is Online, but no rooms are communicating

Was the D-578 factory rebooted by pressing the Blue Bind button 2 times followed by pressing and holding the button for 20 seconds?

- If you were directed to factory re-boot the D-578 by INNCOM customer service, when the D-578 starts up it will be using its default factory Global security key.
- All of the installed D1-528 / D-X47's will still be using the property specific security key that was assigned to them from the previous D-578 so none will communicate through the new D-578. Therefore, you must go to the existing D-578, remove the cover and place it into key deployment mode by pressing the blue Bind button 6 times (press-press-press-press-press-press). The D3 Red LED will being to rapidly blink indicating it is in key deployment mode.
- The D-578 will begin to broadcast the new security key. As the D1-528's receive the new key, they will immediately start to use it and should start to communicate with the D-578. If D-X47/D1-529's are installed, the D-X47 will immediately begin to use the new security key and start communicating with the D-578 and also transfer the new security key to its D1-E529 battery thermostat partner.
- You should begin to see the rooms come back online in RBM. It may take several minutes or hours for all rooms to get back online.



- The D-578 will remain in key deployment mode for 10 hours then turn off key deployment mode automatically. The D3 Red LED will stop blinking. Or, you can go to the D-578 and manually exit it out of key deployment mode by pressing the blue Bind button 6 times (press-press-press-press-press-press). The D3 Red LED will stop blinking.

Was the existing D-578 replaced with a new D-578?

If so, refer to the "Replacing a D-578 and Contract Invalidation" section of this document for the required steps. When you replace the existing D-578 that had already distributed the hotel security key and D-578's Contract (which is based on the D-578's network MAC address) to all of the installed D1-528's or D1-529/D-X47's, you must go through the process described in the "Replacing a D-578 and Contract Invalidation" section to invalidate the old D-578's contract being used by all of the D1-528's or D1-529/D-X47's.

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