

INNCOM DIRECT D-578 EDGE ROUTER

Honeywell's INNCOM Direct is an energy management system tailored to provide an all-in-one control and management for a hotel's guestroom and common area HVAC systems.

Out of the box, INNCOM Direct D578 Edge Router is an essential part of Honeywell's online HVAC solution designed to reduce energy usage in guestroom and common area, enabling hoteliers to reach sustainability goals faster. Additionally, INNCOM Direct provides the capability for portfolio management to optimize room and equipment performance to increase guest satisfaction and decrease operational costs.

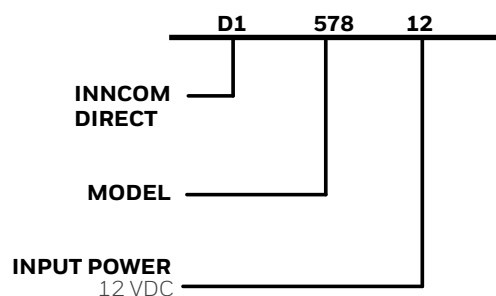
The INNCOM Deep Mesh Network (DMN) is a reliable, redundant, secure wireless network for hotel properties, which offers easier installation, lower costs, and greater scalability than other such hospitality networks. Because DMN infrastructure is embedded in INNCOM thermostats, it provides a wireless mesh network that is self-forming and highly cost effective. This eliminates the need for multiple radios and densely populated networks of costly auxiliary routers and PAN coordinators that only support a limited number of rooms. A typical INNCOM DMN network for a limited service property needs just one edge router for up to 200 rooms. Compared to traditional networks, the highly efficient DMN architecture reduces costs for both installation and maintenance.

Unlike other Property Network Systems, which require extensive installation, cabling, and electrical power, the INNCOM DMN requires minimal installation effort since the network infrastructure is embedded in the thermostat. This mesh network also eliminates or greatly reduces the cabling and electrical power needed to install other systems.

FEATURES AND HIGHLIGHTS

- All-in-one system – both hardware and software
- Property wide – both guestrooms and common areas
- Occupancy and Scheduled Energy Savings
- No system engineering or commissioning experience needed.

PART NUMBERS



ORDERING PART NUMBERS

D-578 PART NUMBERS

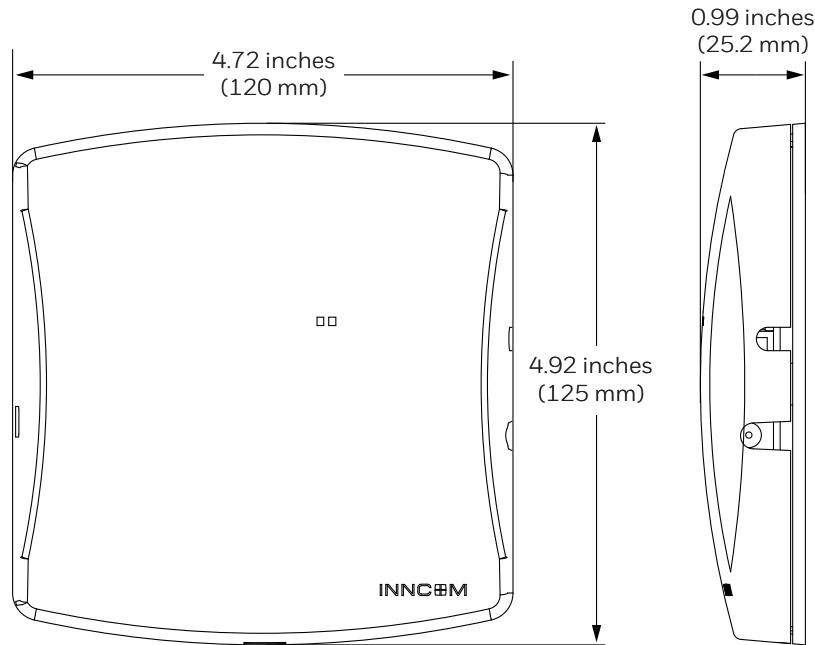
| PART NUMBER | DESCRIPTION |
|-------------|--|
| D1-578-12 | D-578 Edge Router for INNControl Lite using the surface mount housing. Contains POE power module and optional 12 VDC power supply. |

ACCESSORIES PARTS

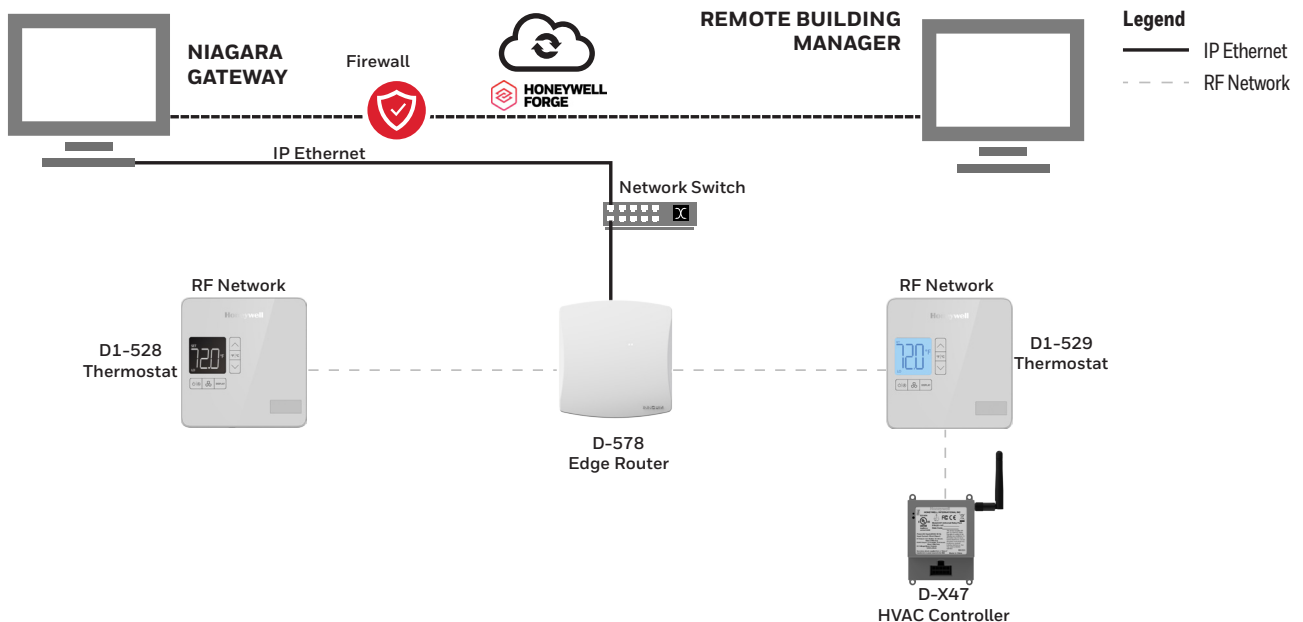
| PART NUMBER | DESCRIPTION |
|-------------|---|
| 04-8047.7B | 7' black CAT5E patch cable |
| 204-005 | 100-240 VA, 12 VDC 2 A power supply |
| 262-301 | US Style AC cable |
| 41-1139 | 4 Piece Screw #6-32 3/4 inches PHILIPS PAN HEAD Zn-PLATED |
| 62-9702 | CAT 5 UTP AWG24*4 PAIRS PVC JACKET COLOR: BLACK 8P8C 30UL=2438 ± 2 mm |
| 241-203 | 4 piece #6-32 3/4 Philips Pan Head |

Note: 204-007 is 204-005 + 262-301

DIMENSIONS



SYSTEM OVERVIEW



DEEP MESH NETWORK OVERVIEW

| |
|--|
| ZigBee (IEEE 802.15.4) based, designed to work with ZigBee Pro, ZigBee 2006, and 6LoWPAN. |
| Supports INNCOM's integrated room automation system message bus. Facilitates interoperability between RF, IR and wired room devices. |
| Multi-path packet routing for enhanced transport reliability. |
| Four AES 128 encryption channels (VLAN) for data security. |
| 102 bytes of data payload, including mesh, encryption and authentication. |
| Low cost network infrastructure is embedded in the thermostat and other room devices. |
| Every powered node contains a 4 kb mailbox memory usable as a relay-buffer for battery operated devices. |
| Intrusion detection and warning on an attempted relay attack. |
| IP addressable devices. Edge router delivers IP packets directly between hosts and devices. |
| Long life for battery operated devices. |
| Patent pending solutions for enhanced battery life of RF motion detectors. |
| Enforcement of authentication certificates at edge router. |
| Supports room control protocol allowing multi-vendor integration. |
| RF network qualification through packet accounting, data path capturing and background noise tracking. |
| Edge router options: RF-to-Ethernet (PoE option), RF-to-USB, RF-to-Set Top Box for Television control. |
| IPv6 edge router supports flat connectivity between devices and third party applications such as tablets, allowing for an IPv6 ready environment for future expansion. |
| Real-time data transmission. |

PRODUCT SPECIFICATIONS

| HARDWARE | |
|------------------------------------|---|
| PARAMETER | SPECIFICATION |
| 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 |

| 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) |

| ELECTRICAL | |
|---------------------|---|
| PARAMETER | SPECIFICATION |
| 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, 100 mA RMS |

| ENVIRONMENTAL SPECIFICATIONS | |
|------------------------------|---------------------------------|
| PARAMETER | SPECIFICATION |
| 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 | SPECIFICATION |
| 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) |

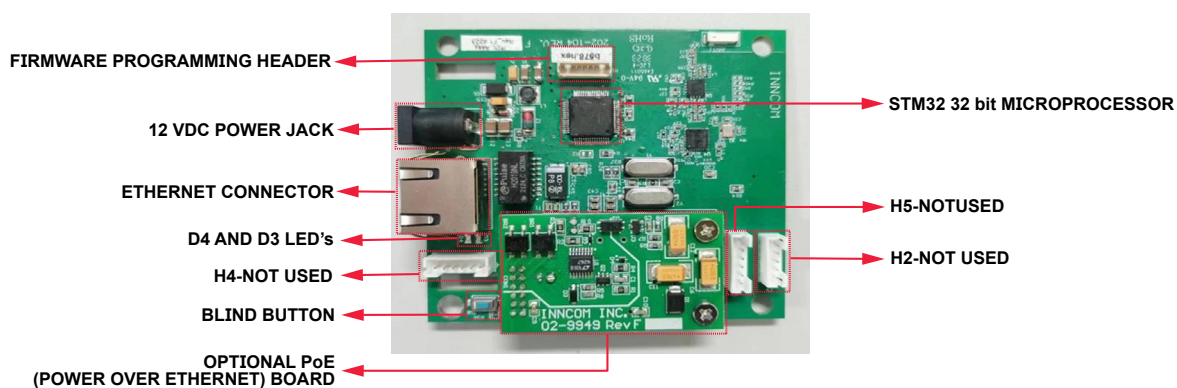
BLINK PATTERNS OF D3 AND D4 LED'S AND ETHERNET JACK LED'S

| ETHERNET JACK LED KEY | |
|--------------------------|---------------------------|
| POSITION/COLOR/STATE | MEANING |
| Left-Yellow LED OFF | 10 Mbps connection |
| Left-Yellow LED ON | 100 Mbps connection |
| Right-Green LED Blinking | Network connection active |

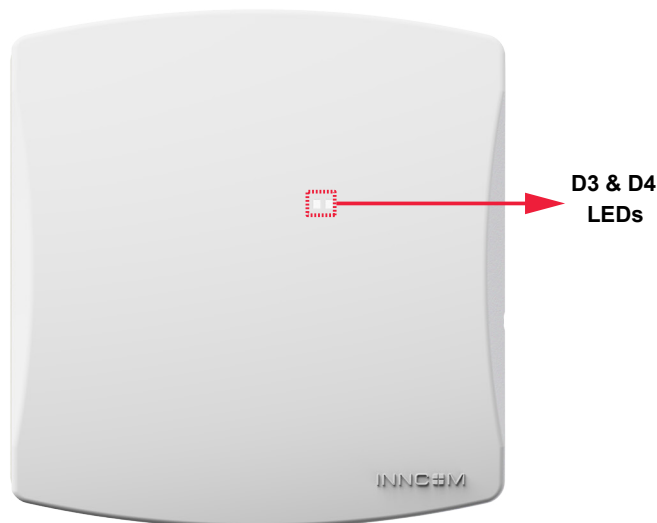
D3 AND D4 LED KEY FOR D-578

| POSITION/COLOR/STATE | D-578 |
|---|--|
| D3 Red , D4 Yellow alternately blink for 5 seconds | Power was just applied to the D-578. |
| D3 Red randomly blinks , D4 Yellow Rapid steady blink (5 blinks / second) | Yellow D4 rapid blink indicates the D-578 has connected to Niagara service (Inncom Direct hotel) or TermDMS. Red D3 LED blinks anytime a connected Room Gateway sends data. |
| D3 Red and D4 Yellow are OFF and never blinking | The D-578 is not powered , not loaded with software or is damaged. Verify the D-578 is powered via 12 VDC via 12 V power socket or via PoE network switch. |
| D3 Red OFF, D4 Yellow Blinks 4 times every 2 seconds | The D-578 is powered but has not yet connected to Niagara service (Inncom Direct hotel) or TermDMS. |
| D3 Red OFF D4 Yellow ON solid | The D-578 is in Ready to Teach mode. For the encrypted D-578, you must first place it into Ready to Teach mode by pressing the blue S1 button before sending its configuration from Niagara EasyOnBoard service (Inncom Direct hotel), DM_Workbench or EngINN. |

D-578 CONNECTORS, LEDS AND BUTTONS



D-578 LEDS



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