

nHUB

Installation Instructions



Installation Considerations

The Novation Wireless Access Control System lets you access your security network, using a wireless connection, from virtually anywhere within its operating range. Keep in mind, however, that the number, thickness and location of walls, ceilings, or other objects that the wireless signals must pass through, may limit the range.

Typical ranges vary depending on the types of materials and background RF (radio frequency) noise in your home or business. The key to maximizing wireless range is to follow these basic guidelines:

1. Keep the number of walls and ceilings between the wireless devices to a minimum - each wall or ceiling can reduce your range.
2. Be aware of the direct line between network devices. A wall that is 1.5 feet thick, at a 45-degree angle appears to be almost 3 feet thick. Position devices so that the signal will travel straight through a wall or ceiling (instead of at an angle) for better reception.
3. Building materials can impede the wireless signal – a solid metal door or aluminum studs may have a negative effect on range. Try to position wireless devices and computers with wireless adapters so that the signal passes through drywall or open doorways and not other materials.
4. Keep your nHUB at least 3-6 feet (1-2 meters) away from electrical devices or appliances that generate RF noise.
5. Keep the nHUB a minimum of 10 feet away from the wireless devices..

Wireless Access Hub (nHUB)

The Wireless Access Hub (nHUB) is the “brains” of the system. The nHUB uses an RS-232 serial port to communicate with the computer. The wireless access point also sends and receives data and commands that it gets from the Security Center software to the wireless devices.

A single nHUB:

- ◆ Communicates with up to 64 wireless locksets
- ◆ Communicates with (nLOCK) Locksets within a maximum radius of 300 feet, and a typical radius of 250 feet
- ◆ Communicates with (nPORT) Portals within a maximum radius of 300 feet, and a typical radius of 250 feet
- ◆ Stores a maximum of 10,000 cardholder records which are distributed to the designated devices
- ◆ Stores the last 20,000 transactions received from a device (the oldest transactions are overwritten when storage is full)

Technical Specifications

Standards: IEEE 802.11 – (900 MHz Spread Spectrum)

Security: Frequency hopping, AES 128 Bit encrypted

Frequency: 902.2 MHz min to 927.8 MHz max

Input Voltage: 5 Volts DC (Supplied)

Temperature: 32° F to 120° F (-30° C to 50° C)

Humidity: 10% ~ 90% (non-condensing)

Certifications: FCC Part 15

Weight: 3 lbs

Dimensions: 6.25”h x 9.5”w x 2.75d (in inches)

Mounting the nHUB

Mount the nHUB within 25 feet of the system computer. The nHUB is connected to any RS-232 serial communications port on the system computer.

Connecting the nHUB:

1. Connect one end of the RS-232 cable to an unused COM port of the computer and the other end to J3 of the nHUB.
2. Plug the AC adapter into a 120 volt and connect the opposite end to J1, being careful for polarity. Incorrectly wiring, or applying the wrong voltage, will damage the board. ***Confirm that you are using a 5Volt.***
3. Screw the antenna onto the top of the enclosure.
4. Document the RFID Serial Number for software programming. This is the sticker on the board that is below the switch block.

The nHUB is now ready to receive data from the computer and remote devices. No radio adjustments are available or required.

The following LED's are available for servicing/system status;

- ◆ Power: The green LED is on when 5V power is present.
- ◆ RF RxD: The red LED blinks when the nHub receives a signal from a remote device.
- ◆ RF TxD; The red LED blinks when the nHUB transmits a signal to a remote device.
- ◆ Processor: The green LED (D8) flashes every two seconds to indicate normal operation.
- ◆ D7, D9, D10; Red LEDs are used at the factory and will remain off during normal operation.

WIRING CONNECTIONS

Power (J1)

Pin 1: +5V (Note: Has the white stripe on the power supply wire)
 Pin 2: Ground

Communications (J3)

Pin 1: “White” Transmit Data / to DE9 Pin 3
 Pin 2: “Black” Ground / to DE9 Pin 5
 Pin 3: “Red” Receive Data to DE9 Pin 2

Tamper Switch (J5)

Pin 1: Common
 Pin 2: Normally Closed

Jumpers

J1 – Pins 2 & 3 J3 – Not Used
 J2 – Pins 2 & 3 J4 – Not Used
 J6 – Pins 1 & 2 J5 – Not Used

Switch Block (SW1) – Not Used

