

# NTC-201

## QUICK START GUIDE



4G LTE Cat 1 Bis  
Industrial IoT Router

LANTRONIX

# NTC-201

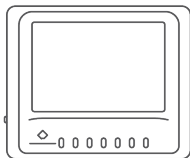
## 4G LTE Cat 1 Bis Industrial IoT Router

### Welcome

This quick start guide is designed to get you up and running quickly with your new Lantronix NTC-201 router. More advanced set up instructions can be found in the NTC-201 User Guide available at

<https://www.lantronix.com/products/ntc-201-series/>.

### What's in the box



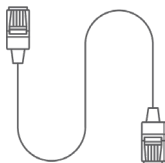
1 x Lantronix  
NTC-201 router



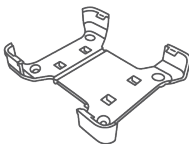
1 x Box insert



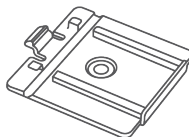
1 x Cellular antenna



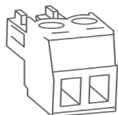
1 x 1 m Ethernet  
cable 8P8C



1 x DIN rail mounting bracket



1 x Horizontal DIN rail  
mounting adapter

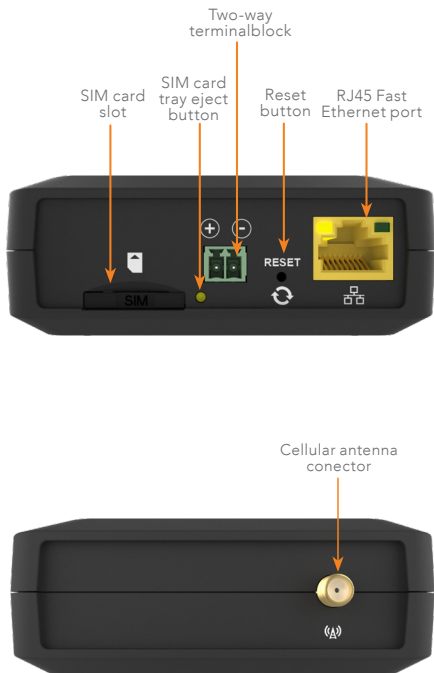


1 x Two-way terminal block  
connector

# NTC-201

## 4G LTE Cat 1 Industrial IoT Router

### Device overview



# NTC-201

## 4G LTE Cat 1 Industrial IoT Router

| ITEM                       | DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cellular antenna connector | SMA female connector for cellular antenna                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Reset button               | <p>Press and hold for less than 5 seconds to reboot to normal mode. The LEDs are green and extinguish in sequence to indicate that the router will reboot normally if the button is released during this period.</p> <p>Press and hold for 5 to 15 seconds to reboot to recovery mode. The LEDs are amber and extinguish in sequence to indicate that the router will reboot to recovery mode if the button is released during this period.</p> <p>Press and hold for 15 to 20 seconds to reset the router to factory default settings. The LEDs are red and extinguish in sequence to indicate that the router will reset to factory default settings if the button is released during this period.</p> |
| SIM card tray slot         | Insert the SIM card here.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| SIM card tray eject button | Push to eject the SIM card tray                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Two-way terminal block     | Connect the power supply here. Terminate power from a DC power supply on the supplied terminal block connector and then insert the connector into the terminal block socket on the router. Refer to the diagram and table under step 5 of the installing your device section for correct wiring of the terminal block. Operates in the 8-40 V DC range.                                                                                                                                                                                                                                                                                                                                                  |
| RJ45 Ethernet port         | Connect one or several devices via a network switch here.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## Getting started

Depending on your chosen setup, you may need certain components to configure your device correctly, such as:

- An external power supply unit for the NTC-201 router (not included).
- A flathead screwdriver for terminating power input wires.
- A laptop or PC for advanced configuration.
- Additional fasteners and screwdrivers for specific wall or rail mounting.

## Overview of LED indicators

| LED ICON                                                                            | NAME             | COLOUR                                                                              | STATE                 | DESCRIPTION                     |
|-------------------------------------------------------------------------------------|------------------|-------------------------------------------------------------------------------------|-----------------------|---------------------------------|
|    | Power            |    | Off                   | Power off                       |
|                                                                                     |                  |    | Blinking <sup>1</sup> | Powering up                     |
|                                                                                     |                  |    | On                    | Power on                        |
|    | SIM              |    | Off                   | No SIM detected                 |
|                                                                                     |                  |    | Blinking              | SIM error                       |
|                                                                                     |                  |    | On                    | SIM installed and working       |
|    | 4G Network       |    | Off                   | No 4G network connection        |
|                                                                                     |                  |    | Blinking              | Connecting to 4G network        |
|                                                                                     |                  |   | On                    | Connected to 4G network         |
|   | Signal strength  |  | Off                   | No signal                       |
|                                                                                     |                  |  | One Lit               | Poor signal                     |
|                                                                                     |                  |  | Two Lit               | Fair signal                     |
|                                                                                     |                  |  | Three Lit             | Good signal                     |
|  | Custom Indicator | Customizable                                                                        |                       | Programmable LED for custom use |

<sup>1</sup> The term “blinking” means that the LED may pulse, with the intervals that the LED is on and off not being equal.

## Installing your device

### Step 1: Insert the SIM card

Before inserting the SIM card, examine it for signs of damage or deformation that could prevent it being safely inserted or allowing it to become stuck in the unit. Examine the gold contact point of the SIM for signs of wear or damage that may prevent it from working correctly.

Press the SIM Eject button to eject the SIM card tray. Place the SIM card in the tray and then insert the loaded tray into the SIM card slot with the gold side facing up. The SIM tray should slide easily into the slot, do not force the loaded SIM tray into the slot.

### Step 2: Attach the antenna

The router is shipped with a cellular antenna. Screw the antenna onto the antenna connector by turning it in a clockwise direction. Please refer to the Device overview section for the antenna socket layout.



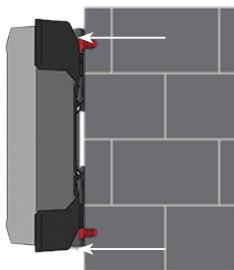
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### 4G LTE Cat 1 Industrial IoT Router

## Step 3: Mount the router

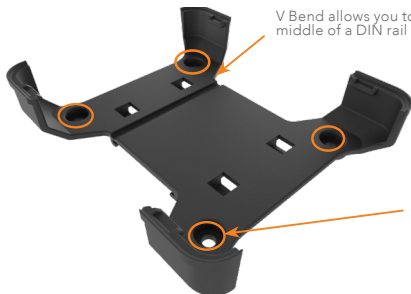
Mount your router in a suitable location using the options listed below.

### 1. WALL MOUNT VIA DIN RAIL BRACKET



Use a minimum of 2 screws (5mm diameter) through the holes on either side of the device.

### DIN RAIL MOUNTING BRACKET



V Bend allows you to snap the DIN bracket onto the middle of a DIN rail rather than sliding it onto the end.

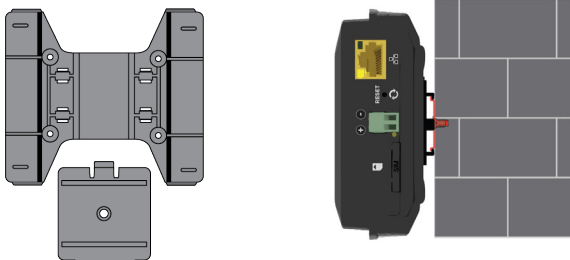
4 x mounting holes allow you to secure the DIN bracket to a wall, using a minimum of 2 screws (3.5mm diameter).

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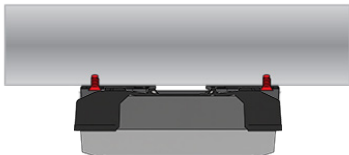
### 4G LTE Cat 1 Industrial IoT Router

#### 2. HORIZONTAL DIN RAIL MOUNTING ADAPTER

Used in conjunction with the DIN rail mounting bracket, this adapter lets you mount the router in a horizontal orientation. With the DIN rail mounting bracket attached to the router, slide the adapter on to the bracket as shown in the image below. You can then mount the device horizontally on a DIN rail. Optionally, you may place a screw (max. 4.5mm diameter) through the centre hole of the adapter so that it doesn't move along the DIN rail.



#### 3. CEILING MOUNT VIA DIN RAIL BRACKET

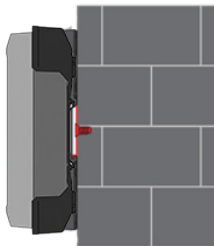




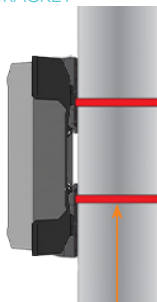
## NTC-201

### 4G LTE Cat 1 Industrial IoT Router

#### 4. DIN RAIL MOUNT



#### 5. POLE MOUNT USING DIN RAIL BRACKET



Use cable ties  
(max. 5mm width)  
through holes in the  
mounting bracket

#### 6. DESK MOUNT



When selecting a location to mount the router, keep in mind that it features a high performance cellular antenna designed to provide optimum signal strength in a wide range of environments. If you find the signal strength is weak, try moving the router to a different place, mounting it differently or changing the orientation of the antenna.

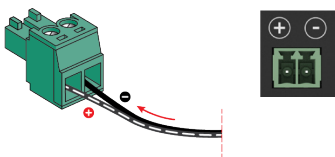
The signal strength LEDs update within a few seconds with a rolling average signal strength reading. When selecting a location for the router, please allow up to 20 seconds for the signal strength LEDs to update before repositioning.

## Step 4: Connect the power and Ethernet cables

Connect power to your router using one of the following options.

### DC POWER VIA SEPARATELY PURCHASED DC POWER SUPPLY

If you have purchased an optional DC power supply, first remove the terminal block connector from the socket. The terminal block connector uses rising cage clamps to secure the wires and ships with the cages lowered and ready for wire insertion. Inspect the cage clamps and use a flathead screwdriver to lower the cage clamps if they have moved during transportation. Insert the wires into the terminal block connector as shown below noting the polarity of the wires and then use a flathead screwdriver to raise the cage clamp to secure the wires. Insert the wired terminal block connector into the terminal block socket of the router and then connect the adapter to a wall socket.



### DC POWER VIA FIELD TERMINATED POWER SOURCE

If an existing 8-40 V DC power supply is available, you can insert the wires into the supplied terminal block connector to power your router. Use a flathead screwdriver to tighten the terminal block connector screws and secure the power wires, making sure the polarity of the wires is correctly matched as shown above. You should avoid using DC cables greater than 2 metres in length.

The green power LED on the router lights up when the router is powered on. Attach the supplied Ethernet cable to the LAN Ethernet port on your router and the other end to your computer.

| TERMINAL | DESCRIPTION              |
|----------|--------------------------|
| +        | Positive wire for power. |
| -        | Ground wire.             |

## Step 5: Access the router is web interface

In your web browser's address bar, enter <https://192.168.1.1/>, the web user interface is displayed. There are two system management accounts (root and admin) with different management capabilities.

### INITIALISATION

The first time the device is booted (or booted after it is factory reset), the device enters Configuration mode. In Configuration mode, the router runs a setup wizard which must be completed before it will boot into Live mode. This is a security feature which enables you to set strong passwords for root user, admin user, and Telnet/SSH access or restore a previous configuration from a file.

To complete the setup:

1. Click the **Next** button on the first dialogue box.
2. Enter the factory default password which is printed on the device label then click the **Next** button.

Welcome to your new Lantronix router. The router is now in configuration mode and can be either configured with secure passwords or restored to a previous configuration before it is operational.

Next

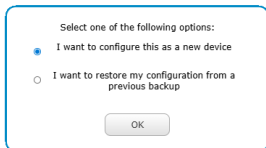
3. Select whether to configure the router as a new device or to restore a previous configuration backup.

To begin using your device, please enter the factory default password. The factory default password is printed on the device label

Next

### Configure as a new device

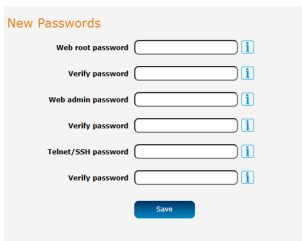
If you want to define a new, more secure password:



A dialog box with a blue border. At the top, it says "Select one of the following options:". Below this are two radio button options. The first option, "I want to configure this as a new device", is selected with a blue dot. The second option is "I want to restore my configuration from a previous backup". At the bottom center is a grey button labeled "OK".

- Select "I want to configure this as a new device" then click the OK button.
- In the **New Passwords** section, enter a strong password in each field.  
You may configure the same password for all three accounts, but it must meet the security criteria set out below:
  - The password must be a minimum of eight characters and no more than 128 characters in length.
  - The password must contain at least one upper case, one lower case character and one number.
  - The password must contain at least one special character, such as: ` ~ ! @ # \$ % ^ & \* ( ) - \_ = + [ { ] } \ | ; : ' " , < > / ?

Additionally, the password must satisfy an algorithm which analyses the characters as you type them, searching for commonly used patterns, passwords, names and surnames according to US census data, popular English words from Wikipedia and US television and movies and other common patterns such as dates, repeated characters (aaa), sequences (abcd), keyboard patterns (qwertyuiop) and substitution of numbers for letters.



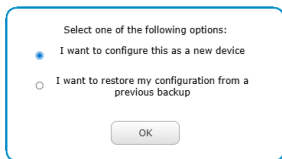
A form titled "New Passwords" in orange text. It contains six rows of password fields. The first three rows are for "Web root password", "Verify password", and "Web admin password". The next three rows are for "Verify password", "Telnet/SSH password", and "Verify password". Each field has a blue information icon to its right. At the bottom right is a blue "Save" button.

- c. When you have entered passwords for all password fields, click **Save** button. If the passwords meet the security criteria, they are saved and the success message displays.
- d. Click the  icon, the login page displays.
- e. To login, in the **Username** field select the user account you want to use to login, in the **Password** field enter the password for the selected user account, and click **Log in**.

## Restore configuration from a previous backup file

To use a configuration that you previously defined and saved in a backup file:

- a. Select **I want to restore my configuration from a previous backup** then click the **OK** button.



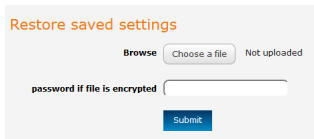
Select one of the following options:

☒ I want to configure this as a new device

☐ I want to restore my configuration from a previous backup

OK

- b. Click **Choose a file** button and locate the backup file on your computer. If the backup file is encrypted, enter the password, then click **Submit** button.



Restore saved settings

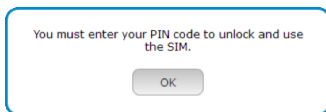
Browse  Not uploaded

password if file is encrypted

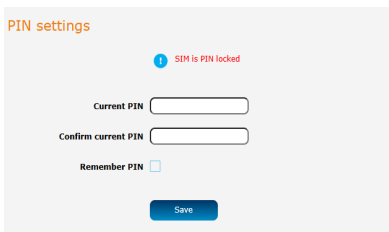
- c. The router restores the previous configuration and then reboots. When it has finished rebooting, log in using the password you previously configured.

## Step 6: Unlock the SIM card

If the inserted SIM card is PIN locked, a pop-up window is displayed informing you that you must unlock the SIM before use.



Click **OK** button. The SIM Security page is displayed.

The "PIN settings" page has a light gray background. At the top left, it says "PIN settings" in orange. In the center, there is a red warning icon (an exclamation mark inside a circle) followed by the text "SIM is PIN locked". Below this, there are two input fields: "Current PIN" and "Confirm current PIN". Under the "Confirm current PIN" field, there is a "Remember PIN" label followed by an unchecked checkbox. At the bottom center, there is a blue "Save" button.

In the **Current PIN** field, enter the SIM PIN and then enter it again in the **Confirm current PIN** field. If you do not want to enter the PIN code each time the SIM is inserted, select the **Remember PIN** option.

Click **Save** button. After a moment, the router displays **Success!** The SIM unlock was successful.

### Step 7: Connect to the Internet

If the SIM Status is OK, the router automatically attempts to connect to the Internet by detecting the correct APN and connection details.

If automatic configuration is unsuccessful, you must manually enter the connection details.

To manually configure the connection profile:

1. From the top menu bar, select the **Networking** option.
2. Next to Profile1, click the  button.  
The Data connection profile settings screen is displayed.
3. Ensure that the **Automatic APN selection** toggle key is set to the **OFF** position.

**Automatic APN selection**

**ON OFF**

4. In the **APN** field, enter the APN name that your carrier requires for mobile broadband connection. If required, enter the username and password in the **Username** and **Password** fields.  
Click **Save** button.

The connection profile is now configured.

### VERIFYING THE CONNECTION STATUS

Click on the **Status** menu item from the top menu bar. The Status page is displayed. The mobile broadband connection is established successfully if the Status field in the WWAN connection status section displays **Connected**.

^ WWAN connection status
Show data usage

|                                 |                                                   |                                      |
|---------------------------------|---------------------------------------------------|--------------------------------------|
| <b>Profile name</b><br>Profile1 | <b>WWAN IP</b><br>IPv4: 192.168.2.30<br>IPv6: N/A | <b>APN</b><br>Blank                  |
| <b>Status</b><br>Connected      | <b>DNS server</b><br>172.22.1.2<br>8.8.8.8        | <b>Connection uptime</b><br>00:06:05 |
| <b>Default profile</b><br>Yes   |                                                   |                                      |

# Safety & Product Care

## Electrical safety

### ACCESSORIES

Only use approved accessories.

Do not connect with incompatible products or accessories.



## Distraction

### OPERATING MACHINERY

Full attention must be given to operating the machinery in order to reduce the risk of an accident.

## Product handling

You alone are responsible for how you use your device and any consequences of its use.

You must always switch off your device wherever the use of a mobile phone is prohibited. Do not use the device without the clip-on covers attached, and do not remove or change the covers while using the device. Use of your device is subject to safety measures designed to protect users and their environment.

Always treat your device and its accessories with care and keep it in a clean and dust-free place.

- Do not expose your device or its accessories to open flames or lit tobacco products.
- Do not expose your device or its accessories to liquid, moisture or high humidity.
- Do not drop, throw or try to bend your device or its accessories.
- Do not use harsh chemicals, cleaning solvents, or aerosols to clean the device or its accessories.
- Do not paint your device or its accessories.
- Do not attempt to disassemble your device or its accessories, only authorised personnel must do so.
- Do not expose your device or its accessories to extreme temperatures. Ensure that the device is installed in an area where the temperature is within the supported operating temperature range of -30°C to +70°C.
- Do not use your device in an enclosed environment or where heat dissipation is poor. Prolonged use in such space may cause excessive heat and raise ambient temperature, which will lead to automatic shutdown of



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your device or the disconnection of the mobile network connection for your safety. To use your device normally again after such shutdown, cool it in a well-ventilated place before turning it on.

- Please check local regulations for disposal of electronic products.
- Do not operate the device where ventilation is restricted
- Installation and configuration should be performed by trained personnel only.
- Do not use or install this product near water to avoid fire or shock hazard. Avoid exposing the equipment to rain or damp areas.
- Arrange power and Ethernet cables in a manner such that they are not likely to be stepped on or have items placed on them.
- Ensure that the voltage and rated current of the power source match the requirements of the device. Do not connect the device to an inappropriate power source.

#### SMALL CHILDREN

Do not leave your device and its accessories within the reach of small children or allow them to play with it.

They could hurt themselves or others, or could accidentally damage the device.

Your device contains small parts with sharp edges that may cause an injury or which could become detached and create a choking hazard.

#### DEMAGNETISATION

To avoid the risk of demagnetisation, do not allow electronic devices or magnetic media close to your device for a long time.

Avoid other magnetic sources as these may cause the internal magnetometer or other sensors to malfunction and provide incorrect data.

#### ELECTROSTATIC DISCHARGE (ESD)

Do not touch the SIM card's metal connectors.

#### EMERGENCY & OTHER SITUATIONS REQUIRING CONTINUOUS CONNECTIVITY

This device, like any wireless device, operates using radio signals, which cannot guarantee connection in all conditions. Therefore, you must never rely solely on any wireless device for emergency communications or otherwise use the device in situations where the interruption of data connectivity could lead to death, personal injury, property damage, data loss, or other loss.

#### DEVICE HEATING

Your device may become warm during normal use.

## Faulty and damaged products

Do not attempt to disassemble the device or its accessory.

Only qualified personnel should service or repair the device or its accessory.

If your device or its accessory has been submerged in water or other liquid, punctured, or subjected to a severe fall, do not use it until you have taken it to be checked at an authorised service centre

## Interference

Care must be taken when using the device in close proximity to personal medical devices, such as pacemakers and hearing aids.

### PACEMAKERS

Pacemaker manufacturers recommend that a minimum separation of 15cm be maintained between a device and a pacemaker to avoid potential interference with the pacemaker.

### HEARING AIDS

People with hearing aids or other cochlear implants may experience interfering noises when using wireless devices or when one is nearby.

The level of interference will depend on the type of hearing device and the distance from the interference source, increasing the separation between them may reduce the interference. You may also consult your hearing aid manufacturer to discuss alternatives.

### MEDICAL DEVICES

Please consult your doctor and the device manufacturer to determine if operation of your device may interfere with the operation of your medical device.

### HOSPITALS

Switch off your wireless device when requested to do so in hospitals, clinics or health care facilities. These requests are designed to prevent possible interference with sensitive medical equipment.

### AIRCRAFT

Switch off your wireless device whenever you are instructed to do so by airport or airline staff.

Consult the airline staff about the use of wireless devices on board the aircraft, if your device offers a 'flight mode' this must be enabled prior to boarding an aircraft.

## Explosive environments

### PETROL STATIONS AND EXPLOSIVE ATMOSPHERES

In locations with potentially explosive atmospheres, obey all posted signs to turn off wireless devices such as your device or other radio equipment.

Areas with potentially explosive atmospheres include fuelling areas, below decks on boats, fuel or chemical transfer or storage facilities, areas where the air contains chemicals or particles, such as grain, dust, or metal powders.

### BLASTING CAPS AND AREAS

Turn off your device or wireless device when in a blasting area or in areas posted **turn off two-way radios or electronic devices** to avoid interfering with blasting operations.

## Trademark Notice

This product may reference NetComm. On December 26th, 2024, Lantronix, Inc. acquired the Industrial Internet of Things (IIoT) portfolio from NetComm Pty Ltd and is authorized to use the NetComm trademark in association with this product.

US

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