

Quick Start **Guide**

NTC-6000 Series - M2M WiFi Router



Quick Start Guide

Thank you for choosing an industrial HSPA Cellular Router of **NetComm's NTC-6000 CallDirect Series**.

This guide covers the models **NTC-6908**, **NTC-6909** and **NTC-6900** (collectively referred to in this document as the NTC-6000 series). This guide will provide a series of step by step instructions to ensure the configuration of your Cellular Router goes as smoothly as possible.

Firstly please check that you have received all the items in your package.

No.	Description
1	NTC-6000 Series HSPA Cellular Router
1	Crossover Ethernet Cable
1	Power Supply Unit
2	Antennas
1	Quick Start Guide

If any of these items are missing, please contact NetComm Technical Support.

Overview of LEDs



LED	Display	Description
Power (red)	Solid ON	The red Power LED indicates correct power is applied to the DC power input jack.
Tx/Rx (amber)	Solid ON	The amber LED will light upon data being sent to or received from the cellular network.
DCD (green)	Solid ON	The green Carrier Detect LED illuminates to indicate a Data connection.
Service Type (green)	The green LED will illuminate when cellular network coverage is detected.	
	Solid ON	3G: indicates UMTS/HSPA available coverage
	Blinking	EDGE: indicates EDGE available coverage
	Off	2G: indicates GSM/GPRS available coverage only.
RSSI (green)	This green LED indicates the Received Signal Strength. There are three possible states that the RSSI LED can operate in, based upon signal level.	
	Solid ON	HIGH - Indicates the RSSI level is -77dBm (high), or greater
	Flashing	MEDIUM - Indicates the RSSI level is between -91dBm and -78dBm, (medium)
	Off	LOW - Indicates the RSSI level is less than -92dBm (low)

Overview of the Cellular Router Interfaces

**Receive Diversity
Antenna Socket**
SMA Female

5 Indicator LEDs
Indicate visually the activities
and connection state for
power, service type , data
traffic, data carrier

Main Antenna Socket
SMA Female



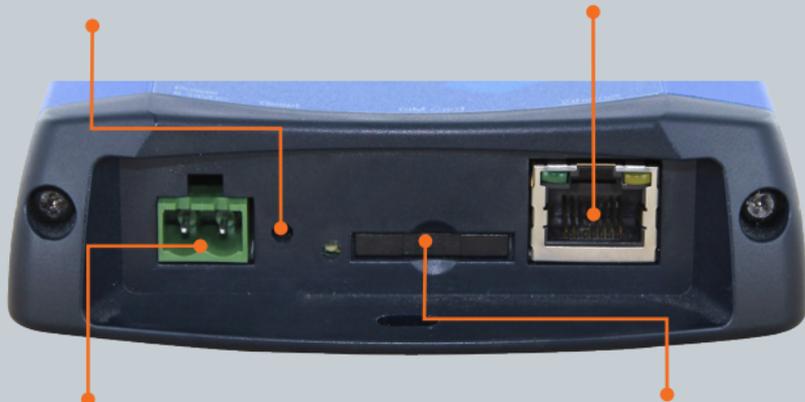
Serial RS-232 Port
Connecting to a terminal
using a DE-9 cable

Reset

Resetting the router to factory default values

Ethernet Port

Connect to a terminal using RJ45 cable or a number of terminals through a hub or network router



2Way Captive Power Terminal Block

Power terminal block and the wide voltage range of 8-28V DC simplify the installation in different industrial environments

SIM Card Reader

For insertion and removal of SIM Card

Overview of Cellular Router Interfaces

Field	Description
Main Antenna Socket	SMA Female
Receive Diversity Antenna Socket	SMA Female
Serial RS-232 Port	For connecting to a terminal using a DE-9 cable.
5 Indicator LEDs	Indicate visually the activities and connection state for power, service type, data traffic, data carrier connection and network signal strength.
2-Way Captive Power Terminal Block	Power terminal block and the wide voltage range of 8-28V DC simplify the installation in different industrial environments
Reset Button	Resetting the router to factory default values
Ethernet Port	For direct connection to your device or number of devices through a hub or network router.
SIM Card Reader	For insertion and removal of SIM Card

Configuring Your Router

You will need the following hardware components to set up the router:

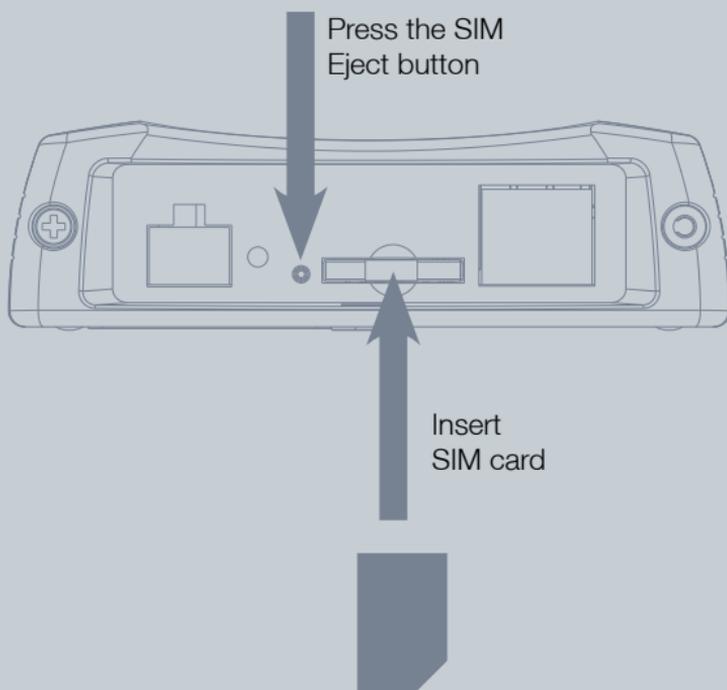
-  Power Supply (8-28VDC)
-  Ethernet cable
-  Laptop or PC
-  Active SIM card

The router is primarily managed via web interface. It may also be configured via the units serial (V.24) port using “AT” (V.250) commands, this method of operation is further detailed in the user guide.

Before you power up the Cellular Router, please insert an active SIM card.

Step One: Inserting the SIM Card

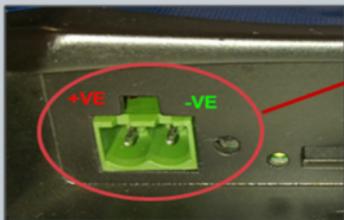
Press the **SIM Eject** button to eject the SIM card tray. Place the SIM card in the tray with the gold side facing up. Insert both into the bay with the gold side facing down and in the direction as shown below.



Step Two: Setting up the Cellular Router

Install the **supplied antennas** to the Cellular Router by screwing them onto the antenna connectors. Connect the **power adapter** to the mains and plug the output into the power jack of the router. The **red Power LED** on the panel should illuminate.

Polarity of Power Terminal



Polarity for MC100-50802 Terminal Block

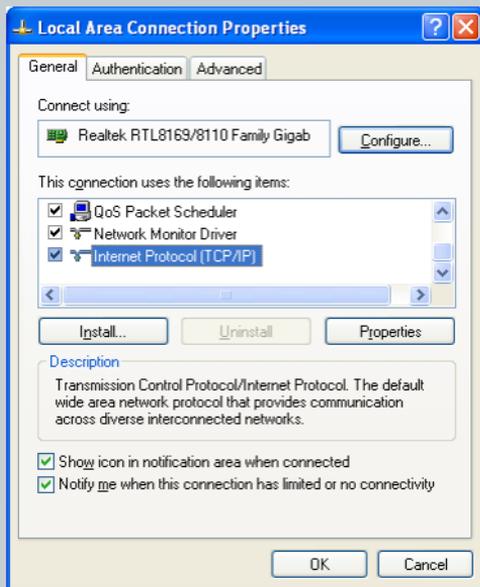
Step Three: Preparing your Computer

Connect one end of the supplied Ethernet cable to the Ethernet port of your router and connect the other end to the Ethernet port of your PC. The router is configured using a web browser. In order for your PC to connect to the router, configure your PC to obtain an IP address automatically from the router using DHCP. Windows users may use the following procedure.

Configuring your Network Adapter in Windows

Follow the path **Start -> Control Panel -> Network Connections**.

Right click **Local Area Connection** and select **Properties** to open the configuration dialogue box of Local Area Connection as below:

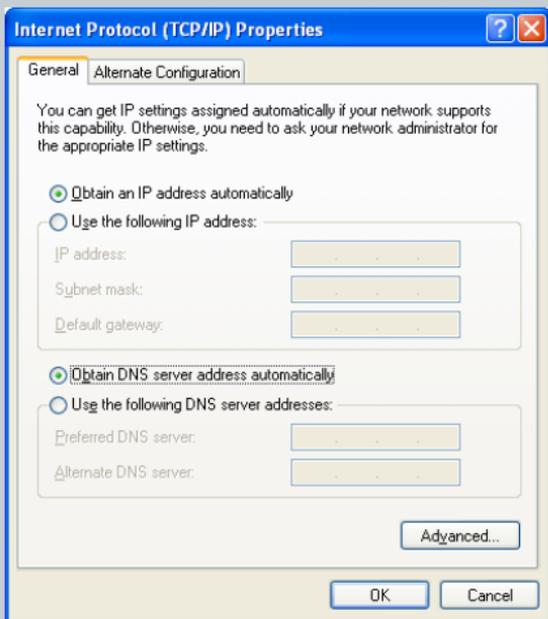


Find and click **Internet Protocol (TCP/IP)** from the protocol list box and then click the **Properties** button. The TCP/IP Configuration window will pop up as illustrated below.

Under General tab, select radio button **Obtain an IP address automatically** and **Obtain DNS server address automatically**.

Then click **OK** button to close TCP/IP configuration window.

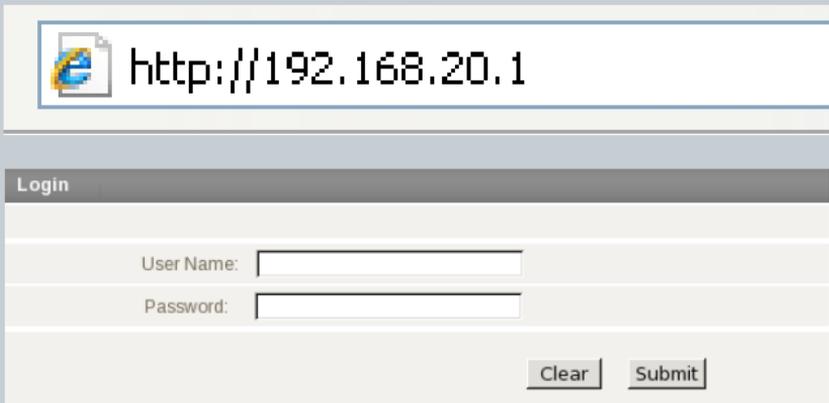
Click the **Close** button to complete the computer preparation.



Step Four: Accessing your Router's Configuration Pages

Below illustrates the steps required to access the configuration pages:

- 📶 Open your web browser (e.g. Internet Explorer/Firefox/Safari) and navigate to **http://192.168.20.1/**
- 📶 Click **Login** and enter the username and password, then click on **Submit**.



The image shows a web browser window with the address bar containing the URL `http://192.168.20.1`. Below the address bar is a login form with a dark header labeled "Login". The form contains two input fields: "User Name:" and "Password:". At the bottom right of the form are two buttons: "Clear" and "Submit".

There are two system management accounts for maintaining the system, **root** and **admin**.

Each has slightly different levels of management capabilities.

The admin account allows a lower level of privileges suitable for managing more common router settings excluding firmware upgrades, device

configuration backup, restore and reset to factory defaults.

The root manager account has full privileges to change all settings of

the router.

To login to the Cellular Router in root manager mode, please use the following login details:

<http://192.168.20.1>

Username:	root
Password:	admin

To login to the Cellular Router in admin manager mode, please use the following login details:

<http://192.168.20.1>

Username:	admin
Password:	admin

Step Five: Unlocking the SIM

If the SIM card is locked you will need to unlock it with a PIN provided with your SIM card. You can find out if the SIM is locked by viewing the SIM Status on the Home page.

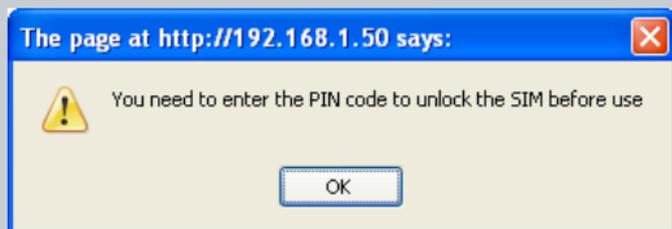
Connection Status	
Provider	Telstra
Service Type	Invalid service
Coverage	WCDMA 850
IMEI	355310030024784
Frequency	WCDMA 850
Signal Strength (dBm)	-67 dBm (strong) 
SIM Status	SIM locked - remaining count : 3

If the SIM Status is ENTER PIN or SIM LOCKED as above then do the following:

Click on the **Security** link.

Status	Internet Settings	Services	System
All Status	LAN	<ul style="list-style-type: none"> WWAN (3G) <ul style="list-style-type: none"> Connection PPPoE Band SIM Security LAN <ul style="list-style-type: none"> Routing VPN 	
System Inform			
System Up time			
Router Version	Hardware: 1.06	Software: 1.0.11.2009	
Phone Module	Model: [0x50]	Hardware: 1.0	Firmware: Temp: 31 °C
Serial Number	02.00.78E3045B		
Ethernet Port Status			
Lan:		Up / 100Mb / HDX	
PPP			
Interface		Local	Remote
Connection Status			
Provider	Telstra		
Service Type	Invalid service		
Coverage	WCDMA 850		
IMEI	355310030024784		
Frequency	WCDMA 850		
Signal Strength (dBm)	-67 dBm (strong)		
SIM Status	SIM locked - remaining count : 3		

When you click on the **Security** link you should see the following message.



Click **OK**.

Next, enter the PIN code and confirm the PIN code. Then click Save.

PIN Settings	
SIM Status	SIM locked - remaining count : 3
PIN	<input type="text"/>
Confirm PIN	<input type="text"/>
Remember PIN	<input type="radio"/> Yes <input checked="" type="radio"/> No
Disable PIN	<input type="radio"/> Yes <input checked="" type="radio"/> No
<input type="button" value="Save"/> <input type="button" value="Help"/>	

Now Click on the **Status** link and the Home Status page should look as below with SIM Status OK.

Status			Internet Settings	Services	System
All Status			LAN	PPPoE	PPTP
System Information					
System Up time	00 : 07 : 04				
Router Version	Hardware: 1.06 Software: 1.0.11.2009				
Phone Module	Model: [0x50] Hardware: 1.0 Firmware: Temp: 31 °C				
Serial Number	02:00:78:E3:04:5B				
Ethernet Port Status					
Lan:	✓	Up / 100Mb / HDX			
PPP					
Interface		Local	Remote		
Connection Status					
Provider	Telstra				
Service Type	Combined service				
Coverage	WCDMA 850				
IMEI	355310030024784				
Frequency	WCDMA 850				
Signal Strength (dBm)	-67 dBm	(strong)			
SIM Status	SIM OK				

Step Six: Connect to the Cellular Network

This section describes how to set up the Cellular Router to initiate a wireless WAN connection via PPP. There are 2 different ways:

-  Initiating the PPP Connection directly from the Cellular Router acting as the PPP Client (most common).
-  Initiating the PPP Connection from a different PPP client (i.e. laptop or router) with the Cellular Router running in PPPoE mode. This method is not documented in this quick start guide.

Initiating a PPP Connection from the Cellular Router

Click the **Internet Settings > WWAN (3G)** link on top panel of the status page to open the **Connection** page.

Status		Internet Settings		Services		System	
All Status	LAN	WWAN (3G)	Connection				
System Information		LAN	PPPoE				
		Routing	Band				
		VPN	SIM Security				
System Up time							
Router Version	Hardware: 1.06	Software: 1.0.11	2009				
Phone Module	Model: [0x50]	Hardware: 1.0	Firmware:	Temp: 32	°C		
Serial Number	02:00:78:E3:04:5B						
Ethernet Port Status							
Lan:	✓	Up / 100Mb / HDX					
PPP							
Interface		Local		Remote			
ppp0	wwan.0	up	10.168.28.156	10.64.64.64			
Connection Status							
Provider	Telstra						
Service Type	Combined service						
Coverage	WCDMA 850						
IMEI	355310030024784						
Frequency	WCDMA 850						
Signal Strength (dBm)	-67 dBm (strong)						
SIM Status	SIM OK						

To Connect Using a Connection Profile

The WWAN (3G) profiles allow you to configure the settings that the router will use to connect to the cellular network.

WWAN (3G) Profile Settings

Profile Name	<input type="text" value="Telstra Internet"/>		
Connection Type	<input type="text" value="Packet"/>		
APN Name	<input type="text" value="telstra.internet"/>	<input type="text" value="Australia"/>	
User	<input type="text"/>		
Password	<input type="password"/>		
Auto Connect	<input checked="" type="radio"/> Enable <input type="radio"/> Disable		
Authentication Type	<input checked="" type="radio"/> CHAP <input type="radio"/> PAP		
PPP verbose logging	<input type="radio"/> Enable <input checked="" type="radio"/> Disable		
Reconnect Delay	<input type="text" value="30"/>	(30-65535) secs	
Reconnect Retries	<input type="text" value="0"/>	(0-65535, 0=Unlimited)	
Metric	<input type="text" value="20"/>	(0-65535)	
NAT Masquerading	<input checked="" type="radio"/> Enable <input type="radio"/> Disable		

Profile Name	Type	Num	APN	User
Telstra.Internet	Packet	atd*99#	telstra.internet	
Telstra.Extranet	Packet	atd*99#	telstra.extranet	
Telstra.Corp	Packet	atd*99#	telstra.corp	

Check the list of pre-configured profile names and select the profile with the APN name that you wish to connect to.

Click **Auto Connect Enable**.

Click **Save**.

Auto Connect will have the router connect automatically unless you come back to this page and disable it.

Click on the **Status** link to return to the status page. To confirm the success of the connection in the **PPP field**, the PPP status should be **up** and the current IP address that the network has allocated should appear.

Status			
Internet Settings		Services	
System			
All Status LAN PPPoE PPTP			
System Information			
System Up time	00 : 10 : 26		
Router Version	Hardware: 1.06	Software: 1.0.11.2009	
Phone Module	Model: [0x50]	Hardware: 1.0	Firmware: Temp: 33 °C
Serial Number	02:00:78:E3:04:5B		
Ethernet Port Status			
Lan:	✓	Up / 100Mb / HDX	
PPP			
Interface		Local	Remote
ppp0 wwan.0 up		10.168.28.156	10.64.64.64
Connection Status			
Provider	Telstra		
Service Type	Combined service		
Coverage	WCDMA 850		
IMEI	355310030024784		
Frequency	WCDMA 850		
Signal Strength (dBm)	-67 dBm (strong)		
SIM Status	SIM OK		

Congratulations - your new NetComm NTC-6000 Series Router is now ready to use!

For more detailed information on the configuration and activation of other features, please visit our website www.netcommwireless.com and click on the **download** tab to download the user guide.

Product Warranty

NetComm Wireless products have a standard 12 months warranty from date of purchase.

Technical Support

For firmware updates or if you have any technical difficulties with your product, please refer to the support section of our website.

support.netcommwireless.com



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