

NetComm NTC-6000 CallDirect Series
HSPA Cellular Routers

Quick Start Guide



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

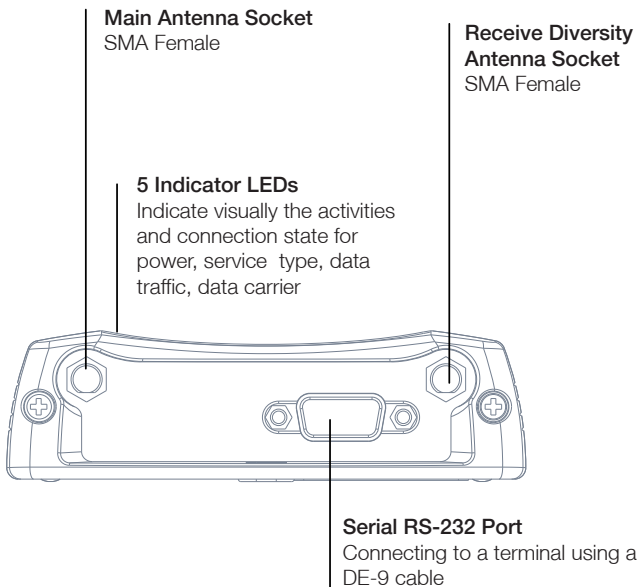


Overview of LEDs

Overview of Indicator Lights

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 amber 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	STRONG - Indicates the RSSI level is -86dBm, or greater
	Flashing once per second	MEDIUM - Indicates the RSSI level is -101dBm and -86dBm, (medium)
	Off	POOR - Indicates the RSSI level is less than -101dBm (poor)

Overview of the Cellular Router Interfaces

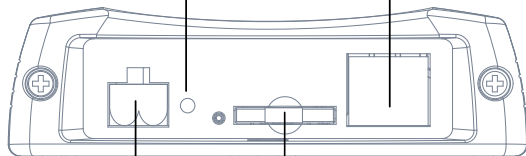


Reset Button

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



SIM Card Reader

For insertion and removal of SIM Card

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

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 Cellular Router:

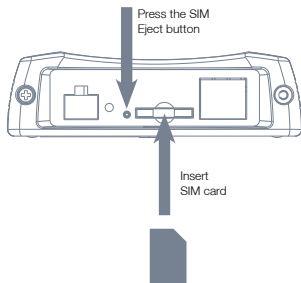
- ④ Power Supply (8-28VDC)
- ④ Ethernet cable
- ④ Laptop or PC
- ④ Active SIM card

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 SIM card bay. Make sure the SIM card is inserted correctly by inserting the SIM the gold side facing down on the SIM card bay and in the direction as shown below:

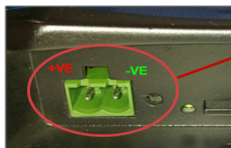


Step Two: Setting up the Cellular Router

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 green **Power LED** on the panel should illuminate.

Polarity of Power Terminal



Polarity for MC100#50802 Terminal Block

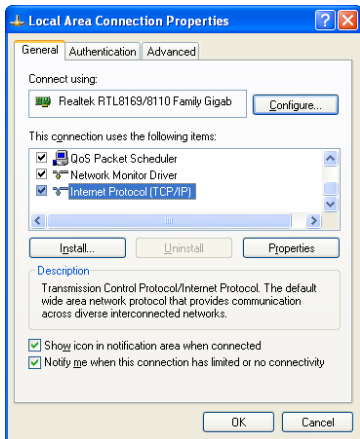


Step Three: Preparing your computer

Connect one end of the supplied Ethernet cable into a LAN Ethernet port of your router. Connect the other end of the cable into the LAN port of your computer. Configure your PC's Ethernet interface to be dynamically assigned an IP address by doing the following:

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:

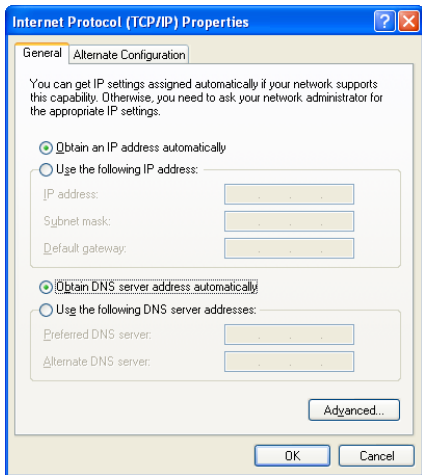


Find and click **Internet Protocol (TCP/IP)** from the protocol list box and then click the **Properties** button. The TCP/IP Configuration window will pop up as illustrated below.

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

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

Press the **Close** button to complete the computer preparation for the Cellular Router.



Step Four: Accessing your Router's configuration pages

Furthermore, there are two system management accounts for maintaining the system, **root** and **admin**, and each of which will have slightly different levels of management capabilities.

The root manager account is empowered with full privilege while the admin manager (administrator) can manage all settings of the Cellular Router excepts functions like Firmware Upgrade, Device Configuration Backup and Restore and Reset Cellular Router to factory default.

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

Enter the address below in your web browser and connect. The username and password are defined below.

Whenever you make changes please refresh your web pages to prevent errors due to caching of web pages.

http://192.168.20.1	
Username:	admin
Password:	admin

Below illustrates the steps required to access the Cellular Router's web browser:

1. Open your web browser (e.g. Internet Explorer/Firefox/Safari) and navigate to **http://192.168.20.1/**
2. Click **Login** and type **admin** in the Username and Password fields. Then click on **Submit**.



http://192.168.20.1

Login

User Name:

Password:


Clear

Submit

Step Five: Unlocking the SIM

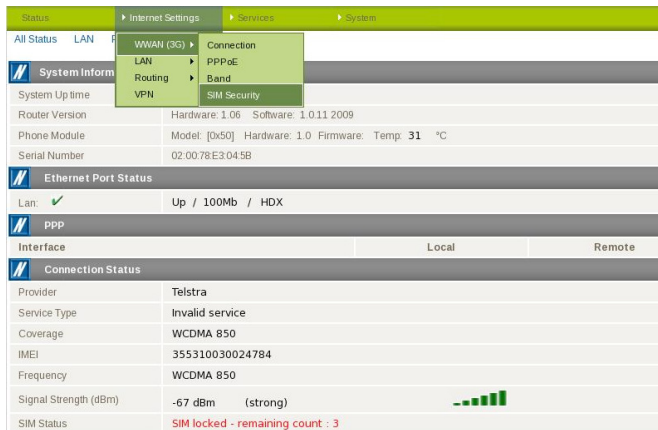
If the SIM card is locked you will need to unlock it with a PIN provided with your SIM card.

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

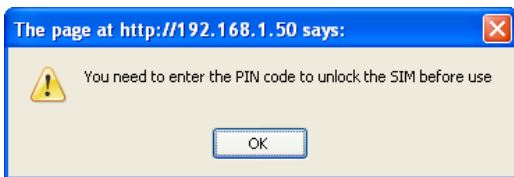
If the SIM Status is ENTER PIN as above then do the following:

Click on the “Security” Link on the left



The screenshot shows the router's web interface with a navigation menu at the top. The 'Services' menu is expanded, showing options for Connection, PPPoE, Band, and SIM Security. The 'SIM Security' option is highlighted. Below the menu, the 'System Inform' section displays various system details, and the 'Ethernet Port Status' section shows the LAN port is up. The 'Connection Status' section at the bottom of the page shows the same SIM status as in the previous image: '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.

Step Six: Connect to the Cellular Network

This section describes how to set up the Cellular Router to initiate a wireless WAN connection.

There are 2 different ways to set up a wireless WAN connection via PPP:

- ① Initiating the PPP Connection directly from the Cellular Router acting as the PPP Client (most common).
- ② Initiating the PPP Connection from a different PPP client (i.e. laptop or router) with the Cellular Router running in PPPoE mode. This mode is used for example, when you also have an ADSL connection present such that if the Wireless connection on the Cellular Router fails then the ADSL router can be used as backup. This method is not documented in this quick start guide.

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

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

Initiating a PPP Connection from the Cellular Router

The status page of Cellular Router Setup will now be displayed as below.

The PPP status on the page should be DISABLED network (as indicated by the large arrow) as your new device is not yet configured to connect to the cellular network.

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

Status		
All Status	LAN	Internet Settings
		Services
		System
<div style="display: flex; justify-content: space-between;"> System Inform WWAN (3G) ▶ Connection </div>		
		LAN ▶
		Routing ▶
		VPN
		PPPoE
		Band
		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 Cellular Router profiles allow you to configure the settings that the router will use to connect to the cellular network.

WWAN (3G) > Connection

WWAN (3G) Profile Settings				
Profile Name	Telstra.Internet ▾			
Connection Type	Packet ▾			
APN Name	telstra.internet		Australia	▾
User	<input type="text"/>			
Password	<input type="text"/>			
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			
<input type="button" value="Save"/> <input type="button" value="Delete"/>				

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	

First examine the list of configured profiles

Select the profile that you wish to connect to make sure that the APN name field is correct. This is very important.

Click **Auto Connect Enable**

Click **Save**

From now on, Auto Connect will keep remain enabled and the router will automatically connect unless you come back to this page and disable it.

To Confirm Successful Connection

Now click on the **Status** link to return to the status page. Please pay close attention to PPP field on the page. PPP Status should be UP. PPP IP Address shows the current IP address that the network has allocated for the Cellular Router.

Status		
Internet Settings		
Services		
System		
All Status	LAN	PPPoE PPTP
System Information		
System Up time	00 : 10 : 26	
Router Version	Hardware: 1.06 Software: 1.011 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 CallDirect Series Router is now ready to use!

For more detailed information on the configuration and activation of other features, please visit our website www.netcomm.com.au and download the user guide.



NetComm Commercial

NETCOMM LIMITED Head Office
PO Box 1200, Lane Cove NSW 2066 Australia
P: 02 9424 2070 **F:** 02 9424 2010
E: int.sales@netcomm.com.au
W: www.netcommlimited.com.

Product Warranty

NetComm products have a standard 12 months warranty from date of purchase. However some products have an extended warranty option, via registering your product online at the NetComm website **www.netcommlimited.com**.

Technical Support

If you have any technical difficulties with your product, please refer to the support section of our website.

www.netcomm.com.au/support

Note: NetComm Technical Support for this product only covers the basic installation and features outlined in the Quick Start Guide. For further information regarding the advanced features of this product, please refer to the configuring sections in the User Guide or contact a Network Specialist.