



NetComm NTC-5000 CallDirect Series
HSPA Cellular Routers

Quick Start Guide



Quick Start Guide

Thank you for choosing an industrial HSPA Cellular Router of NetComm's NTC-5000 CallDirect Series.

This guide covers the models **NTC-5908** and **NTC-5909** (collectively referred to in this document as the NTC-5000 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-5000 Series HSPA Cellular Router
1	Crossover Ethernet Cable
1	Power Supply Unit
1	Antennas
1	Quick Start Guide

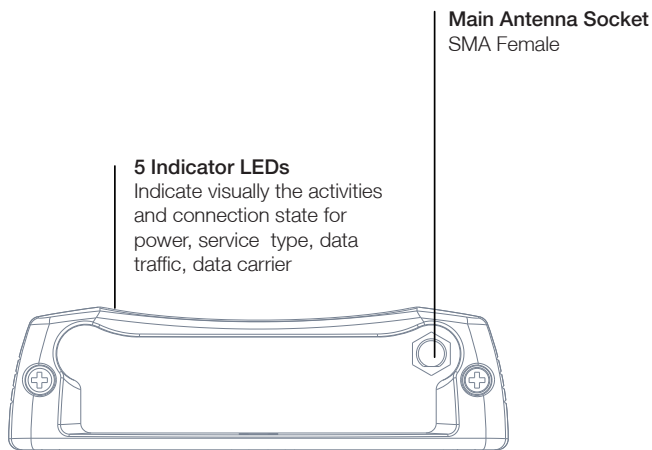


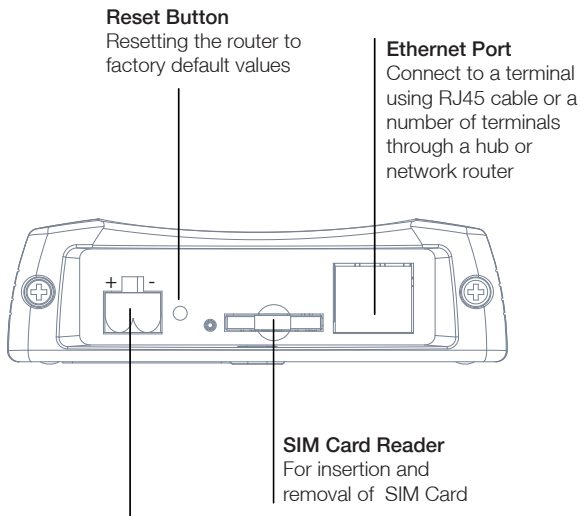
Overview of LEDs

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





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
Antenna socket	SMA Female
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 to 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

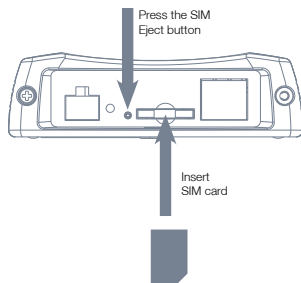
You will need the following hardware components to set up the router:

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

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.

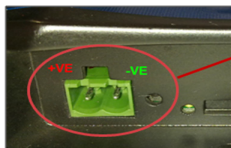


Step Two: Setting up the Cellular Router

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

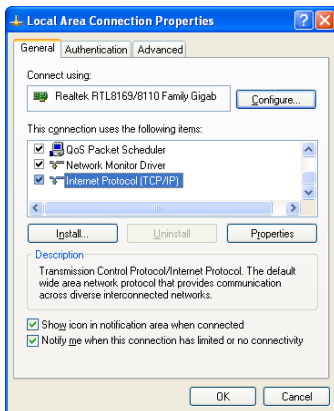


Step Three: Preparing your Computer

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:

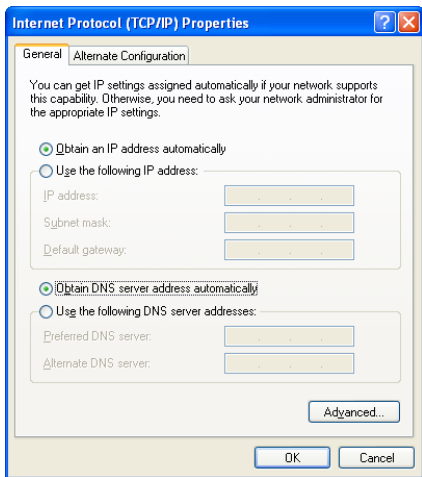


Find and click **Internet Protocol (TCP/IP)** from the protocol list box and then click the **Properties** button. The TCP/IP Configuration window will pop up as illustrated below.

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

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://192.168.1.1	
Username:	root
Password:	admin

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

http://192.168.1.1	
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.

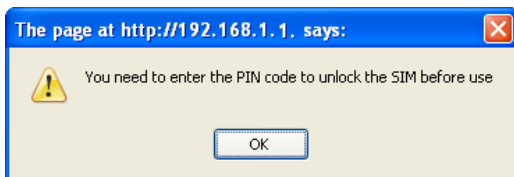
The screenshot shows the NetComm router web interface. The top navigation bar includes 'Status', 'Internet Settings', 'Services', and 'System'. The 'System' tab is selected, and the 'Security' link is highlighted in the left sidebar. The main content area displays the 'System Information' section, which includes the following details:

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	

Below the system information, the 'Ethernet Port Status' section shows the LAN port is 'Up / 100Mb / HDX'. The 'PPP' section shows the connection status. The 'Connection Status' section displays the following information:

Interface	Local	Remote
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

[Save](#) [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:

- 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 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		
System Inform	WWAN (3G)	Connection	
	LAN	PPPoE	
	Routing	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 WWAN (3G) 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="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			
<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	

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 StatusLANPPPoEPPTP

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-5000 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-commercial.com.au and download the user guide.

Notes:

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper appears to be a standard notebook page or a sheet of stationery.



NETCOMM LIMITED Head Office

PO Box 1200, Lane Cove NSW 2066 Australia

P: 02 8205 3888 **F:** 02 9424 2010

E: sales@netcomm.com.au

W: www.netcomm-commercial.com.au

Product Warranty

NetComm 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.

www.netcomm-commercial.com.au/support