

# **TMAS™**

## **Center Manager User Manual**

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## Center Manager

Center Manager is a device and connectivity management software for TMAS GPRS gateway, TMN-51. Its functionality is as follows:

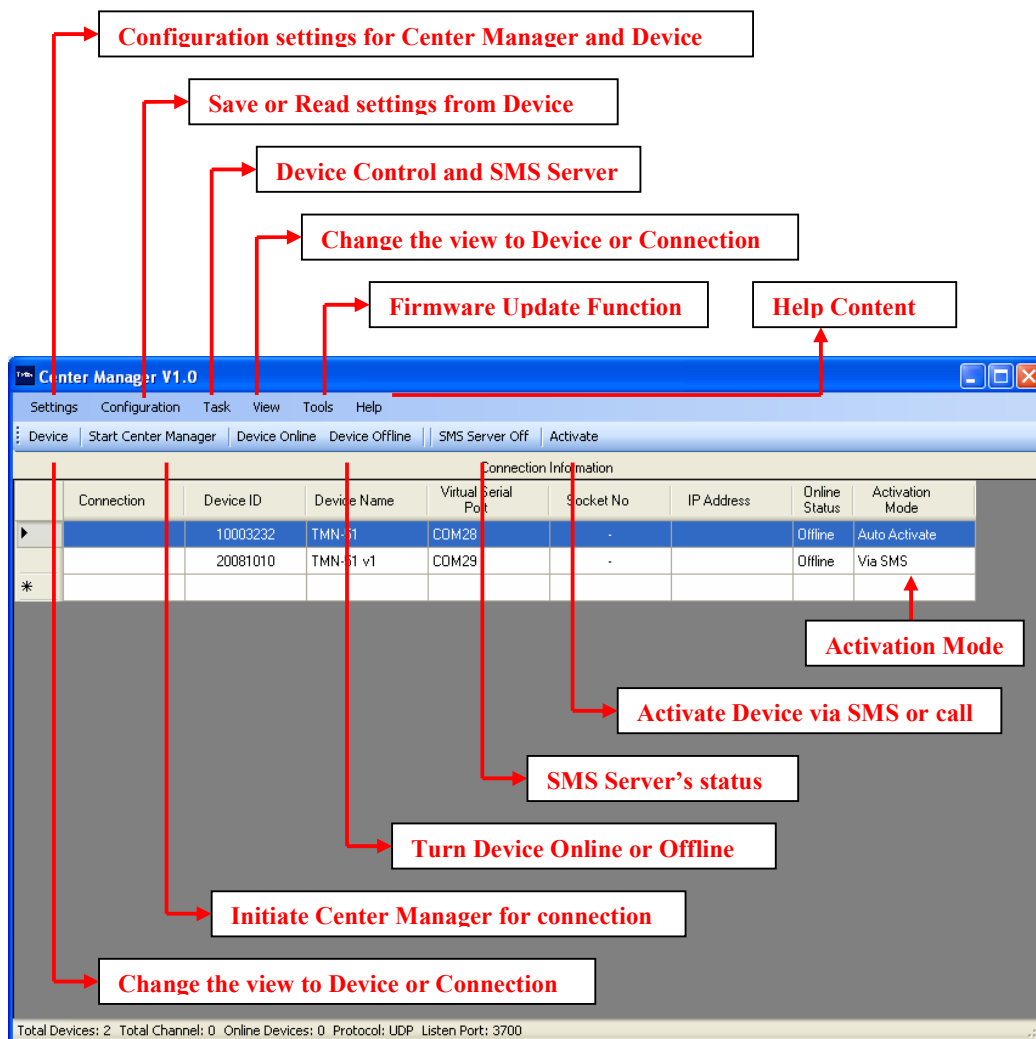
- Configuration tools for TMN-51 (settings and firmware update)
- Emulating virtual wire via Virtual Serial Port (VSP)
- Connection manager supporting Multiple Virtual Serial Port (MVSP)
- SMS Server for IP address reporting

The default password for Center Manager is:

User Name: admin

Password: admin

## Center Manager Window Layout



The screenshot shows the Center Manager V1.0 interface with the following callouts:

- Configuration settings for Center Manager and Device**: Points to the 'Settings' menu.
- Save or Read settings from Device**: Points to the 'Configuration' menu.
- Device Control and SMS Server**: Points to the 'Task' menu.
- Change the view to Device or Connection**: Points to the 'View' menu.
- Firmware Update Function**: Points to the 'Tools' menu.
- Help Content**: Points to the 'Help' menu.
- Activation Mode**: Points to the 'Activation Mode' column in the table.
- Activate Device via SMS or call**: Points to the 'Via SMS' entry in the 'Activation Mode' column.
- SMS Server's status**: Points to the 'SMS Server Off' status indicator.
- Turn Device Online or Offline**: Points to the 'Device Online' and 'Device Offline' status indicators.
- Initiate Center Manager for connection**: Points to the 'Start Center Manager' button.
- Change the view to Device or Connection**: Points to the 'Device' button in the top navigation bar.

Connection	Device ID	Device Name	Virtual Serial Port	Socket No	IP Address	Online Status	Activation Mode
	10003232	TMN-51	COM28	-	-	Offline	Auto Activate
	20081010	TMN-51 v1	COM29	-	-	Offline	Via SMS

Total Devices: 2. Total Channel: 0. Online Devices: 0. Protocol: UDP. Listen Port: 3700

## **1.0 Configuration Tools: Settings**

To save a device setting into the Center Manager, a direct wire configuration must be performed first. Do a wired configuration and save the device settings. Once it is saved, change the necessary settings and apply the changes to the device.

### **1.01 Basic Configuration**

Center Manager provides a basic tool for configuring TMN-51. There are 2 method of configuration, via direct wire or via GPRS. For the first configuration, it must be done via direct wire. Wireless configuration via GPRS can only be performed once TMN-51 is able to connect to Center Manager via GPRS.

Before configuring any TMN-51, please configure the Center Manager first. Center Manager's setting is important as it affect every TMN-51 that connects to it. Refer to Connection Scenario in this document for more information regarding the type of connection available.

Below is a list of crucial settings that have to be set:

Basic settings:

- Server – Client Mode (Center Manager setting)
- Protocol (Center Manager Setting)
- Port No (Center Manager Setting)
- GPRS connection settings (get from Service Provider)

For Center Manager as Server:

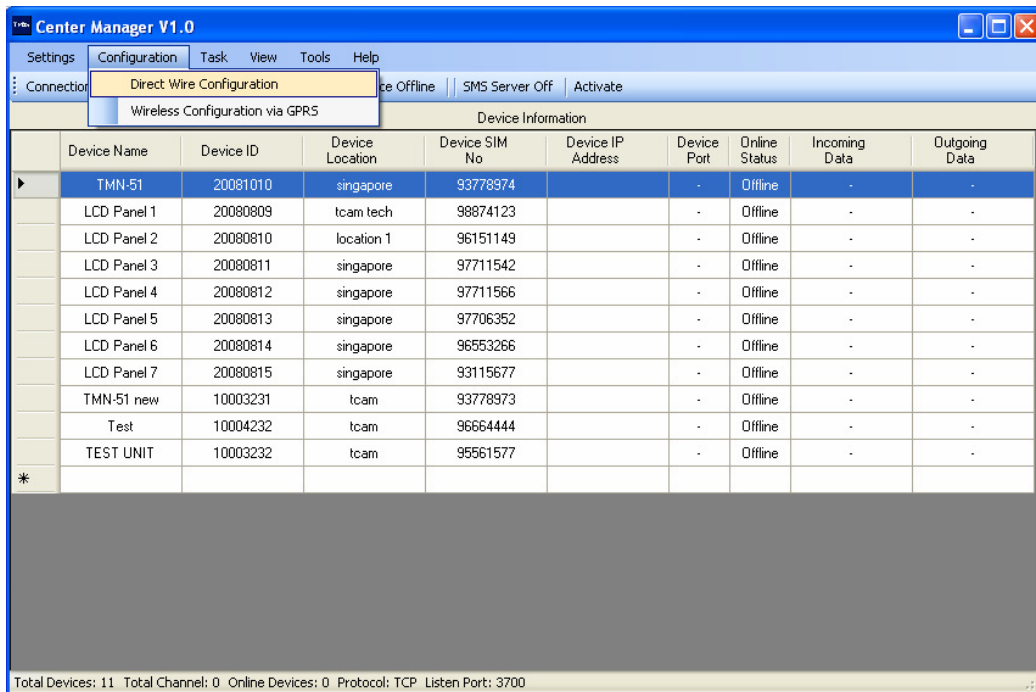
- Host PC static IP address

For Center Manager as Client:

- TMN-51 static IP address OR TMN-51 mobile no
- Center Manager's mobile no (optional)

### **1.02 Direct Wire Configuration**

For first time configuration, a direct wire configuration must be performed for Center Manager to recognize the device. Connect TMN-51 to the host PC with Center Manager installed. Power up TMN-51. On the Center Manager, click on Configuration → Direct Wire Configuration



Center Manager V1.0

Settings Configuration Task View Tools Help

Connection: Direct Wire Configuration | Device Offline | SMS Server Off | Activate

Wireless Configuration via GPRS

Device Information

Device Name	Device ID	Device Location	Device SIM No	Device IP Address	Device Port	Online Status	Incoming Data	Outgoing Data
TMN-51	20081010	singapore	93778974		-	Offline	-	-
LCD Panel 1	20080809	tcam tech	98874123		-	Offline	-	-
LCD Panel 2	20080810	location 1	96151149		-	Offline	-	-
LCD Panel 3	20080811	singapore	97711542		-	Offline	-	-
LCD Panel 4	20080812	singapore	97711566		-	Offline	-	-
LCD Panel 5	20080813	singapore	97706352		-	Offline	-	-
LCD Panel 6	20080814	singapore	96553266		-	Offline	-	-
LCD Panel 7	20080815	singapore	93115677		-	Offline	-	-
TMN-51 new	10003231	tcam	93778973		-	Offline	-	-
Test	10004232	tcam	96654444		-	Offline	-	-
TEST UNIT	10003232	tcam	95561577		-	Offline	-	-

Total Devices: 11 Total Channel: 0 Online Devices: 0 Protocol: TCP Listen Port: 3700

Figure 1

The Direct Wire Configuration window will appear as shown in Figure 2.



Direct Wire Configuration

Connect to Device

Select Comport

COM1

Connect

Device Status: Not Connected

Device Information

Serial Number

Device Name

Read Data Refresh

Configuration Tools

These are the tools to read settings from device, save the settings and update the firmware

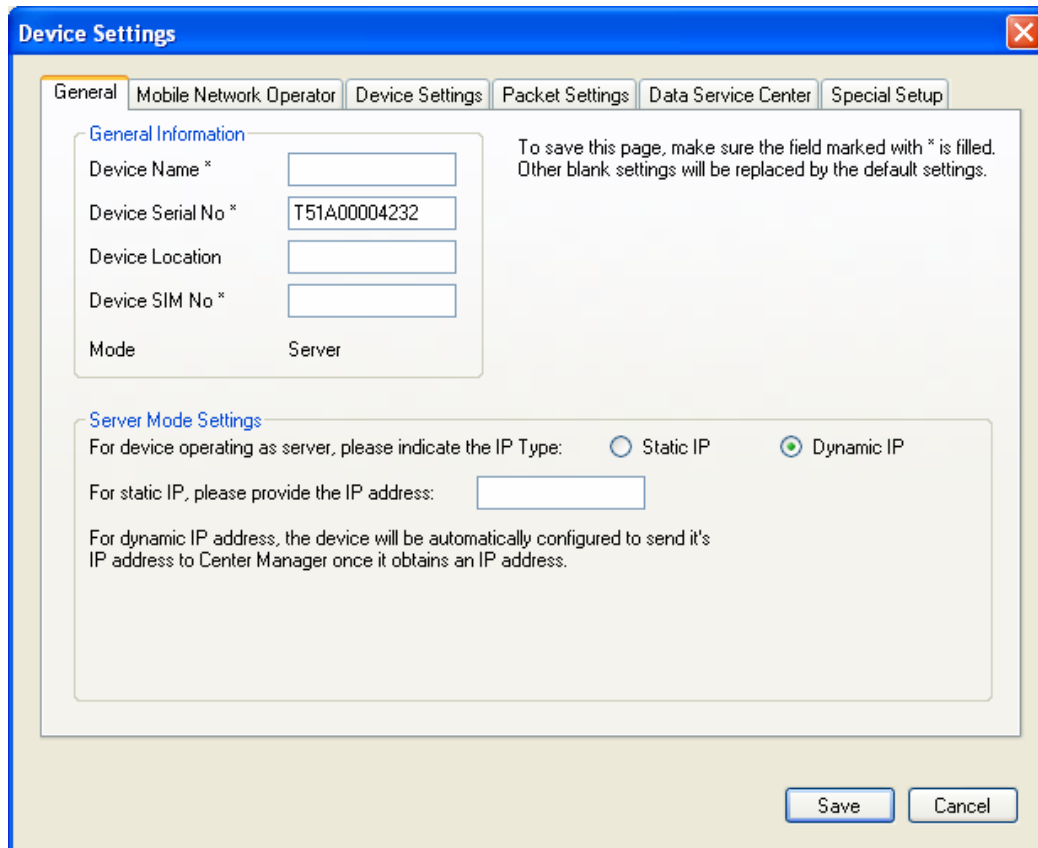
Read Settings Firmware Update

Save Settings

Figure 2

In the Direct Wire Configuration window, select the Comport that TMN-51 is connected to. Click Connect button. TMN-51 Serial Number shall appear under the Device Information. If Center Manager detects a registered device, its Device name will appear on the Device Information.

To begin configuration, click on Read Settings. The following window in Figure 3 will appear.



The image shows a 'Device Settings' dialog box with a blue title bar and a close button. It has several tabs: 'General', 'Mobile Network Operator', 'Device Settings', 'Packet Settings', 'Data Service Center', and 'Special Setup'. The 'General' tab is active. Under 'General Information', there are fields for 'Device Name \*', 'Device Serial No \*' (containing 'T51A00004232'), 'Device Location', and 'Device SIM No \*'. The 'Mode' is set to 'Server'. A note states: 'To save this page, make sure the field marked with \* is filled. Other blank settings will be replaced by the default settings.' Under 'Server Mode Settings', there are radio buttons for 'Static IP' and 'Dynamic IP' (which is selected). Below this is a field for 'For static IP, please provide the IP address:'. A note explains: 'For dynamic IP address, the device will be automatically configured to send it's IP address to Center Manager once it obtains an IP address.' At the bottom right are 'Save' and 'Cancel' buttons.

Figure 3

Enter all the necessary information. Brief description of every setting is available on every page. Click Save to save the settings. Be aware that when saving the settings of a new TMN-51, Center Manager will automatically create a Virtual Serial Port.

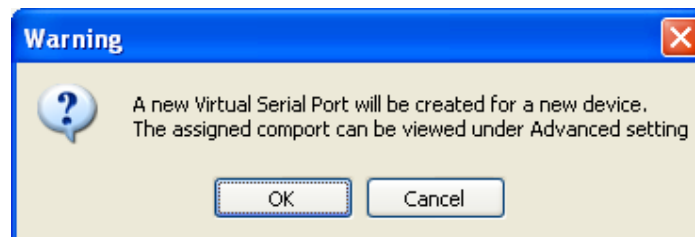
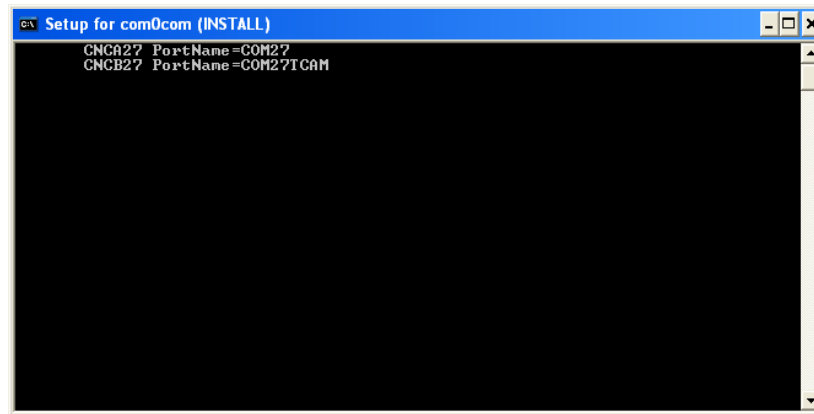


Figure 4

Click OK to begin the installation of a Virtual Serial Port. The comport number will be assigned automatically. Follow the instruction and install the Virtual Serial Port.

Figure 5 to figure 9 shows all the installation steps. During the installation, a pair of Virtual port will be installed, therefore, repeat the same steps twice.

During the installation, a command window will pop out. Kindly wait for it to initialize the Found New Hardware Wizard.



**Figure 5 Initiate Installation of VSP**



**Figure 6**

Check No, not this time and click on Next button.

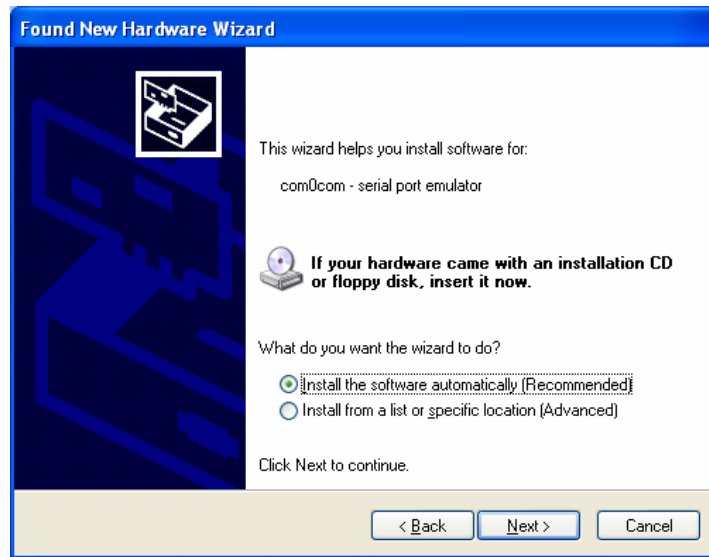


Figure 7

Click on Next to begin the installation

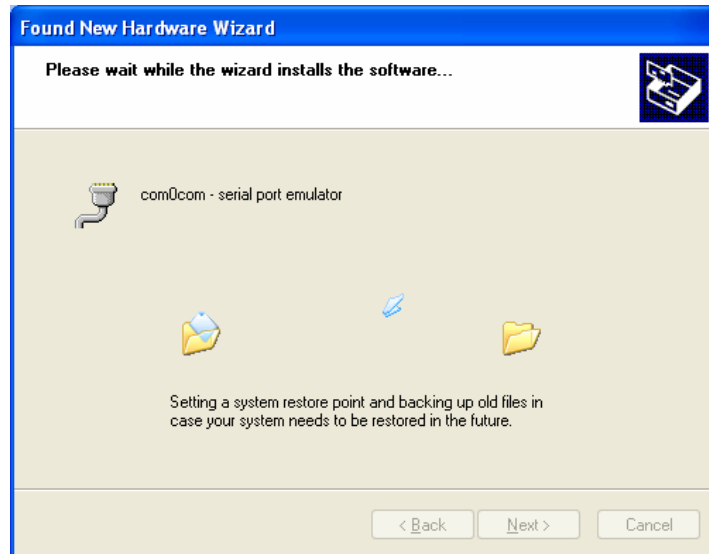


Figure 8

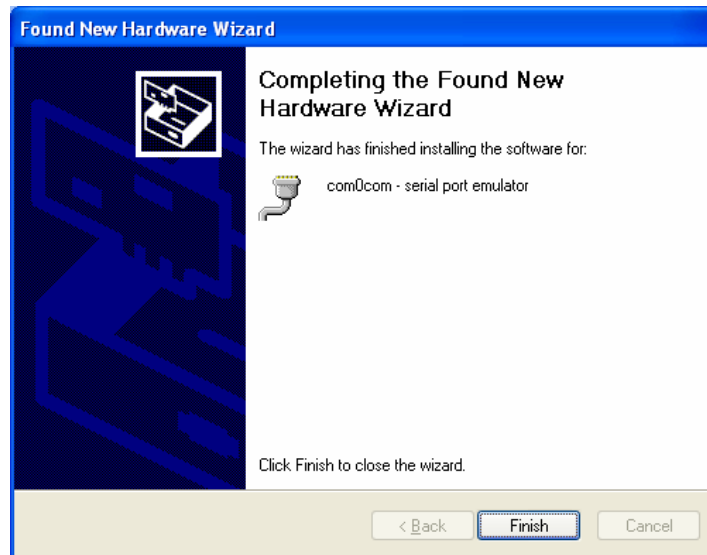


Figure 9

Click on Finish to complete the installation.

### 1,03 Advance Configuration of VSP

To manually assign a comport, on Center Manager, click on Settings → Device and the Device Manager will open. Highlight the device that requires changes to the comport and click on Edit or double click on the highlighted Device Name.

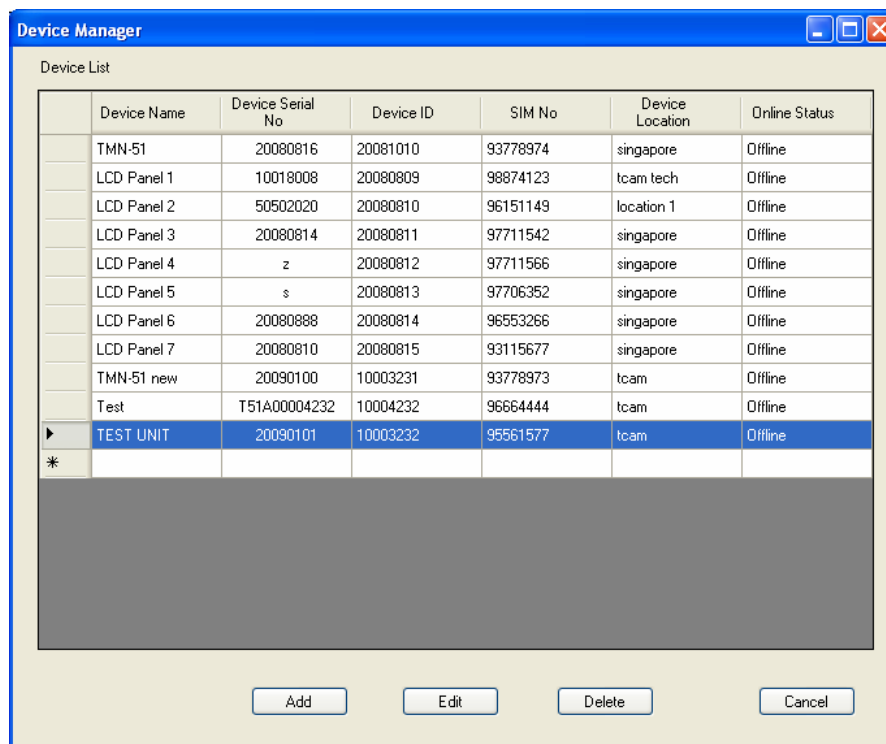
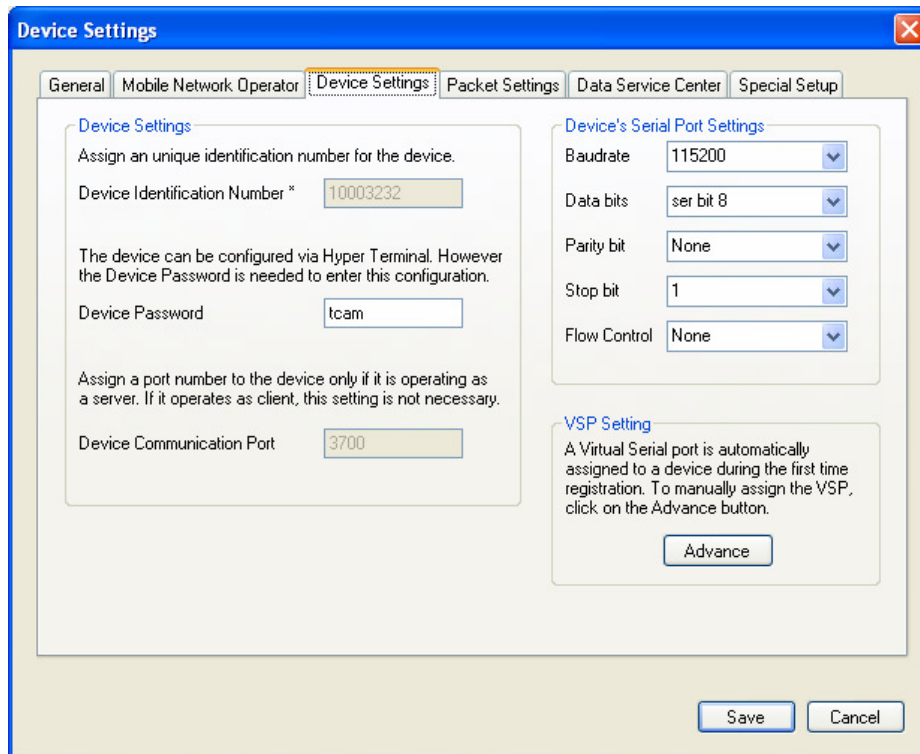


Figure 10 Device Manager

The Device Setting page shall appear. Select Device Settings tab and under VSP setting, click on Advance button.



**Figure 11 Device Settings**



**Figure 12 Advance Setting**

Figure 12 shows the advance settings for the VSP. To change the assigned comport, under Assign VSP, select the comport to change and click on change. The installation

of the new VSP will begin and repeat the installation procedure as described in Basic Configuration.

### 1.04 Firmware Update

On Center Manager, select Tools → Firmware Update → Direct Wire. The Direct Wire Configuration window shall appear.

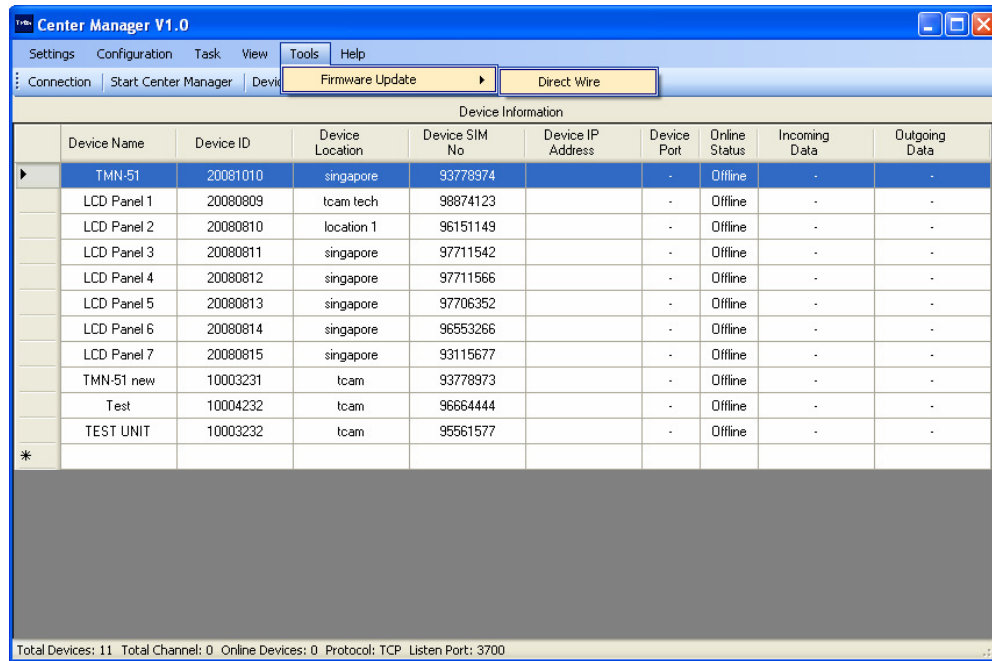
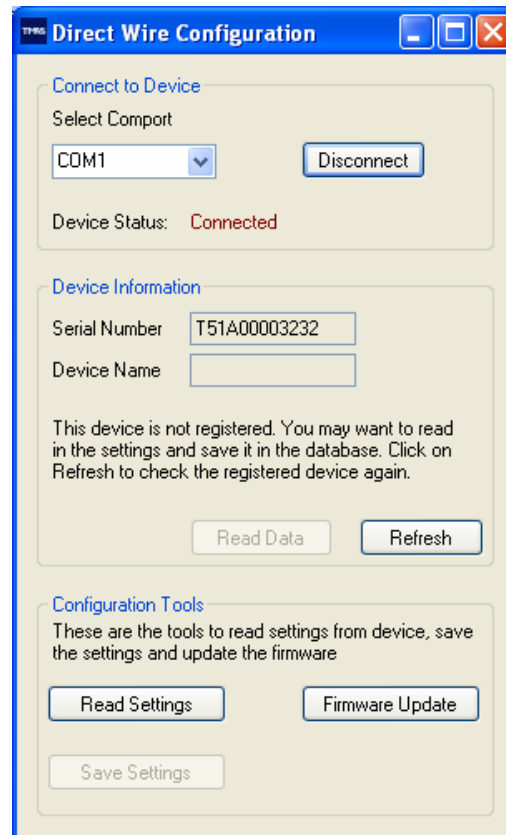
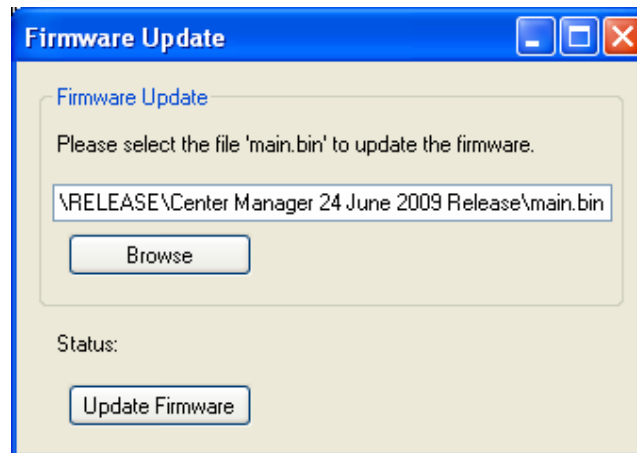


Figure 13



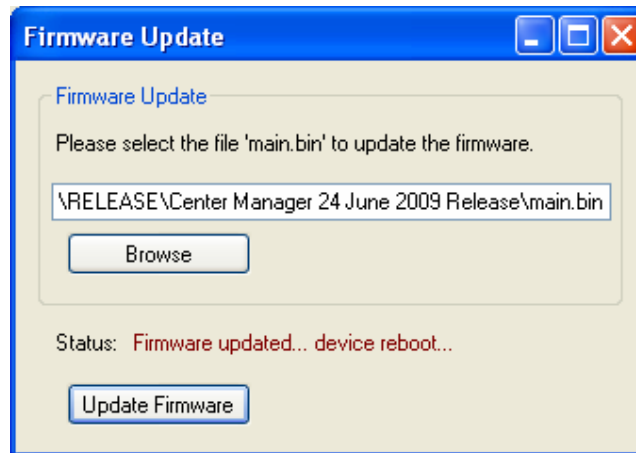
**Figure 14**

Click on Firmware Update button.



**Figure 15 Firmware Update**

Browse the PC and select the firmware update file (main.bin) provided by TCAM Technology and click on Update Firmware. Please wait for the firmware update to finish.

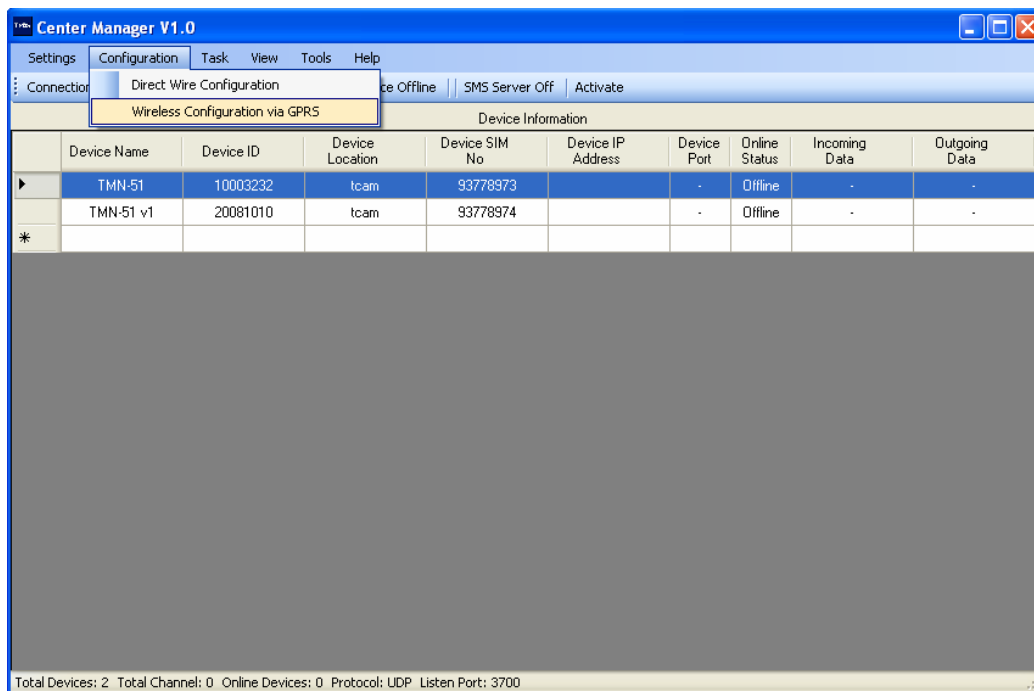


**Figure 16 Firmware Update Completed**

Close the window once the firmware update is completed.

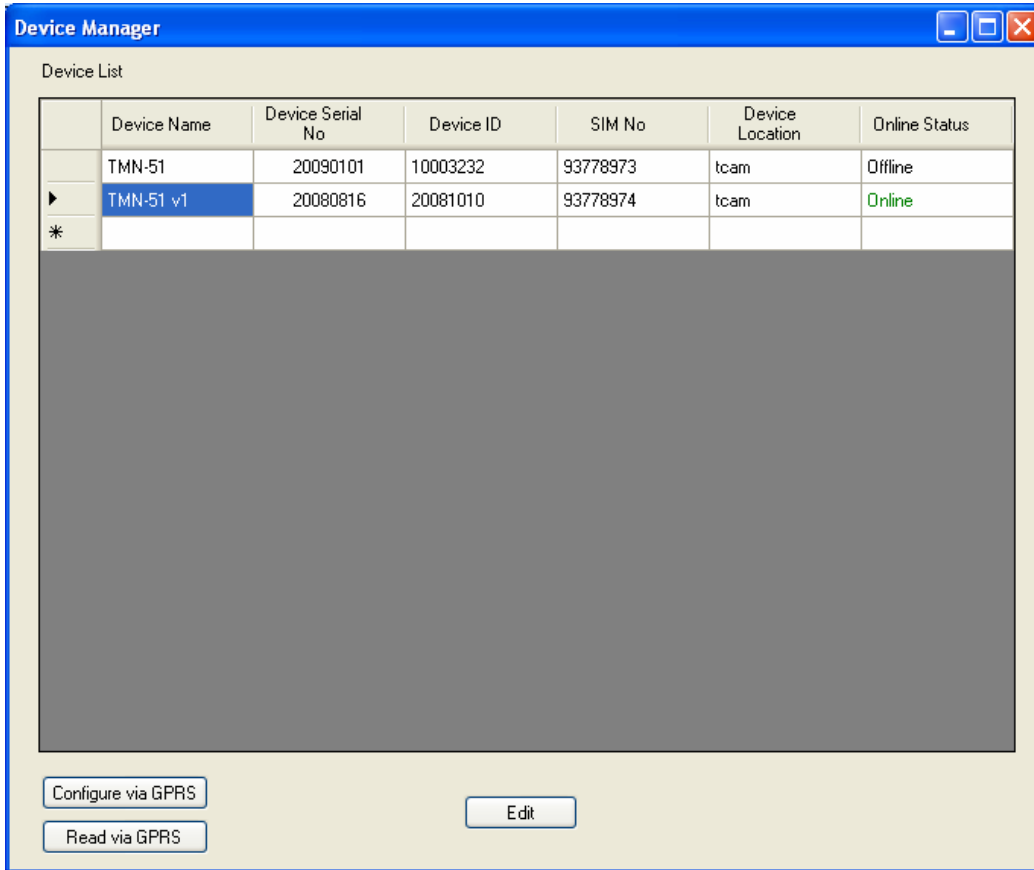
### 1.05 Setting Configuration via GPRS

To update setting configuration via GPRS, establish a GPRS connection between Center Manager and TMN-51. In Center Manager, select Configuration → Wireless Configuration via GPRS



**Figure 17**

On the Device Manager, select the device to update. Make sure that the device's online status is Online. Click on Configure via GPRS to save the settings to the device and Read via GPRS to retrieve the settings from the device.



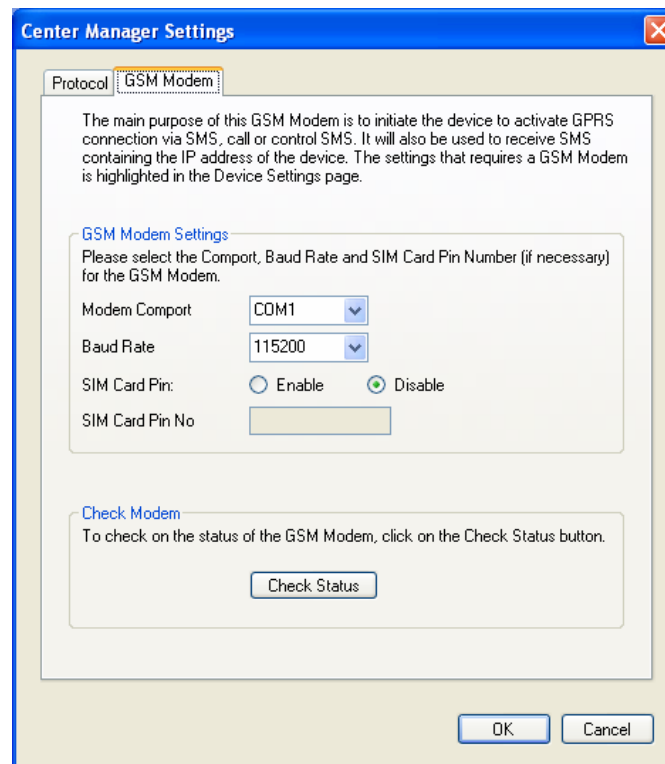
**Figure 18 Device Manager, Configuration via GPRS**

## 2.0 SMS Server

Center Manager has a built in SMS Server that support some of Center Manager's feature such as:

- IP reporting from TMN-51
- Activating TMN-51 to connect to GPRS

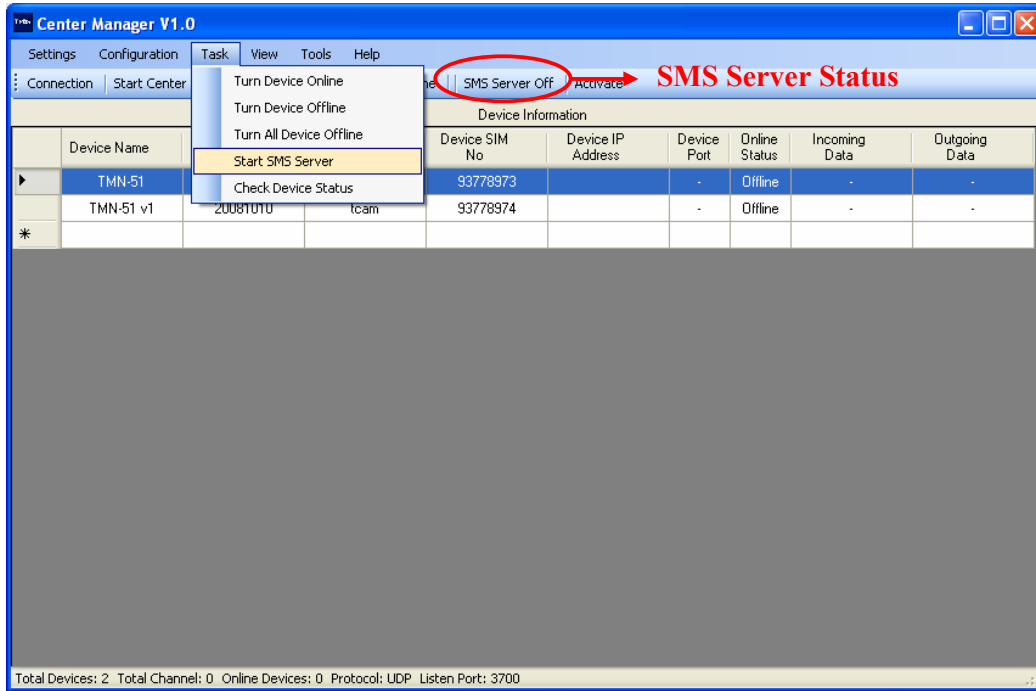
To setup the SMS Server, go to Center Manager Settings and click on the GSM Modem tab. Set the modem comport and baudrate.



**Figure 19 GSM Modem Setting**

To start the SMS server, on Center Manager, select Task → Start SMS Server as shown in Figure 20. SMS Server status is shown in the task bar above the Device or Connection Information as shown in Figure 20. To turn off the SMS Server, select Task → Stop SMS Server.

Once the SMS Server is running, user may also check the modem status by clicking on the Check Status button shown in Figure 19.



**Figure 20 Start SMS Server**

### 3.0 Connecting with TMN-51 via GPRS

#### 3.01 Initialize the Connection

To start the connection, click on the Start Center Manager button as shown in Figure 21.

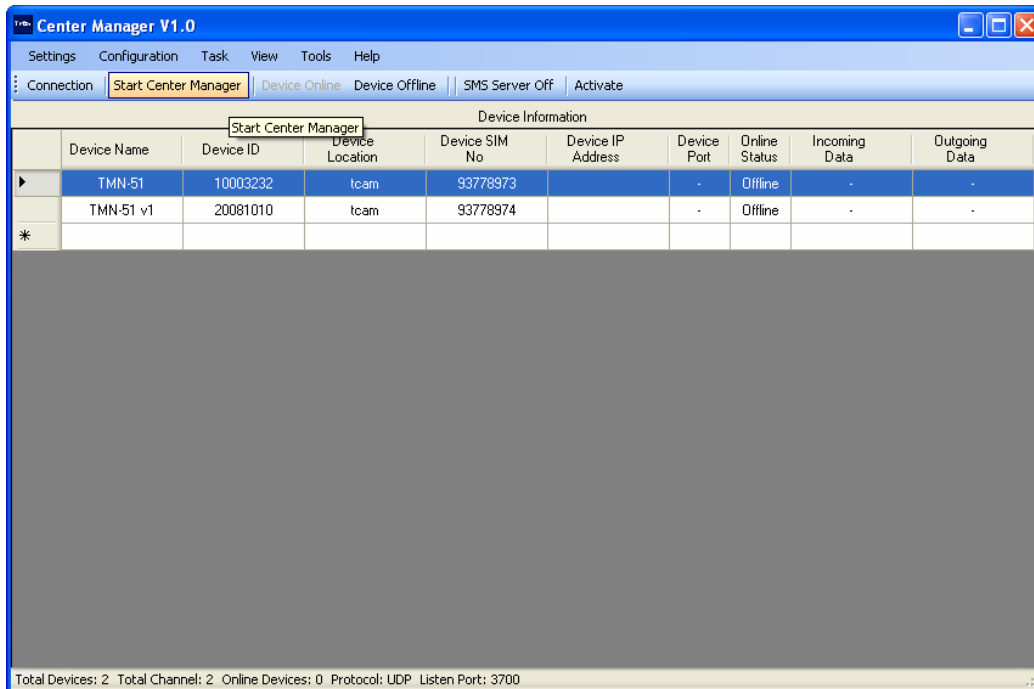


Figure 21 Start Center Manager

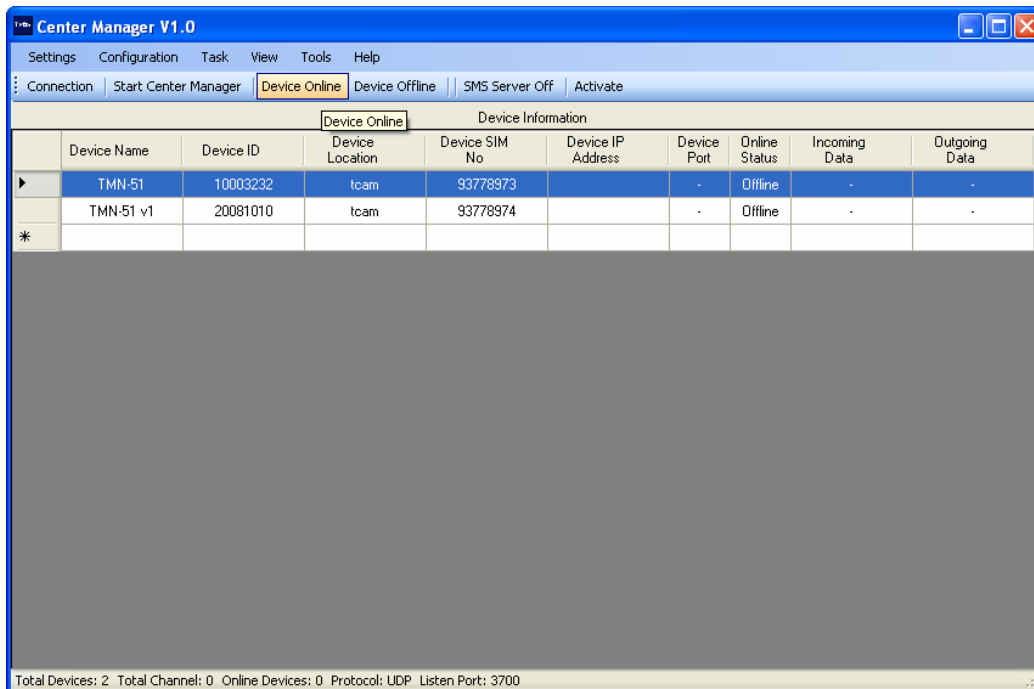
When Center Manager starts, it will always wait for TMN-51 to make a connection. Once the connection is made, the Online Status will change to “Online” and the current IP address of the device will be displayed.

#### 3.02 Turning Device Online and Offline

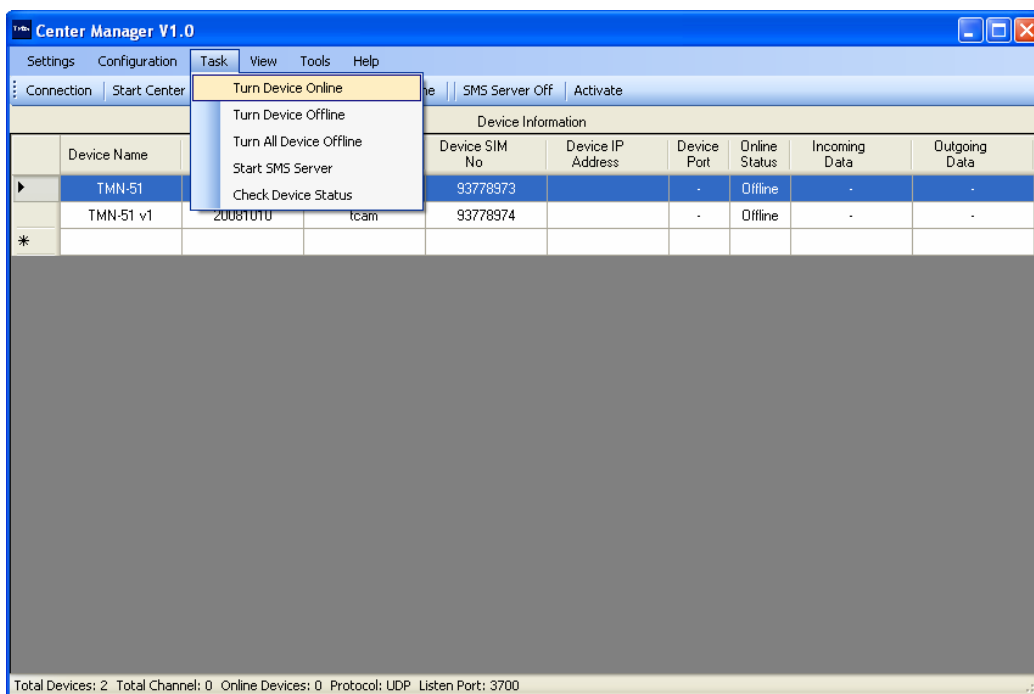
Turning device online is only available when Center Manager is operating in Client mode. Turning a device online is only necessary in the following situation (in all situations described below, Center Manager is working in Client mode):

- When TMN-51 is using static IP address.  
In a situation where TMN-51 is using a static IP address, user need to highlight the device and click on Device Online button as shown in Figure 22 to connect to TMN-51 that act as a server.
- When SMS Server is activated but Center Manager is not initiated for connection.  
In this situation, Center Manager will retain the IP address of the device. When user starts the connection, he/she has to manually turn on the device.

Turning device offline will force TMN-51 to reset itself. Upon reset, depending on its activation mode (check GPRS activation mode for more details), it will either connects to Center Manager automatically or waiting for SMS or call from Center Manager.



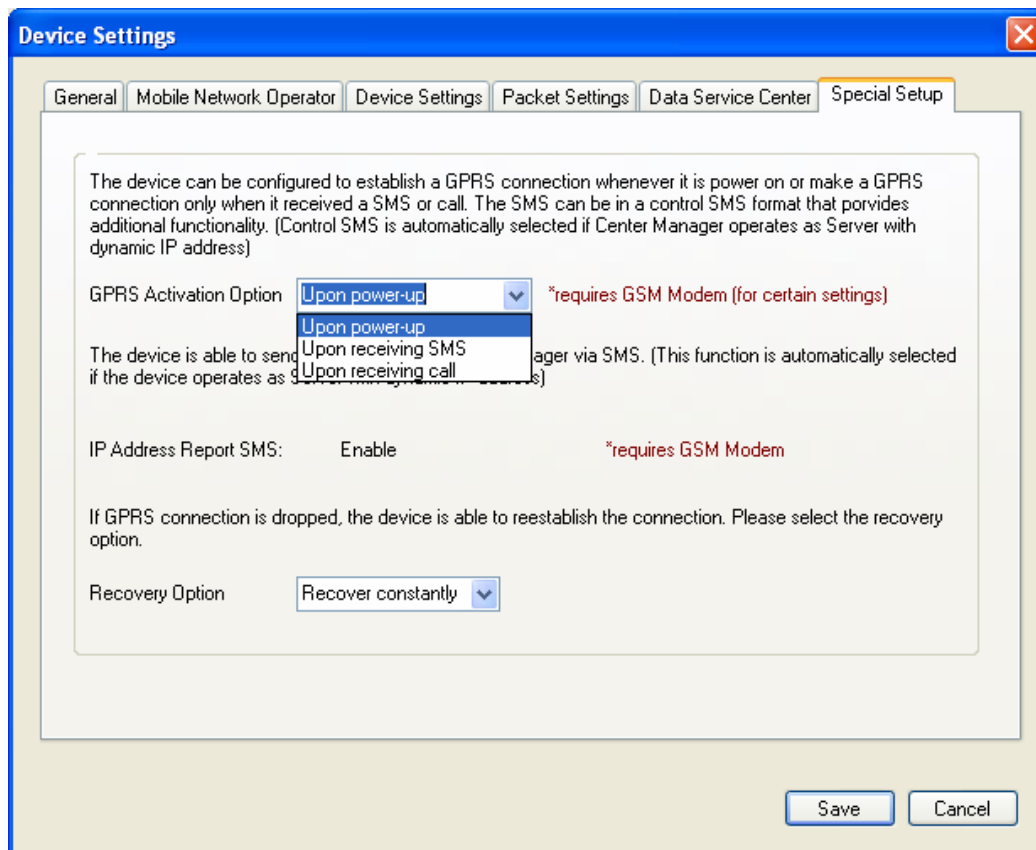
**Figure 22 Device Online and Offline Button**



**Figure 23 Device Online and Offline Function on the Menu Strip**

### 3.03 GPRS Activation Mode

TMN-51 can be set to connect to GPRS upon power up, upon receiving SMS from Center Manager or upon receiving call from Center Manager. These settings can be set in Device Settings, under Special Setup, tab, in GPRS Activation Option as shown in Figure 24.

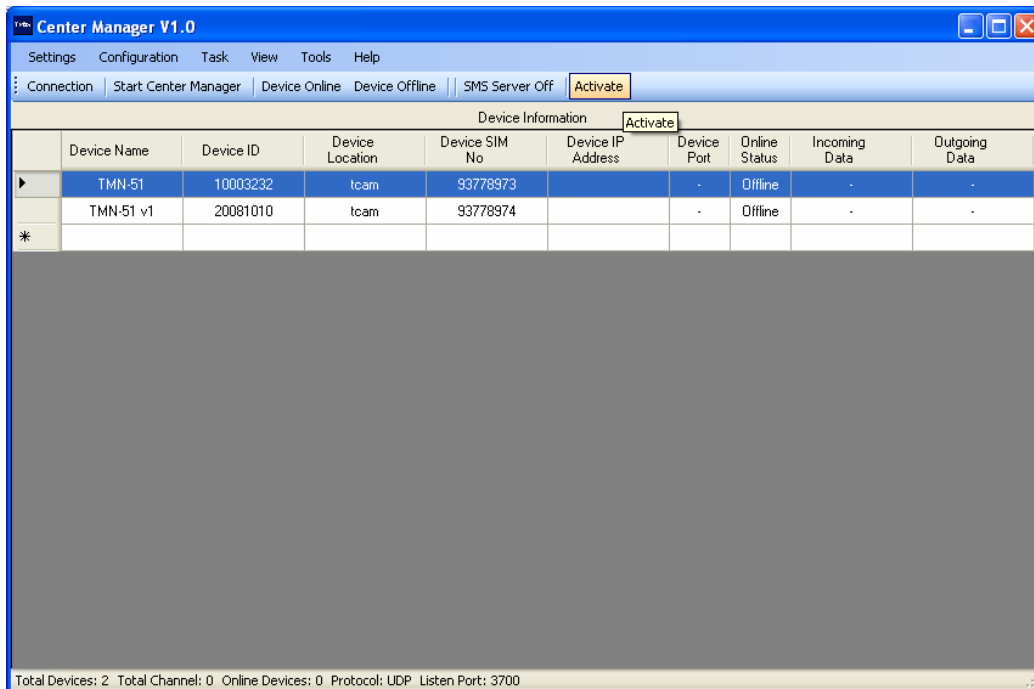


**Figure 24 Activation Mode**

Below is a short description on all 3 activation mode:

- Upon power-up  
TMN-51 will automatically establish a GPRS connection when it is power up and tries to connect to Center Manager.
- Upon receiving SMS  
TMN-51 will always in standby mode and waiting for SMS from Center Manager. Once it receives a SMS from Center Manager, it will establish a GPRS connection and tries to connect to Center Manager.
- Upon receiving call  
TMN-51 will always in standby mode and waiting for call from Center Manager. Once it receives a call from Center Manager, it will establish a GPRS connection and tries to connect to Center Manager.

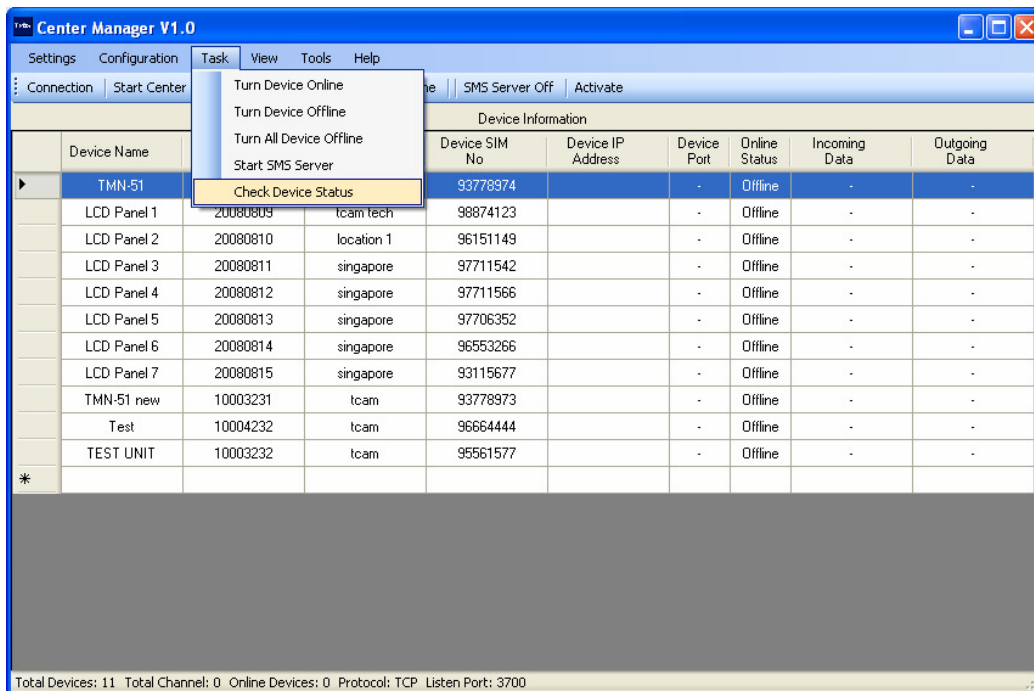
To activate the device that is in standby mode, on the Center Manager, click on Activate button as shown in Figure 25. Please make sure that the SMS Server is running before activating any devices. Refer to the SMS Server for more details.



**Figure 25 Activation of Device**

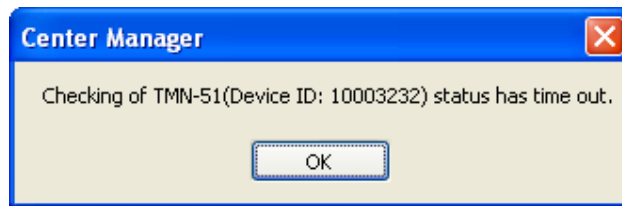
### 3.04 Checking Device Status

To check if the device is responsive, on the Center Manager, select Task → Check Device Status. If the device is responsive, a pop up window will appear as shown in Figure 26.



**Figure 26 Check Device Status**

Within the timeout period and there is still no response from the device, Center Manager will pop out a timeout message as shown in Figure 27. The non-responsive device will be considered offline by Center Manager.



**Figure 27 Timeout Message**

## 4.0 Connection Scenario

Definition: Host PC – PC installed with Center Manager

### 4.01 Scenario 1 (Server Mode)

Situation: -Host PC with public static IP address  
-TMN-51 with public static or dynamic IP address

Solution: -Configure Center Manager as Server  
-In Device Settings window, under Data Service Center, set Primary Service Center IP address as the Host PC's static IP address.

Connection Scenario:

- In Center Manager, click on Start Center Manager button and wait for connection
- Depending on the activation mode of TMN-51, once it connects to GPRS, it will connect itself with Center Manager
- Once connection is established, TMN-51's IP address will show on both Device and Connection view. Its status changes from Offline to Online

### 4.02 Scenario 2 (Client Mode)

Situation: -Host PC with public dynamic IP address  
-TMN-51 with public static IP address

Solution: -Configure Center Manager as Client  
-In Device Settings window, under General, set IP Type as static IP and enter the static IP address of TMN-51

Connection Scenario:

- In Center Manager, click on Start Center Manager button
- Power on TMN-51
- On either Device or Connection view, highlight the device that will be connected
- Click on the Device Online button
- Use Check Device Status function to check if the device is responsive

### 4.03 Scenario 3 (Client Mode)

Situation: -Host PC with public dynamic IP address  
-TMN-51 with public dynamic IP address

Solution: -Configure Center Manager as Client  
-In Device Settings window, under General, set IP Type as dynamic IP  
-Attach a GSM modem to Host PC and setup the modem accordingly  
-In Device Settings page, enter both the GSM modem's mobile no and TMN-51's mobile no

Connection Scenario 1(Center Manager is started):

- In Center Manager, click on Start Center Manager button and Start SMS Server
- Power on TMN-51

- Wait for connection to establish
- Once connection is established, IP address will be displayed and online status changed to Online

Background Scenario 1:

- Once TMN-51 obtains an IP address, it will SMS the IP address to Centre Manager.
- Center Manager retrieves the IP address from the SMS and makes a connection with TMN-51

Connection Scenario 2(Center Manager is stopped):

- In Center Manager Start SMS Server. Center Manager is not started
- Power on TMN-51
- Center Manager will receive TMN-51's IP address but it will not establish a connection
- Click on Start Center Manager to begin connection
- Highlight the device to connect and click on Device Online button

Background Scenario 2:

- Once TMN-51 obtains an IP address, it will SMS the IP address to Centre Manager.
- Center Manager retrieves the IP address from the SMS and saves it
- Once user click on Start Center Manager, the system initiates itself for connection
- Center Manager will use the saved IP address to connect to the TMN-51