
C2C Configuration Guide

This document provides guidelines for configuration of the C2C™ software.

Note: For installation information, see the [C2C Office Set-Up Guide](#).

See the following:

- [Before Configuration](#), on page 1
- [Communication with the C2C](#), on page 2
- [C2C Configuration](#), on page 5
- [Statistics for the Modem Ports](#), on page 43

3.1 Before Configuration

Before configuring the C2C software, make sure you have performed the following procedures in the [C2C Office Set-Up Guide](#):

- [Checking the Parts](#)
- [Installing the Hardware](#)

Note: If you need to restore the C2C's factory default settings, do the following:

- 1 Push the end of a paperclip into the C2C's recessed C/R (Configuration Reset) button. Hold the button in for 5 seconds.
- 2 Watch the LEDs on the front of the C2C chassis.
 - ❖ After about 5 seconds, all LEDs will go off briefly.
- 3 At this point, release the C/R button.
 - ❖ The C2C's LEDs may flash or may stay on or off during tests while the C2C performs its reset routine.
 - ❖ After the C2C finishes resetting, it uses the settings it had when it was shipped to you.

! **Caution:** Restoring the C2C's factory default settings erases any configuration you had given the C2C.

3.2 Communication with the C2C

The C2C's default IP address is 192.168.10.1. The C2C's Ethernet port is a DHCP server and issues IP address 192.168.10.2 to the first connected PC that is configured as a DHCP client.

Note: The default DHCP server on the C2C's Ethernet port can issue 30 IP addresses: 192.168.10.2 through 192.168.10.31.

Most of the time, a device attached to the C2C's Ethernet port—such as an ATM or an RTU—will be a DHCP client. If the device that will attach to the C2C's Ethernet port is not a DHCP client, confer with your network administrator.

After the C2C starts up and its Ethernet port is active (indicated when the Ethernet LED is on), you can use one of the following methods to connect to the C2C:

- [Using a DOS Command](#), on page 2
- [Using a Terminal Emulation Routine](#), on page 3

Note: If you see a message similar to the message in [Figure 3-1](#), make sure the C2C's Ethernet port is connected to the control terminal's Ethernet port.

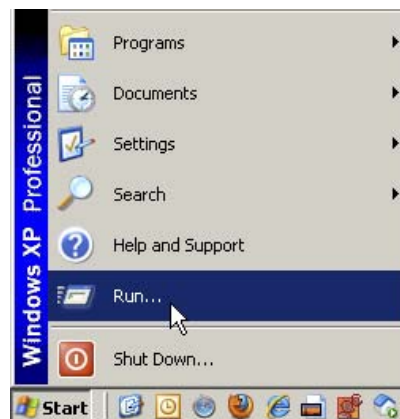
Figure 3-1. Message That Connection Cannot Reach the C2C



3.2.1 Using a DOS Command

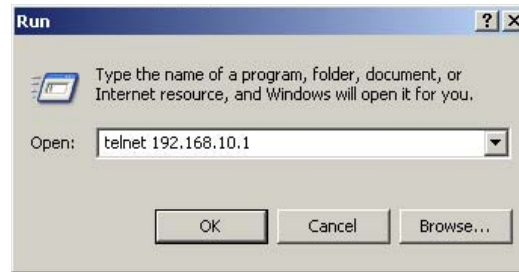
- 1 Open a DOS window by selecting the Windows **Start** button and selecting the **Run** command ([Figure 3-2](#)).

Figure 3-2. Selecting the Command to Run Windows DOS



- 2 When the Run window opens, type: `telnet 192.168.10.1` ([Figure 3-3](#)).

Figure 3-3. Entering the DOS Telnet Connection Command

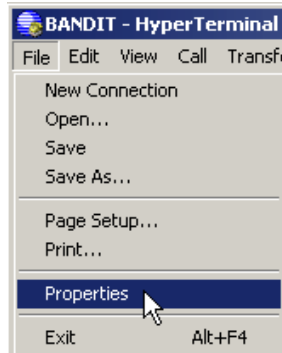


3.2.2 Using a Terminal Emulation Routine

Note: You may use any terminal emulation application; consult its manufacturer for details of use. The example shows HyperTerminal.

- 1 In the terminal emulation routine, select the connection **Properties** (Figure 3-4).

Figure 3-4. Selecting the Properties Command in the Terminal Emulator



- 2 Select the IP communication protocol—for example, **TCP/IP Winsock** (Figure 3-5).

Figure 3-5. Selecting the Communication Protocol in the Terminal Emulator

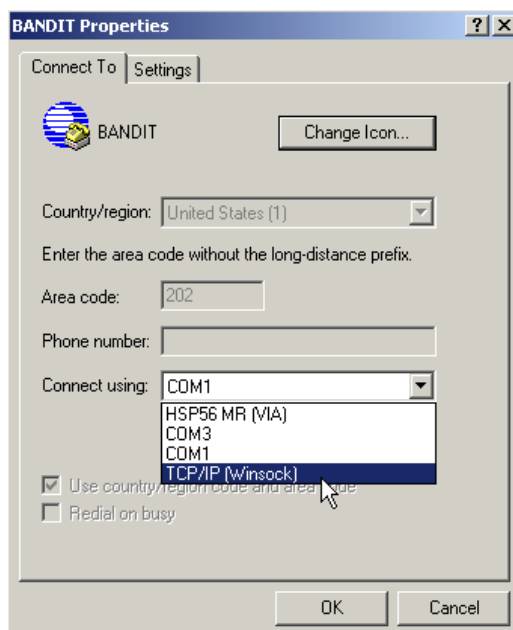
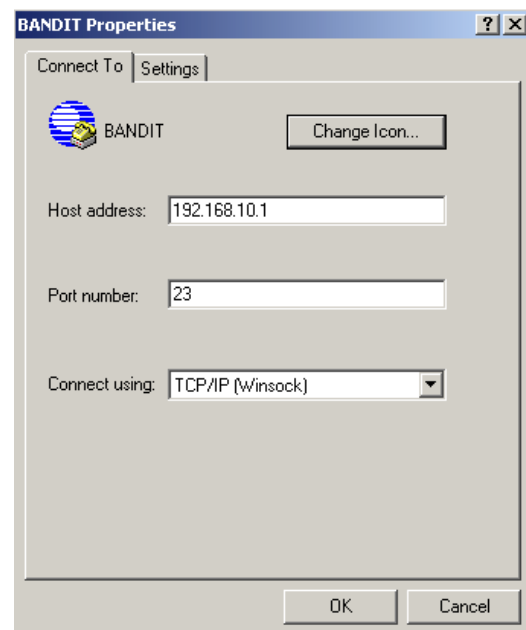
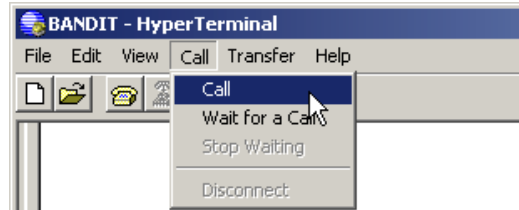


Figure 3-6. Setting the IP Connection Parameters in the Terminal Emulator



- 3 Set the host address as **192.168.10.1** and set the connection through **Port 23** (Figure 3-6).
- 4 Then use the terminal emulator menu to **Call** (or **Connect** to) the C2C (Figure 3-7).

Figure 3-7. Establishing the Telnet Connection from the Terminal Emulator



3.2.3 Logging In to the C2C Software

- 1 After you have established *Communication with the C2C* (see page 2), press the **Enter** key on the control terminal's keyboard.
 - ❖ The control terminal displays the C2C's security message.

```

*****
*
*   WARNING: You are accessing an actively monitored system   *
*
*           Unauthorized access prohibited!                   *
*
*   Disconnect IMMEDIATELY if you are not an authorized user *
*
*****

```

- ❖ Then the C2C's log-in screen is displayed:
 - If this is the initial log-in to this C2C, you will see the first screen shown below.
 - On subsequent log-ins, you will see the second screen shown below.

```

Enter New ADMIN Name:

```

```

Enter User Name:

```

- 2 To log into the C2C software, type your user name.

Note: The first person to log into the C2C must have administrator privileges. Get all names and passwords from your network administrator.

- ❖ The password prompt is displayed.

```

Enter Password:

```

3 Type your password and press the **Enter** key.

❖ After a successful log-in, the welcome screen is displayed.

```
WELCOME TO ENCORE PRODUCT -- C2C 2G, ELIOS Version:17019.0182  
Copyright ENCORE NETWORKS Inc., 2002-2011.
```

❖ Then the ELIOS™ software displays the C2C's Main Menu.

```
Main Menu  
-----  
1) QuickStart Config Builder  
  
2) Typical Configurations  
3) Advanced Configurations  
4) Tools  
  
V) View Current Unit Status  
F) Cellular Fast Connect  
L) Load Factory Defaults  
P) Load Plug and Play Defaults  
W) Write Configuration  
R) Reset Unit  
X) eXit Session  
S) Statistics  
Y) sYstem Administration  
  
Enter Choice :
```

3.3 C2C Configuration

See the following to configure the C2C:

- [Configuring the C2C's Ethernet Port](#), on page 6
- [Configuring the C2C's Modem Port](#), on page 9
- [Saving and Using the New Configuration](#), on page 40

Note: These configuration examples are for applications that will bypass the Public Switched Telephone Network (PSTN) and instead will use a cellular wireless connection to an IP network. The Telnet or PPP application will be used to carry the analog/async modem traffic over IP.

3.3.1 Configuring the C2C's Ethernet Port

- 1 On the C2C's Main Menu, select Typical Configurations.

```
C2C Telnet
Main Menu
-----
1) QuickStart Config Builder
2) Typical Configurations
3) Advanced Configurations
4) Tools

V) View Current Unit Status
L) Load Factory Defaults
W) Write Configuration
R) Reset Unit
X) eXit Session
S) Statistics
Y) sYstem Administration

Enter Choice :
```

- 2 The Typical Configurations Menu is displayed.

```
C2C Telnet
Typical Configurations Menu
-----
1) System Configuration
2) IP Interfaces
3) IP Static Routes
4) VPN Profiles
5) IP/VPN Policies
6) NAT Profiles
7) OSPF/BGP Configuration
8) DNS/DHCP Servers
9) Configure Firewall
A) IP QoS (Quality of Service)
B) GPS Geo-Fencing

L) LAN      : EtherNet           DHCP Server  192.168.10.1   ETHERNET
M) MODEM   : Telnet Terminal    MODEM              INTERNAL
O) WIRELESS : Point-to-Point    WIRELESS           INTERNAL
P) More Ports...

Enter Choice :
```

- 3 On the Typical Configurations Menu, select the LAN Ethernet port.

❖ The Logical Port Attribute menu is displayed.

```
C2C Telnet
Logical Port Attribute Menu
-----
1) Protocol           : EtherNet
2) DHCP Type         : DHCP Server
3) DHCP Server Parameters
4) VLAN Tagging Parameters : No VLAN Tagging
5) MAC Filters
6) Undefine Current Logical Port

Enter Choice :
```

4 Do one of the following:

a If the **Protocol** setting is **Ethernet** (the default), select **Protocol**.

- ❖ The Ethernet Port Parameters Menu is displayed. Go to [Step a](#) (on page 8).

```
C2C Telnet
EtherNet Port Parameters
-----
1) SmartARP : Disabled

Enter Choice :
```

b If the **Protocol** setting is not **Ethernet**, select **Undefine Current Logical Port**.

- ❖ The Logical Port Attribute Menu is redisplayed, with **Protocol** as **Undefined**.

```
C2C Telnet
Logical Port Attribute Menu
-----
1) Protocol           : UNDEFINED
2) DHCP Type         : DHCP Server
3) DHCP Server Parameters
4) VLAN Tagging Parameters : No VLAN Tagging
5) MAC Filters
6) Undefine Current Logical Port

Enter Choice : 1
```

5 On the Logical Port Attribute Menu, select **Protocol**.

- ❖ The Logical Port Protocol Selection Menu is displayed.

```
C2C Telnet
Logical Port Protocol Selection Menu
-----
1) PPPoE(PPP over Ethernet)
2) EtherNet Configuration
3) X.42 Spoofing
4) Diagnostic Async

Enter Choice :
```

6 On the Logical Port Protocol Selection Menu, select **Ethernet Configuration**.

❖ The Ethernet Port Parameters Menu is displayed.

```
C2C Telnet
EtherNet Port Parameters
-----
1) SmartARP : Disabled

Enter Choice :
```

Note: The Ethernet Port Parameters Menu lists only the parameter **SmartARP**. In some BANDIT devices, SmartARP functions in the following way:

- When SmartARP is disabled, the unit's Ethernet port automatically detects Address Resolution Protocol (ARP) information—MAC address to IP address mapping—only from ARP responses.
- When SmartARP is enabled, the Ethernet port automatically detects ARP information from all incoming IP data packets (including packets that are ARP responses).

However, the C2C's Ethernet port always detects ARP information from all incoming IP packets, so SmartARP provides no additional benefit for the C2C. In the C2C, you may enable or disable SmartARP; there is no difference in C2C function.

7 If you do not wish to enable SmartARP, go to [Step 8](#). If you wish to enable SmartARP, do the following:

a On the Ethernet Port Parameters Menu, select **SmartARP**.

❖ The SmartARP for Ethernet Menu is displayed.

```
C2C Telnet
SmartARP - Ethernet
-----
1) Enabled : ARP data automatically detected from data packets and ARP responses
2) Disabled: ARP data automatically detected from ARP responses only

Enter Choice :
```

b On the SmartARP for Ethernet Menu, select **Enabled**.

- ❖ The Ethernet Port Parameters Menu is redisplayed, with SmartARP configured as **enabled** for all incoming IP packets (Ethernet packets).

```
C2C Telnet
EtherNet Port Parameters
-----
1) SmartARP : Enabled

Enter Choice :
```

- 8 When you have finished configuring the Ethernet port, press **CTRL Z** once, or press the **Escape** key until you reach the Main Menu.

- ❖ The Main Menu is displayed.

- 9 Go to [Saving and Using the New Configuration](#), on page 40.

3.3.2 Configuring the C2C's Modem Port

Go to one of the following to configure the C2C's modem port:

- [Using a Quick Configuration for the C2C Software](#), on page 9
- [Using a Standard Configuration for the C2C Software](#), on page 20

3.3.2.1 Using a Quick Configuration for the C2C Software

- 1 On the C2C's Main Menu, select **QuickStart Config Builder**.

```
C2C_DEFAULTS
Main Menu
-----
1) QuickStart Config Builder

2) Typical Configurations
3) Advanced Configurations
4) Tools

V) View Current Unit Status
L) Load Factory Defaults
W) Write Configuration
R) Reset Unit
X) eXit Session
S) Statistics
Y) sYstem Administration

Enter Choice : 1
```

- ❖ The C2C QuickStart Menu is displayed.

```
C2C_DEFAULTS
-
1) Cellular with PPP on Modem
2) Cellular with Telnet Terminal on Modem

Enter Choice : 1
```

2 Go to one of the following:

- [C2C QuickStart Configuration Using PPP](#), on page 10
- [C2C QuickStart Configuration Using Telnet](#), on page 14

3.3.2.1.1 C2C QuickStart Configuration Using PPP

You have reached this procedure from [Step 2](#) (on page 10) of [Using a Quick Configuration for the C2C Software](#). The C2C QuickStart Menu has been displayed.

```
C2C_DEFAULTS
-
1) Cellular with PPP on Modem
2) Cellular with Telnet Terminal on Modem

Enter Choice : 1
```

1 On the C2C QuickStart Menu, select **Cellular with PPP on Modem**.

❖ The menu for C2C PPP network roles is displayed.

```
C2C_DEFAULTS
-
1) Ethernet Cellular Router
2) Ethernet Cellular VPN Gateway(Initiator)
3) Ethernet Cellular VPN Gateway(Terminator)

Enter Choice : 1
```

2 On the menu for C2C network roles, select **Ethernet Cellular Router**.

❖ The PPP menu of Cellular Startup Configuration Parameters is displayed.

```
C2C_DEFAULTS
Cellular Startup Configuration Parameters
-----
1) System Name :
2) LAN Interface IP : 0.0.0.0 /0.0.0.0 No DHCP Server
3) Configure Cellular modem on WIRELESS port

L) Load Above Config
Z) Clear All Fields
V) reView/Modify Loaded Config
R) Reset (Write and Reset)

Enter Choice : 1
```

3 On the menu of Cellular Startup Configuration Parameters, select **System Name**.

❖ The following prompt is displayed. Go to [System Name and IP Address QuickStart Parameters](#), on page 23.

```
Enter System Name :
```

- 4 After you have configured the device name and IP address, then, on the menu of Cellular Startup Configuration Parameters, select **Configure Cellular Modem on Wireless port**.

```
C2C_DEFAULTS
Cellular Startup Configuration Parameters
-----
1) System Name : PPP C2C
2) LAN Interface IP : 192.168.10.1 /255.255.255.0 DHCP Server
3) Configure Cellular modem on WIRELESS port

L) Load Above Config
Z) Clear All Fields
V) reView/Modify Loaded Config
R) Reset (Write and Reset)

Enter Choice : 3
```

- ❖ The Menu to Configure the Wireless Port Cellular Card is displayed. Go to [Configuring the Wireless Port Cellular Card](#), on page 25.

```
C2C_DEFAULTS
Configure WIRELESS Port Cellular Card
-----
1) Wireless Interface IP : Dynamic
2) Wireless PPP User Name :
3) Wireless PPP Password :
4) Wireless Access Number :
5) Wireless Toll Saver : Enabled
6) Wireless Baudrate : 115200
7) Wireless GPRS/EDGE Context AT Command : AT+CGDCONT=1,"IP","xx.yy.com",,0,0

Enter Choice : 4
```

- 5 When you have finished configuring the cellular wireless card, press **Escape** to return to the menu of Cellular Startup Configuration Parameters.

```
C2C_DEFAULTS
Cellular Startup Configuration Parameters
-----
1) System Name : PPP C2C
2) LAN Interface IP : 192.168.10.1 /255.255.255.0 DHCP Server
3) Configure Cellular modem on WIRELESS port

L) Load Above Config
Z) Clear All Fields
V) reView/Modify Loaded Config
R) Reset (Write and Reset)

Enter Choice : L
```

- 6 On the menu of Cellular Startup Configuration Parameters: When you have finished configuring the C2C parameters, select **Load Above Config**.

❖ The screen might list the configured parameters.

```
System Name      : PPP C2C
System IP Address: 192.168.10.1
LAN IP Address  : 192.168.10.1    /255.255.255.0   DHCP Server
WAN IP Address  : Dynamic

Parameter      ExpansionWireless

IP Address:     -N/A-            0.0.0.0
PPP User Name:  -N/A-
PPP Password:   -N/A-
Access Number:  -N/A-            #777
Toll Saver:     -N/A-            Disabled
Baudrate:       -N/A-            115200
WIRELESS GPRS/EDGE Context AT Command :
```

❖ Then the following prompt is displayed.

```
Caution: Existing configurations will be over written
Do you want to Continue?(Y/N)[N]:Y
```

- 7 Answer y (yes).

❖ The following message is displayed.

```
Loading Cellular Config, Please wait...Done.
This takes effect only after WRITE and RESET, Press Any key...
```

❖ Then the menu of Cellular Startup Configuration Parameters is redisplayed.

```
PPP C2C
Cellular Startup Configuration Parameters
-----
1) System Name : PPP C2C
2) LAN Interface IP : 192.168.10.1    /255.255.255.0   DHCP Server
3) Configure Cellular modem on WIRELESS port

L) Load Above Config
Z) Clear All Fields
V) reView/Modify Loaded Config
R) Reset (Write and Reset)

Enter Choice : V
```

- 8 On the menu of Cellular Startup Configuration Parameters: Select **Review/Modify Loaded Config**.

❖ The Typical Configurations Menu is displayed.

```

PPP C2C
Typical Configurations Menu
-----
1) System Configuration
2) IP Interfaces
3) IP Static Routes
4) VPN Profiles
5) IP/VPN Policies
6) NAT Profiles
7) OSPF/BGP Configuration

8) DNS/DHCP Servers
9) Configure Firewall
A) IP QoS (Quality of Service)
B) GPS Geo-Fencing

L) LAN      : EtherNet          DHCP Server 192.168.10.1  ETHERNET
M) MODEM   : Point-to-Point    MODEM
O) WIRELESS : Point-to-Point    WIRELESS          INTERNAL
P) More Ports...

Enter Choice : M

```

- 9** On the Typical Configurations Menu, select **Modem**.

Note: This selection is for the RJ11 modem port on the back of the C2C chassis.

❖ The RJ11 modem's Logical Port Attribute Menu is displayed. Go to [Configuring the RJ11 Modem Port for PPP](#), on page 27.

```

PPP C2C
Logical Port Attribute Menu
-----
1) Protocol      : Point-to-Point
2) Global Paths
3) Dialup Configuration
4) Undefine Current Logical Port

Enter Choice : 1

```

- 10** When you have finished reviewing the PPP configuration, press the **Escape** key until you reach the Menu of Cellular Startup Configuration Parameters.

```

PPP C2C
Cellular Startup Configuration Parameters
-----
1) System Name : PPP C2C
2) LAN Interface IP : 192.168.10.1 /255.255.255.0 DHCP Server
3) Configure Cellular modem on WIRELESS port

L) Load Above Config
Z) Clear All Fields
V) reView/Modify Loaded Config
R) Reset (Write and Reset)

Enter Choice : R

```

- 11** On the Menu of Cellular Startup Configuration Parameters, select **Reset (Write and Reset)**.

❖ The Menu to Reset the Unit is displayed.

```

PPP C2C
Reset Unit
-----
Y) Yes
N) No

Are You Sure? : Y

```

- 12** On the Menu to Reset the Unit, select **Yes**.

❖ The following prompt is displayed.

```

Save New Configuration? (Enter Y (Yes) or N (No)) : y

```

- 13** Select **Yes**.

❖ The configuration is saved, and the chassis resets. When the C2C restarts, it will use the new configuration. For details, see [Saving and Using the New Configuration](#), on page 40.

3.3.2.1.2 C2C QuickStart Configuration Using Telnet

You have reached this procedure from [Step 2](#) (on page 10) of [Using a Quick Configuration for the C2C Software](#). The C2C QuickStart Menu has been displayed.

```

C2C_DEFAULTS
-
1) Cellular with PPP on Modem
2) Cellular with Telnet Terminal on Modem

Enter Choice :

```

- 1** On the C2C QuickStart Menu, select **Cellular with Telnet Terminal on Modem**.

❖ The menu for C2C telnet network roles is displayed.

```

C2C_DEFAULTS
-----
1) Ethernet Cellular Router
2) Ethernet Cellular VPN Gateway(Initiator)
3) Ethernet Cellular VPN Gateway(Terminator)
Enter Choice : 1

```

- 2** On the menu for C2C telnet network roles, select **Ethernet Cellular Router**.

❖ The telnet menu of Cellular Startup Configuration Parameters is displayed.

```
C2C_DEFAULTS
Cellular Startup Configuration Parameters
-----
1) System Name :
2) LAN Interface IP : 0.0.0.0 /0.0.0.0 No DHCP Server
3) Remote IP Address : 0.0.0.0
4) Local TCP Port : 0
5) Remote TCP Port : 0
6) Modem Dialup Mode : ANSWER
7) Configure Cellular modem on WIRELESS port
L) Load Above Config
Z) Clear All Fields
V) reView/Modify Loaded Config
R) Reset (Write and Reset)
Enter Choice : 1
```

3 On the menu of Cellular Startup Configuration Parameters, select **System Name**.

❖ The following prompt is displayed. Go to [System Name and IP Address QuickStart Parameters](#), on page 23.

```
Enter System Name :
```

4 After you have configured the device name and IP address, then, on the menu of Cellular Startup Configuration Parameters, select **Local TCP Port**.

```
C2C_DEFAULTS
Cellular Startup Configuration Parameters
-----
1) System Name : C2C Telnet
2) LAN Interface IP : 192.168.10.1 /255.255.255.0 DHCP Server
3) Remote IP Address : 0.0.0.0
4) Local TCP Port : 0
5) Remote TCP Port : 0
6) Modem Dialup Mode : ANSWER
7) Configure Cellular modem on WIRELESS port
L) Load Above Config
Z) Clear All Fields
V) reView/Modify Loaded Config
R) Reset (Write and Reset)
Enter Choice : 4
```

❖ The following prompt is displayed.

```
Enter Local TCP Port,[0]: 7700
```

5 Type the local TCP port number and press **Enter**.

Note: Get all port numbers from your network administrator.

```
C2C_DEFAULTS
Cellular Startup Configuration Parameters
-----
1) System Name : C2C Telnet
2) LAN Interface IP : 192.168.10.1 /255.255.255.0 DHCP Server
3) Remote IP Address : 0.0.0.0
4) Local TCP Port : 7700
5) Remote TCP Port : 0
6) Modem Dialup Mode : ANSWER
7) Configure Cellular modem on WIRELESS port
L) Load Above Config
Z) Clear All Fields
V) reView/Modify Loaded Config
R) Reset (Write and Reset)
Enter Choice : 6
```

6 On the menu of Cellular Startup Configuration Parameters, select **Modem Dialup Mode**.

❖ The Menu for Dial-Out Role is displayed.

```
1) DIALOUT
2) ANSWER
3) DIALOUT/DIALIN
Enter Choice:
```

7 Select **Dialout**.

```
C2C_DEFAULTS
Cellular Startup Configuration Parameters
-----
1) System Name : C2C Telnet
2) LAN Interface IP : 192.168.10.1 /255.255.255.0 DHCP Server
3) Remote IP Address : 0.0.0.0
4) Local TCP Port : 7700
5) Remote TCP Port : 0
6) Modem Dialup Mode : DIALOUT
7) Configure Cellular modem on WIRELESS port
L) Load Above Config
Z) Clear All Fields
V) reView/Modify Loaded Config
R) Reset (Write and Reset)
Enter Choice : 7
```

8 On the menu of Cellular Startup Configuration Parameters, select **Configure Cellular Modem on Wireless port**.

❖ The Menu to Configure the Wireless Port Cellular Card is displayed. Go to [Configuring the Wireless Port Cellular Card](#), on page 25.


```

C2C_DEFAULTS
Configure WIRELESS Port Cellular Card
-----
1) Wireless Interface IP : Dynamic
2) Wireless PPP User Name :
3) Wireless PPP Password :
4) Wireless Access Number :
5) Wireless Toll Saver : Enabled
6) Wireless Baudrate : 115200
7) Wireless GPRS/EDGE Context AT Command : AT+CGDCONT=1,"IP","xx.yy.com",,0,0
Enter Choice : 4

```

- 9 When you have finished configuring the cellular wireless card, press **Escape** to return to the menu of Cellular Startup Configuration Parameters.

```

C2C_DEFAULTS
Cellular Startup Configuration Parameters
-----
1) System Name : C2C Telnet
2) LAN Interface IP : 192.168.10.1 /255.255.255.0 DHCP Server
3) Remote IP Address : 0.0.0.0
4) Local TCP Port : 7700
5) Remote TCP Port : 0
6) Modem Dialup Mode : DIALOUT
7) Configure Cellular modem on WIRELESS port
L) Load Above Config
Z) Clear All Fields
V) reView/Modify Loaded Config
R) Reset (Write and Reset)
Enter Choice : L

```

- 10 On the menu of Cellular Startup Configuration Parameters: When you have finished configuring the C2C parameters, select **Load Above Config**.

❖ The screen might list the configured parameters.

```

System Name : C2C Telnet
System IP Address: 192.168.10.1
LAN IP Address : 192.168.10.1 /255.255.255.0 DHCP Server
WAN IP Address : Dynamic
Parameter ExpansionWireless

IP Address: -N/A- 0.0.0.0
PPP User Name: -N/A-
PPP Password: -N/A-
Access Number: -N/A- #777
Toll Saver: -N/A- Disabled
Baudrate: -N/A- 115200
WIRELESS GPRS/EDGE Context AT Command :

```

❖ Then the following prompt is displayed.

```

Caution: Existing configurations will be over written
Do you want to Continue?(Y/N)[N]:Y

```

11 Answer y (yes).

- ❖ The following message is displayed.

```

Loading Cellular Config, Please wait...Done.
This takes effect only after WRITE and RESET, Press Any key...

```

- ❖ Then the menu of Cellular Startup Configuration Parameters is redisplayed.

```

C2C Telnet
Cellular Startup Configuration Parameters
-----
1) System Name : C2C Telnet
2) LAN Interface IP : 192.168.10.1 /255.255.255.0 DHCP Server
3) Remote IP Address : 0.0.0.0
4) Local TCP Port : 7700
5) Remote TCP Port : 0
6) Modem Dialup Mode : DIALOUT
7) Configure Cellular modem on WIRELESS port
L) Load Above Config
Z) Clear All Fields
V) reView/Modify Loaded Config
R) Reset (Write and Reset)
Enter Choice : V

```

12 On the menu of Cellular Startup Configuration Parameters: Select **Review/Modify Loaded Config**.

- ❖ The Typical Configurations Menu is displayed.

```

C2C Telnet
Typical Configurations Menu
-----
1) System Configuration
2) IP Interfaces
3) IP Static Routes
4) VPN Profiles
5) IP/VPN Policies
6) NAT Profiles
7) OSPF/BGP Configuration
8) DNS/DHCP Servers
9) Configure Firewall
A) IP QoS (Quality of Service)
B) GPS Geo-Fencing
L) LAN : EtherNet DHCP Server 192.168.10.1 ETHERNET
M) MODEM : Telnet Terminal MODEM
O) WIRELESS : Point-to-Point WIRELESS INTERNAL
P) More Ports...
Enter Choice : 6

```

13 On the Typical Configurations Menu, select **NAT Profiles**.

- ❖ The Network Address Translation menu is displayed. Go to [Preparing the Network Address Translation Profile](#), on page 36.

```

C2C Telnet
Network Address Translation (NAT)
-----
1) NAT Configuration 1
2) NAT Configuration 2
3) NAT Configuration 3
Enter Choice : 1

```

- 14** When you have finished configuring NAT, press the **Escape** key until you reach the Menu of Cellular Startup Configuration Parameters.

```

C2C Telnet
Cellular Startup Configuration Parameters
-----
1) System Name : C2C Telnet
2) LAN Interface IP : 192.168.10.1 /255.255.255.0 DHCP Server
3) Remote IP Address : 0.0.0.0
4) Local TCP Port : 7700
5) Remote TCP Port : 0
6) Modem Dialup Mode : DIALOUT
7) Configure Cellular modem on WIRELESS port
L) Load Above Config
Z) Clear All Fields
V) reView/Modify Loaded Config
R) Reset (Write and Reset)
Enter Choice : R

```

- 15** On the Menu of Cellular Startup Configuration Parameters, When you have finished configuring telnet parameters, select **Reset (Write and Reset)**.

❖ The Menu to Reset the Unit is displayed.

```

C2C Telnet
Reset Unit
-----
Y) Yes
N) No
Are You Sure? : Y

```

- 16** On the Menu to Reset the Unit, select **Yes**.

❖ The following prompt is displayed.

```

Save New Configuration? (Enter Y (Yes) or N (No)) : y

```

- 17** Select **Yes**.

❖ The configuration is saved, and the chassis resets. When the C2C restarts, it will use the new configuration. For details, see [Saving and Using the New Configuration](#), on page 40.

3.3.2.2 Using a Standard Configuration for the C2C Software

- 1 On the Main Menu, select **Typical Configurations**.

```

Main Menu
-----
1) QuickStart Config Builder

2) Typical Configurations
3) Advanced Configurations
4) Tools

V) View Current Unit Status
F) Cellular Fast Connect
L) Load Factory Defaults
P) Load Plug and Play Defaults
W) Write Configuration
R) Reset Unit
X) eXit Session
S) Statistics
Y) sYstem Administration

Enter Choice :
```

- ❖ The Typical Configurations Menu is displayed.

```

FAST3
Typical Configurations Menu
-----
1) System Configuration
2) IP Interfaces
3) IP Static Routes
4) VPN Profiles
5) IP/VPN Policies
6) NAT Profiles
7) OSPF/BGP Configuration
8) DNS/DHCP Servers
9) Configure Firewall
A) IP QoS (Quality of Service)
B) GPS Geo-Fencing
L) LAN      : EtherNet          DHCP Server  192.168.10.1    ETHERNET
M) MODEM   : Point-to-Point    MODEM
O) WIRELESS : Point-to-Point    WIRELESS          INTERNAL
P) More Ports...

Enter Choice :
```

- 2 On the Typical Configurations Menu, select **System Configuration**.

- ❖ The menu to Configure System Parameters is displayed.

```

FAST3
Configure System Parameters
-----
1) System IP Address : 192.168.10.1
2) System Name      : FAST3
Enter Choice :
```

- 3 On the menu to Configure System Parameters, select each parameter and configure it.
 - a If the system IP address is different from the IP address that the C2C will use, select **System IP Address**.

❖ The following prompt is displayed.

```
Enter Local IP Address (N.N.N.N) :
```

- b Type the C2C's IP address, and press the **Enter** key.
 - c If the system name is different from the name for the C2C, select **System Name**.

❖ The following prompt is displayed.

```
Enter Local BANDIT Name (Maximum 15 characters):
```

- d Type the C2C name and press the **Enter** key.

Note: Any character, including a space, is allowed in the system name. The system name may be 1 to 15 characters long.

If you do not want to assign the C2C a system name, you can leave this field blank.

❖ The name is accepted, and the menu to Configure System Parameters is redisplayed.

```
C2C Demo
Configure System Parameters
-----
1) System IP Address : 192.168.10.1
2) System Name : C2C Demo
Enter Choice :
```

- 4 When you have finished with the menu to Configure System Parameters, press **Escape** to return to the Typical Configurations Menu.

```

C2C Demo
Typical Configurations Menu
-----
1) System Configuration

2) IP Interfaces
3) IP Static Routes
4) VPN Profiles
5) IP/VPN Policies
6) NAT Profiles
7) OSPF/BGP Configuration
8) DNS/DHCP Servers
9) Configure Firewall
A) IP QoS (Quality of Service)
B) GPS Geo-Fencing
L) LAN      : EtherNet          DHCP Server 192.168.10.1  ETHERNET
M) MODEM   : Point-to-Point    MODEM
O) WIRELESS : Point-to-Point    WIRELESS          INTERNAL
P) More Ports...
Enter Choice :

```

5 On the Typical Configurations Menu, select the **Modem** port.

Note: This selection is the analog modem port, which uses a physical RJ11 connector on the back of the C2C chassis.

We will not configure the internal **Wireless** modem port; that port will be configured for its role in the network when it automatically activates on the cellular network.

❖ The Logical Port Attribute Menu for the RJ11 modem port is displayed.

```

C2C Demo
Logical Port Attribute Menu
-----
1) Protocol      : Point-to-Point
2) Global Paths
3) Dialup Configuration
4) Undefine Current Logical Port
Enter Choice :

```

Note: The default protocol for this modem port is the Point-to-Point Protocol (PPP).

6 Do one of the following:

- a** If you want the port to use PPP, go to [Configuring the RJ11 Modem Port for PPP](#), on page 27.
- b** If you want the port to use Telnet, go to [Configuring the RJ11 Modem Port for Telnet](#), on page 30.

7 When you have finished configuring the C2C parameters, press **Ctrl Z** to return to the Main Menu.

```
C2C Demo
Main Menu
-----
1) QuickStart Config Builder
2) Typical Configurations
3) Advanced Configurations
4) Tools
V) View Current Unit Status
F) Cellular Fast Connect
L) Load Factory Defaults
P) Load Plug and Play Defaults
W) Write Configuration
R) Reset Unit
X) eXit Session
S) Statistics
Y) sYstem Administration
Enter Choice :
```

- 8 Go to [Saving and Using the New Configuration](#), on page 40.

3.3.2.3 System Name and IP Address QuickStart Parameters

You have reached this procedure from one of the following:

- [Step 3](#) (on page 10) of [C2C QuickStart Configuration Using PPP](#)
- [Step 3](#) (on page 15) of [C2C QuickStart Configuration Using Telnet](#)

On the menu of menu of Cellular Startup Configuration Parameters, you selected **System Name**.

- ❖ The following prompt has been displayed.

```
Enter System Name :
```

- 1 Type a name for this device—for example, **PPP C2C** or **PPP Telnet**—and press the **Enter** key.

Note: The device name must be unique in the network. Get all names and IP addresses from your network administrator.

- ❖ The name is accepted, and the menu of Cellular Startup Configuration Parameters is redisplayed.

```
C2C_DEFAULTS
Cellular Startup Configuration Parameters
-----
1) System Name : PPP C2C
2) LAN Interface IP : 0.0.0.0 /0.0.0.0 No DHCP Server
3) Configure Cellular modem on WIRELESS port

L) Load Above Config
Z) Clear All Fields
V) reView/Modify Loaded Config
R) Reset (Write and Reset)

Enter Choice : 2
```

- 2 On the menu of Cellular Startup Configuration Parameters, select **LAN Interface IP**.

❖ The following prompt is displayed.

```
Enter IP Address :192.168.10.1
```

- 3 Type the IP address for this C2C, and press **Enter**.

Note: The IP address must be unique in the network. Get all names and IP addresses from your network administrator.

❖ The following prompt is displayed.

```
Enter IP Subnet Mask :255.255.255.0
```

- 4 Type the IP subnet mask, and press **Enter**. (To accept the default, just press **Enter**.)

❖ The following prompt is displayed.

```
Enter DHCP Type (1.No DHCP, 2.DHCP Server)(1 to 2)[1] : 2
```

- 5 Select **DHCP Server**. (To accept the default, just press **Enter**.)

❖ The following prompt is displayed.

```
Enter DHCP Pool IP Address Low:192.168.10.2
```

- 6 Type the lowest IP address for this C2C port, and press **Enter**.

Note: This IP address will match the IP address you typed for the RJ11 modem port.

❖ The following prompt is displayed.

```
Enter DHCP Pool IP Address High:192.168.10.18
```


- 7 Type the highest IP address for this C2C port, and press **Enter**.

Note: This IP address will match the IP address you typed for the RJ11 modem port.

- ❖ The following prompt is displayed.

```
Enter Lease in Minutes (1 to 65535)[1440] :
```

- 8 Press **Enter** to accept the default number of minutes.)

- ❖ The following prompt is displayed.

```
Enter Domain Name :PPP C2C.com
```

- 9 Press **Enter** to accept the default domain name.

- ❖ The following prompt is displayed.

```
Enter Router IP Address:192.168.10.1
```

- 10 Press **Enter** to accept the default router address.

- ❖ The IP address information is accepted, and the menu of Cellular Startup Configuration Parameters is redisplayed.

- 11 Return to one of the following:

- [Step 4](#) (on page 11) of *C2C QuickStart Configuration Using PPP*
- [Step 4](#) (on page 15) of *C2C QuickStart Configuration Using Telnet*

3.3.2.4 **Configuring the Wireless Port Cellular Card**

You have reached this procedure from one of the following:

- [Step 4](#) (on page 11) of *C2C QuickStart Configuration Using PPP*
- [Step 8](#) (on page 16) of *C2C QuickStart Configuration Using Telnet*

On the menu of Cellular Startup Configuration Parameters, you selected **Configure Cellular Modem on Wireless port**.

- ❖ The Menu to Configure the Wireless Port Cellular Card is displayed.

```

C2C_DEFAULTS
Configure WIRELESS Port Cellular Card
-----
1) Wireless Interface IP : Dynamic
2) Wireless PPP User Name :
3) Wireless PPP Password :
4) Wireless Access Number :
5) Wireless Toll Saver : Enabled
6) Wireless Baudrate : 115200
7) Wireless GPRS/EDGE Context AT Command : AT+CGDCONT=1,"IP","xx.yy.com",,0,0

Enter Choice : 4

```

- 1 On the Menu to Configure the Wireless Port Cellular Card, select **Wireless Access Number**.

❖ The following prompt is displayed.

```

Enter PPP Access Number : #777

```

- 2 Type the wireless access code and press **Enter**.

❖ The wireless access code is accepted, and the Menu to Configure the Wireless Port Cellular Card is redisplayed.

```

C2C_DEFAULTS
Configure WIRELESS Port Cellular Card
-----
1) Wireless Interface IP : Dynamic
2) Wireless PPP User Name :
3) Wireless PPP Password :
4) Wireless Access Number : #777
5) Wireless Toll Saver : Enabled
6) Wireless Baudrate : 115200
7) Wireless GPRS/EDGE Context AT Command : AT+CGDCONT=1,"IP","xx.yy.com",,0,0

Enter Choice : 7

```

- 3 On the Menu to Configure the Wireless Port Cellular Card, select **Wireless GPRS/EDGE Context AT Command**.

❖ The following prompt is displayed.

```

Enter GPRS/EDGE Context AT Command: AT+CGDCONT=1,"IP","xx.yy.com",,0,0

```

- 4 The wireless card will not use GSM. Press the **Backspace** key to delete all of the GSM AT command. When the entry is blank, press the **Enter** key.

❖ The GSM AT command is deleted, and the Menu to Configure the Wireless Port Cellular Card is redisplayed.

```

C2C_DEFAULTS
Configure WIRELESS Port Cellular Card
-----
1) Wireless Interface IP   : Dynamic
2) Wireless PPP User Name :
3) Wireless PPP Password  :
4) Wireless Access Number : #777
5) Wireless Toll Saver    : Disabled
6) Wireless Baudrate      : 115200
7) Wireless GPRS/EDGE Context AT Command :

Enter Choice :

```

- 5 When you have finished configuring the cellular wireless card, press **Escape** to return to the menu of Cellular Startup Configuration Parameters.
- 6 Return to one of the following:
 - [Step 5](#) (on page 11) of *C2C QuickStart Configuration Using PPP*
 - [Step 9](#) (on page 17) of *C2C QuickStart Configuration Using Telnet*

3.3.2.5 Configuring the RJ11 Modem Port for PPP

This procedure is a continuation from one of the following:

- [Step 9](#) (on page 13) in *C2C QuickStart Configuration Using PPP*.
- [Step 6](#) (on page 22) in *Using a Standard Configuration for the C2C Software*.
 - ❖ The Logical Port Attribute Menu has been displayed for the RJ11 modem port on the back of the C2C chassis.

```

C2C Demo
Logical Port Attribute Menu
-----
1) Protocol           : Point-to-Point
2) Global Paths
3) Dialup Configuration
4) Undefine Current Logical Port
Enter Choice :

```

Note: The default protocol for this modem port is the Point-to-Point Protocol (PPP).

- 1 Do one of the following:
 - a If you want the modem to use telnet, go to [Configuring the RJ11 Modem Port for Telnet](#), on page 30.
 - b If you want the port to use PPP, select **Protocol** so that you can review the PPP configuration.
 - ❖ The modem's PPP Config Parameters Menu is displayed. Continue to [Step 2](#).

Note: Most of the default configuration does not need to be changed.

```

C2C Demo
PPP Config Parameters : MODEM
-----
1) Type : Asynchronous PPP
2) IP Address Configuration
3) LQM Monitoring : Disable
4) LQM Percentage : 70
5) LQM Timer : 120
6) MRU : 1500
7) PPP Authentication Configuration
8) DNS Negotiation : not desired
9) NBNS Negotiation : not desired
A) No Action Timer : disabled
Enter Choice :

```

2 On the PPP Config Parameters Menu, select **PPP Authentication Configuration**.

❖ The PPP Authentication Configuration Menu is displayed.

```

C2C Demo
PPP Authentication Configuration : MODEM
-----
1) Local User Name : encore
2) Local User Password : *****
3) Remote Authentication Protocol : PAP
4) Remote User Information
Enter Choice :

```

3 On the PPP Authentication Configuration Menu, select **Remote User Information**.

❖ The Remote User Information Table is displayed.

Entry	Remote User Name	Remote User Password
1	encore	*****

Add, Modify, or Delete an Entry? (Enter A, M, or D):

4 You need to make sure the Remote User Name and Remote User Password match the remote device's settings. (Get the correct remote name and password from your network administrator.) Do one of the following:

a To modify a record, press **m**.

❖ The following prompt is displayed. Go to [Step 5](#) (on page 29).

```

Enter Number of Entry to be Modified:

```

b If you have finished modifying the table, press **Escape**.

❖ The following message is displayed. Then the Remote User Information Menu is redisplayed. Go to [Step 8](#) (on page 30).

```
PPP Remote User Information Table Handling Complete
```

```
C2C Demo
Remote User Information
-----
1) Remote User Information

Enter Choice :
```

5 Type the number of the **Entry** to change, and press **Enter**.

❖ The Remote User ID Menu is displayed.

```
1) Remote User Name : encore
2) Remote User Password : *****

Enter Choice :
```

6 Do one of the following:

a If you need to change the user name, select **Remote User Name**.

b If you need to change the password, select **Remote User Password**.

❖ One of the following prompts is displayed. Go to [Step 7](#) (on page 30).

```
Enter Remote User Name :
```

```
Enter Remote User Password :
```

c If you do not need to change values for user identification, press the **Escape** key.

❖ One of the following is displayed.

- If you have changed a value, the following prompt is displayed. Answer with **y** (yes) or **n** (no).

```
Save Changes to Selected Entry? (Enter Y or N):
```

- If you have not changed any value, the following message is displayed.

```
No changes to Remote User Information.
```

- ❖ In either case, the PPP Remote User Information Table is then redisplayed. Return to [Step 4](#) (on page 28).

```
Entry          Remote User Name          Remote User Password
  1             encore                *****

Add, Modify, or Delete an Entry? (Enter A, M, or D):
```

- 7 Type the new value for the item, and press **Enter**.
 - ❖ The Remote User ID Menu is redisplayed. Return to [Step 6](#).
- 8 When you have finished configuring the Remote User Information Menu, press **Escape**.
 - ❖ The PPP Authentication Configuration Menu is redisplayed.

```
C2C Demo
PPP Authentication Configuration : MODEM
-----
1) Local User Name : encore
2) Local User Password : *****
3) Remote Authentication Protocol : PAP
4) Remote User Information
Enter Choice :
```

- 9 Return to one of the following:
 - [Step 10](#) (on page 13) of *C2C QuickStart Configuration Using PPP*
 - [Step 7](#) (on page 22) of *Using a Standard Configuration for the C2C Software*

3.3.2.6 Configuring the RJ11 Modem Port for Telnet

This procedure is a continuation from [Step 6](#) (on page 22) in *Using a Standard Configuration for the C2C Software*. The Logical Port Attribute Menu has been displayed for the RJ11 modem port on the back of the C2C chassis.

```
C2C Demo
Logical Port Attribute Menu
-----
1) Protocol          : Point-to-Point
2) Global Paths
3) Dialup  Configuration
4) Undefine Current Logical Port
Enter Choice :
```

Note: The default protocol for this modem port is the Point-to-Point Protocol (PPP).

1 Do one of the following:

a If you want the port to use PPP, go to [Configuring the RJ11 Modem Port for PPP](#), on page 27.

b If you want to change the protocol, select **Undefine Current Logical Port**.

❖ The Logical Port Attribute Menu for the modem port is redisplayed, with the port's protocol undefined. Continue to [Step 2](#).

```
C2C Demo
Logical Port Attribute Menu
-----
1) Protocol          : UNDEFINED
2) Global Paths
3) Dialup  Configuration
4) Undefine Current Logical Port
Enter Choice :
```

2 Now, on the Logical Port Attribute Menu, select **Protocol**.

❖ The Logical Port Protocol Selection Menu is displayed.

```
C2C Demo
Logical Port Protocol Selection Menu
-----
1) Frame Relay
2) Point-to-Point (PPP)
3) Telnet Terminal
4) X.42 Spoofing
5) Diagnostic Async
6) CDC
7) Voice/PCM Encapsulation
Enter Choice :
```

3 On the Logical Port Protocol Selection Menu, select **Telnet Terminal**.

❖ The menu of Telnet Terminal Parameters for the RJ11 modem port is displayed.

```
C2C Demo
Telnet Terminal Parameters : MODEM
-----
1) Connection Type : Manual
2) Answer Mode : ON
3) Data Mode : Binary
4) Null Insertion Mode : Disable
5) Exit Session Key : CTRL-X
6) Menu Quiet Mode : ON
7) Local Echo : Disable
8) Store and Forward : Disable
9) Force DTR ON : Yes
A) Force DCD ON : Yes
B) Force DSR ON : Yes
C) Local TCP Port : 258
D) Remote TCP Port : 0
E) Remote IP Address : 0.0.0.0
F) Generic Logical Port : N/A
G) DTMF Routing : Disabled
Enter Choice :
```

4 On the menu of Telnet Terminal Parameters, select **Local TCP Port**.

❖ The following prompt is displayed.

```
Enter Local TCP port (0 - 65535):
```

5 Type the TCP port that the modem port will use for the Telnet application—for example, **7700**—and press **Enter**.

❖ The menu of Telnet Terminal Parameters is redisplayed, with the value you entered.

```
C2C Demo
Telnet Terminal Parameters : MODEM
-----
1) Connection Type : Manual
2) Answer Mode : ON
3) Data Mode : Binary
4) Null Insertion Mode : Disable
5) Exit Session Key : CTRL-X
6) Menu Quiet Mode : ON
7) Local Echo : Disable
8) Store and Forward : Disable
9) Force DTR ON : Yes
A) Force DCD ON : Yes
B) Force DSR ON : Yes
C) Local TCP Port : 7700
D) Remote TCP Port : 0
E) Remote IP Address : 0.0.0.0
F) Generic Logical Port : N/A
G) DTMF Routing : Disabled
Enter Choice :
```

6 Press the **Escape** key to return to the Logical Port Attribute Menu.


```
C2C Demo
Logical Port Attribute Menu
-----
1) Protocol          : Telnet Terminal
2) Global Paths
3) Dialup Configuration
4) Undefine Current Logical Port
Enter Choice :
```

7 On the Logical Port Attribute Menu, select **Dialup Configuration**.

❖ The Dialup Configuration Menu for the RJ11 modem port is displayed.

```
C2C Demo
Dialup Configuration : MODEM
-----
1) Dial Mode : DIALOUT
2) Primary Phone Number :
3) Secondary Phone Number :
4) Redial Timer Seconds : 10
5) Number of Redials : 65530
6) Dialup Port Priority : Low
7) Toll Saver : Enabled
8) Toll Saver Timeout : 180
9) Maximum Number of Successful Calls Allowed In a Minute : 25
A) Reset after dis-connection : Disabled
B) GPRS/EDGE Context AT Command :
C) V.42 Functionality : Enabled
D) Dialout Mode : NORMAL
E) OTA : Disabled
F) Wakeup IP address : 0.0.0.0
Enter Choice :
```

8 On the Dialup Configuration Menu, select **Primary Phone Number**.

❖ The following prompt is displayed.

```
Enter Primary Phone Number :
```

9 Type the number that your network administrator has indicated for the primary telephone number, and press **Enter**.

Note: The RJ11 modem port has a direct connection to the ATM, RTU, meter, or other legacy device the C2C is supporting. Because this is a direct connection and not a connection to the PSTN, the phone number doesn't matter; there is only one option for connection.

A number (even one digit) in this field allows the C2C modem to ring the modem in the ATM or other legacy device, so that the C2C and the legacy device can establish a connection.

There must be at least one digit in the **Primary Phone Number** field. The example uses **123**. Follow your network administrator's guidelines.

❖ The Dialup Configuration Menu for the modem port is redisplayed, with the number you entered.

```

C2C Demo
Dialup Configuration : MODEM
-----
1) Dial Mode : DIALOUT
2) Primary Phone Number : 123
3) Secondary Phone Number :
4) Redial Timer Seconds : 10
5) Number of Redials : 65530
6) Dialup Port Priority : Low
7) Toll Saver : Enabled
8) Toll Saver Timeout : 180
9) Maximum Number of Successful Calls Allowed In a Minute : 25
A) Reset after dis-connection : Disabled
B) GPRS/EDGE Context AT Command :
C) V.42 Functionality : Enabled
D) Dialout Mode : NORMAL
E) OTA : Disabled
F) Wakeup IP address : 0.0.0.0
Enter Choice :

```

10 Press **Escape** until you reach the Typical Configurations Menu.

```

C2C Demo
Typical Configurations Menu
-----
1) System Configuration
2) IP Interfaces
3) IP Static Routes
4) VPN Profiles
5) IP/VPN Policies
6) NAT Profiles
7) OSPF/BGP Configuration
8) DNS/DHCP Servers
9) Configure Firewall
A) IP QoS (Quality of Service)
B) GPS Geo-Fencing
L) LAN      : EtherNet          DHCP Server 192.168.10.1  ETHERNET
M) MODEM   : Telnet Terminal    MODEM
O) WIRELESS : Point-to-Point    WIRELESS          INTERNAL
P) More Ports...
Enter Choice :

```

11 On the Typical Configuration Menu, select **IP Interfaces**.

❖ The IP Interfaces Table is displayed.

Entry	IP Address	Net Mask	Gpt Name	Next Router	Mode	MTU
1	Unnumbered	N/A	WIRELESS	N/A	Off	1500
2	172.16.1.1	255.255.255.0	MODEM	0.0.0.0	Off	1500
3	192.168.10.1	255.255.255.0	LAN	0.0.0.0	Off	1500

Add, Modify, or Delete an Entry? (Enter A, M, or D):

12 At the IP Interfaces Table, type **d** to delete a line.

❖ The following prompt is displayed.

Enter Number of Entry to be Deleted:

13 Do the following:

a In the IP Interfaces Table, find **Modem** under the list for **GPT Name**.

b Type that record's line number (under the list for **Entry**), and press the **Enter** key.

Note: In the example, the GPT Name **Modem** is record Entry **2**.

❖ A message verifies the change you indicated.

Entry Deleted

❖ Then the table is redisplayed with the change you indicated.

Note: Line numbers under **Entry** have also adjusted to renumber the records.

Entry	IP Address	Net Mask	Gpt Name	Next Router	Mode	MTU
1	Unnumbered	N/A	WIRELESS	N/A	Off	1500
2	192.168.10.1	255.255.255.0	LAN	0.0.0.0	Off	1500

Add, Modify, or Delete an Entry? (Enter A, M, or D):

14 Press the **Escape** key when you have finished with the table.

❖ The Typical Configuration Menu is redisplayed.

15 On the Typical Configurations Menu, select **NAT Profiles**.

❖ The Network Address Translation (NAT) Menu is displayed. Go to [Preparing the Network Address Translation Profile](#), on page 36.

```
C2C Demo
Network Address Translation (NAT)
-----
1) NAT Configuration 1
2) NAT Configuration 2
3) NAT Configuration 3
Enter Choice :
```

16 When you have finished the C2C's telnet configuration, press **Ctrl Z** to return to the Main Menu.

❖ If you have waited a few seconds and the Main Menu has not been displayed, press the **Enter** key.

```
C2C Demo
Main Menu
-----
1) QuickStart Config Builder
2) Typical Configurations
3) Advanced Configurations
4) Tools
V) View Current Unit Status
F) Cellular Fast Connect
L) Load Factory Defaults
P) Load Plug and Play Defaults
W) Write Configuration
R) Reset Unit
X) eXit Session
S) Statistics
Y) sYstem Administration
Enter Choice :
```

17 Go to *Saving and Using the New Configuration*, on page 40.

3.3.2.7 Preparing the Network Address Translation Profile

You have reached this procedure from one of the following:

- [Step 13](#) (on page 18) of *C2C QuickStart Configuration Using Telnet*.
 - [Step 15](#) (on page 35) of *Configuring the RJ11 Modem Port for Telnet*.
- ❖ The Network Address Translation (NAT) Menu has been displayed.

```
C2C Demo
Network Address Translation (NAT)
-----
1) NAT Configuration 1
2) NAT Configuration 2
3) NAT Configuration 3
Enter Choice :
```

1 On the Network Address Translation (NAT) Menu, select **NAT Configuration 1**.

- ❖ The Configuration Menu for NAT 1 is displayed.

```
C2C Demo
NAT Configuration : 1
-----
1) NAT Status : Public NAT Enabled
2) IP Masquerading
3) Static NAT Table
4) Remote Logging : Disabled
Enter Choice :
```

- 2 On the Configuration Menu for NAT 1, select **Static NAT Table**.

- ❖ The Static NAT Table is displayed.

#	Protocol	Private Address	Private Port	Public Address	Public Port
1	UDP	0.0.0.0	10500	0.0.0.0	10500
		0.0.0.0	10500	0.0.0.0	10500
2	ESP	0.0.0.0	0	0.0.0.0	0
		0.0.0.0	0	0.0.0.0	0
3	UDP	0.0.0.0	500	0.0.0.0	500
		0.0.0.0	500	0.0.0.0	500
4	ICMP	0.0.0.0	N/A	0.0.0.0	N/A
		0.0.0.0	N/A	0.0.0.0	N/A
5	TCP	0.0.0.0	23	0.0.0.0	23
		0.0.0.0	23	0.0.0.0	23

Add, Modify, or Delete an Entry? (Enter A, M, or D):

- 3 Type **a** to add a record to the table.

- ❖ The following message is displayed.

```
Add Static NAT Table Entry
```

- ❖ Then prompts request information for the new record.

```
Enter Protocol (1.TCP 2.UDP 3.ICMP 4.ESP 5.AH 6.GRE):
```

- a Select **TCP**.

```
Enter Low Private IP Address (N.N.N.N) :
```

- b Type the IP address your network administrator assigned to the C2C, and press **Enter**.

Enter High Private IP Address (N.N.N.N) :

- c** Again, type the IP address your network administrator assigned to the C2C, and press **Enter**.

Enter Low Private TCP/UDP Port (N) :

- d** Type the TCP port number you entered in one of these earlier steps, and press **Enter**:

- [Step 5](#) (on page 15) of *C2C QuickStart Configuration Using Telnet*
- [Step 5](#) (on page 32) of *Configuring the RJ11 Modem Port for Telnet*

Enter High Private TCP/UDP Port (N) :

- e** Again, type the TCP port number you entered in one of these earlier steps, and press **Enter**:

- [Step 5](#) (on page 15) of *C2C QuickStart Configuration Using Telnet*
- [Step 5](#) (on page 32) of *Configuring the RJ11 Modem Port for Telnet*

Enter Low Public IP Address (N.N.N.N) :

- f** Press the **Enter** key, so that **0.0.0.0** will be entered. (The IP address 0.0.0.0 tells the C2C to use the public IP address assigned by your cellular wireless provider.)

Enter High Public IP Address (N.N.N.N) :

- g** Again, press the **Enter** key, so that **0.0.0.0** will be entered.

Enter Low Public TCP/UDP Port (N) :

- h** Once again, type the TCP port number you entered in one of these earlier steps, and press **Enter**:

- [Step 5](#) (on page 15) of *C2C QuickStart Configuration Using Telnet*
- [Step 5](#) (on page 32) of *Configuring the RJ11 Modem Port for Telnet*

```
Enter High Public TCP/UDP Port ( N ) :
```

i Yet again, type the TCP port number you entered in one of these earlier steps, and press **Enter**..

- [Step 5](#) (on page 15) of *C2C QuickStart Configuration Using Telnet*
 - [Step 5](#) (on page 32) of *Configuring the RJ11 Modem Port for Telnet*
- ❖ The following message is displayed.

```
Entry Added
```

❖ Then the prompt cycle starts for another new record.

```
Enter Protocol (1.TCP 2.UDP 3.ICMP 4.ESP 5.AH 6.GRE):
```

j There are no additional records to add, so press the **Escape** key.

❖ The Static NAT Table is redisplayed, with the added record.

#	Protocol	Private Address	Private Port	Public Address	Public Port
1	UDP	0.0.0.0	10500	0.0.0.0	10500
		0.0.0.0	10500	0.0.0.0	10500
2	ESP	0.0.0.0	0	0.0.0.0	0
		0.0.0.0	0	0.0.0.0	0
3	UDP	0.0.0.0	500	0.0.0.0	500
		0.0.0.0	500	0.0.0.0	500
4	ICMP	0.0.0.0	N/A	0.0.0.0	N/A
		0.0.0.0	N/A	0.0.0.0	N/A
5	TCP	0.0.0.0	23	0.0.0.0	23
		0.0.0.0	23	0.0.0.0	23
6	TCP	192.168.10.1	7700	0.0.0.0	7700
		192.168.10.1	7700	0.0.0.0	7700

Add, Modify, or Delete an Entry? (Enter A, M, or D):

4 Press **Escape** to indicate that you have finished reviewing the Static NAT table.

❖ The following message is displayed.

```
Static NAT Table Handling Complete
```

❖ Then the Configuration Menu for NAT 1 is redisplayed.

```

C2C Demo
NAT Configuration : 1
-----
1) NAT Status : Public NAT Enabled
2) IP Masquerading
3) Static NAT Table
4) Remote Logging : Disabled
Enter Choice :

```

5 Press **Escape** to return to the Typical Configurations Menu. Return to one of the following:

- [Step 14](#) (on page 19) of *C2C QuickStart Configuration Using Telnet*.
- [Step 16](#) (on page 36) of *Configuring the RJ11 Modem Port for Telnet*.

3.3.3 Saving and Using the New Configuration

Note: If you see an error message during the Write routine, go to [What to Do If You See an Error Message While Saving the C2C Configuration](#), on page 41.

1 On the Main Menu, select **Reset Unit**.

❖ The Menu to Reset the Unit is displayed.

```

Reset Unit
-----
Y) Yes
N) No

Are You Sure? :

```

2 Type **y** (yes).

❖ The following prompt is displayed.

```

Save New Configuration? (Enter Y (Yes) or N (No)) :

```

3 Type **y** (yes).

❖ The C2C displays messages while saving its configuration.

```

. . .
Verifying Dynamic Memory Requirements...
  Dynamic Memory Requirements: 3138088
Verifying Required EEPROM Space(Maximum 57344 bytes)...
  EEPROM Utilization: 30%
Saving Config, WAIT ...
  EEPROM Write Time : 1 seconds

```


Note: If you see an error message while the configuration is being saved, see [What to Do If You See an Error Message While Saving the C2C Configuration](#), on page 41.

❖ When the configuration has been saved, you will see the following message.

```
Configuration SAVED
```

❖ Then the C2C resets.

```
Resetting this Unit
```

❖ After the C2C has restarted and you have logged in, the C2C uses the new configuration.

Note: If you assigned the C2C a new IP address, you will need to use that IP address to set up a telnet connection to the C2C. (See [Communication with the C2C](#), on page 2.)

Because the connection is over an Ethernet port, not over a serial Supervisory port, you will not see the C2C's startup routine and messages. When the C2C has finished its start-up routine and the Ethernet port is active, you will see the log-in screen.

If you do not see the screen after about 3 minutes, press the **Enter** key. If the box has finished resetting, the log-in screen will be displayed. If it is not displayed, wait a couple more minutes and try again.

4 When the C2C restarts, do one of the following:

- a If there are still features to configure on the C2C, enter your user name and password. Return to [C2C Configuration](#), on page 5, and complete any remaining configuration for the C2C.
- b If you wish to view the C2C in action, enter your user name and password.
- c If you do not wish to monitor the C2C, ignore the log-in prompt, and the log-in request will time out.

Note: The C2C continues its functions with or without monitoring.

5 After you have reviewed the configuration and processes, exit the C2C software.

Note: The C2C's principal network connection is through its internal wireless port.

You may leave the C2C's Ethernet cable connected to your PC if you wish to monitor the C2C processes. However, if you want the C2C to have an additional, physical connection to the network, you can disconnect the C2C's Ethernet cable from the PC and connect the C2C's Ethernet cable to your local Ethernet network.

3.3.3.1 **What to Do If You See an Error Message While Saving the C2C Configuration**

If the default setting for the RJ11 modem port was PPP, and if you changed the protocol to telnet, you might see an error message similar to the following message when you are saving (Writing) the C2C configuration.

```
MTU error in Entry # 2 . . .
```

If you see that error message, you will need to perform the following procedure.

Note: This procedure duplicates [Step 11](#) through [Step 14](#) (on page 34 through page 35) in [Configuring the RJ11 Modem Port for Telnet](#).

- 1 On the C2C's Main Menu, select **Typical Configurations**.
 - ❖ The Typical Configuration Menu is displayed.
- 2 On the Typical Configuration Menu, select **IP Interfaces**.
 - ❖ The IP Interfaces Table is displayed.

Entry	IP Address	Net Mask	Gpt Name	Next Router	Mode	MTU
1	Unnumbered	N/A	WIRELESS	N/A	Off	1500
2	172.16.1.1	255.255.255.0	MODEM	0.0.0.0	Off	1500
3	192.168.10.1	255.255.255.0	LAN	0.0.0.0	Off	1500

Add, Modify, or Delete an Entry? (Enter A, M, or D):

- 3 At the IP Interfaces Table, type **d** to delete a line.
 - ❖ The following prompt is displayed.

```
Enter Number of Entry to be Deleted:
```

- 4 Do the following:
 - a In the IP Interfaces Table, find **Modem** under the list for **GPT Name**.
 - b Type that record's line number (under the list for **Entry**), and press the **Enter** key.

Note: In the example, the GPT Name **Modem** is record Entry 2.

- ❖ A message verifies the change you indicated.

```
Entry Deleted
```

- ❖ Then the table is redisplayed with the change you indicated.

Note: Line numbers under **Entry** have also adjusted to renumber the records.

Entry	IP Address	Net Mask	Gpt Name	Next Router	Mode	MTU
1	Unnumbered	N/A	WIRELESS	N/A	Off	1500
2	192.168.10.1	255.255.255.0	LAN	0.0.0.0	Off	1500

Add, Modify, or Delete an Entry? (Enter A, M, or D):

- 5 Press the **Escape** key when you have finished with the table.
 - ❖ The Typical Configuration Menu is redisplayed.
- 6 Press **Ctrl Z** to go to the Main Menu
- 7 On the Main Menu, select **Write**, then **Reset** to save and use the new configuration. (See [Saving and Using the New Configuration](#), on page 40.)

3.4 Statistics for the Modem Ports

The C2C has two modem ports:

- An analog modem port on the back of the C2C, using a physical connection. An analog device can connect to this RJ11 modem port.
- A cellular modem port. The C2C's antenna connects this modem to a cellular wireless network.

By using the modems together, an analog device's functions can be supported over an IP network.

This section shows you how to monitor the statistics of both modem ports.

- 1 On the C2C's Main Menu, select **Statistics**.

```

C2C Demo
Main Menu
-----
1) QuickStart Config Builder
2) Typical Configurations
3) Advanced Configurations
4) Tools
V) View Current Unit Status
F) Cellular Fast Connect
L) Load Factory Defaults
P) Load Plug and Play Defaults
W) Write Configuration
R) Reset Unit
X) eXit Session
S) Statistics
Y) sYstem Administration
Enter Choice :

```

- ❖ The Statistics Menu is displayed.

```

C2C Demo
Statistics
-----
1) Logical Ports
A) Alarms
B) BANDIT Triggers
D) Display Syslog Messages
G) GPS Status
I) IP
L) Loader
M) MODEM
P) ICMP
R) RADIUS
S) SNMP
T) TCP
U) UDP
V) VPN Statistics
Y) Display All Statistics
Z) Clear All Statistics
Enter Choice :

```

2 On the Statistics Menu, select **Modem**.

❖ Statistics are displayed for the C2C's modems.

```

MODEM Statistics

```

❖ First, the wireless modem's statistics are displayed.

```

Modem Connected to PhyPort      : WIRELESS
Modem Status                    : Connected
ESN (Electronic Serial Number)  : 804AF9BD
Signal Strength (AT+CSQ)        : -99 dBm (7,99)

Total Traffic      :          112KB
Total Tx Packets  :          292   Total Rx Packets : 282
Total Tx Bytes   :         45571   Total Rx Bytes  : 66965
Throughput      : Rx=0 bps      Tx=0 bps          Total=
Call Layer :
Total Outgoing Calls Made      : 1
Total Successful Outgoing Calls : 1
Total Incoming Calls Accepted  : 0

Application Layer :
Application Allocated to Modem : Logical Port WIRELESS
  Redial Attempts: 0 on Phone # 1

ERRORS:
Rx Break Received: 0      Rx Overrun: 0
Rx Parity Error: 0      Rx Framing Error: 0
Press ESC to exit, 'R' to refresh, any other key to continue...

```

3 Press the **Enter** key to continue reviewing modem statistics.

❖ The RJ11 analog modem's statistics are displayed.

```
Modem Connected to PhyPort      : MODEM
Modem Status                    : Idle
Modem Speed                    :
Line Status: (Ext.)Onhook:(Int.) Onhook
Total Traffic      :          0KB
Total Tx Packets  :          0   Total Rx Packets : 0
Total Tx Bytes   :          0   Total Rx Bytes   : 0
Throughput      : Rx=N/A      Tx=N/A      Total=N/A
Call Layer :
Total Outgoing Calls Made      : 0
Total Successful Outgoing Calls : 0
Total Incoming Calls Accepted  : 0

Application Layer :
  Application allocated to Modem : None

ERRORS:
Rx Break Received:      0   Rx Overrun:      0
Rx Parity Error:      0   Rx Framing Error:      0
Press ESC to exit, 'R' to refresh, any other key to continue...
```

- 4 When all the statistics have displayed, do one of the following:
 - a Press **Enter** to review another cycle of both modems' statistics. Return to the [result](#) under Step 2.
 - b Press **Escape** to return to the Statistics Menu.

```
C2C Demo
Statistics
-----
1) Logical Ports
A) Alarms
B) BANDIT Triggers
D) Display Syslog Messages
G) GPS Status
I) IP
L) Loader
M) MODEM
P) ICMP
R) RADIUS
S) SNMP
T) TCP
U) UDP
V) VPN Statistics
Y) Display All Statistics
Z) Clear All Statistics
Enter Choice :
```

- 5 To view the modem statistics in another way, select **Logical Ports** on the Statistics Menu.
 - ❖ The Logical Ports Statistics Menu is displayed.

```

C2C Demo
Logical Port Statistics Attached To IP Address Port Interfaces
-----
C) Comm/Supervisor      Comm/Sup      DCE
M) Telnet Terminal     MODEM
L) EtherNet            DHCP Server  192.168.10.1  ETHERNET
O) Point-to-Point      WIRELESS
P) More Ports ...
Enter Choice : 0

```

6 On the Logical Ports Statistics Menu, do the following to see the RJ11 analog modem's statistics:

a Find **Modem** under the list for **Attached To**.

b Select that row number.

Note: In the example, the RJ11 **Modem** is in row **M** and uses the **Telnet Terminal** protocol. In this example, you would select the letter **m**.

❖ The analog modem's statistics are displayed.

```

Port      : MODEM
Protocol  : Telnet Terminal

Bytes Received          0
Bytes Transmitted       0
Connections Successful  0
Connections Failed      0
PINGs Successful        0
PINGs Failed           0

ERRORS:
Rx Breaks:              0 Rx Overrun:          0 Tx Breaks:          0
Rx Parity Error:        0 Rx Framing Error:    0

CONTROL SIGNALS:  RTS    CTS    DTR    DSR    DCD
Current State    Up     Up     Up     Up     Down

LIGHTS:  Link: OFF  Activity: ON

Press Any Key to Continue ...

```

```

Enter "C" to Clear Statistics, "ESC" to Return
And Any Other Key to Refresh Statistics

```

7 When you have finished reviewing the RJ11 modem's statistics, press **Escape** to see the Logical Ports Statistics Menu again.

```

C2C Demo
Logical Port Statistics Attached To IP Address Port Interfaces
-----
C) Comm/Supervisor      Comm/Sup      DCE
M) Telnet Terminal     MODEM
L) EtherNet            DHCP Server  192.168.10.1  ETHERNET
O) Point-to-Point      WIRELESS
P) More Ports ...
Enter Choice : 0

```

8 On the Logical Ports Statistics Menu, do the following to see the cellular wireless modem's statistics:

a Find **Wireless** under the list for **Attached To**.

b Select that row number.

Note: In the example, the **Wireless** modem is in row **O** (letter o) and uses the **Point-to-Point** protocol. In this example, you would select the letter **o**.

❖ The cellular modem's statistics are displayed.

```

Port          : WIRELESS          Protocol : Point to Point
Modem Status/ModemSpeed : Connected

LCP: Active IPCP: Active IPXCP: InActive
Frames Received      : 554, Frames Transmitted      : 597

Link Quality Statistics:
LQR Frames Received  : 0, LQR Frames Transmitted : 0

Authentication Statistics:
Authentication Requested by Remote : CHAP, Status : Success
Remote Authentication Protocol      : None, Status : None

IPCP Statistics:
IP Address Acked/Assigned by Remote : 70.201.12.253
Primary DNS : 66.174.95.44          Primary NBNS : None

Enter ESC to stop, 'R' to repeat, any other key to continue

```

Note: In this example of the wireless modem's statistics, **IP Address Acked/Assigned by Remote** indicates that the cellular provider assigned the IP address 70.201.12.253 to the C2C's wireless modem port. ("Acked" means "acknowledged.")

```

Error Statistics:
Total Frames Received with Errors      :      0
  Rx Unknown Protocol      :      0, Bad Addr Field :      0
  Rx with Bad Control Field :      0,          Bad FCS :     22

CONTROL SIGNALS:  RTS    CTS    DTR    DSR    DCD
Current State    Up     Up     Up     Up     Up

LIGHTS: Link: OFF Activity: ON
'R' to repeat, any other key to continue...

```

Enter "C" to Clear Statistics, "ESC" to Return
And Any Other Key to Refresh Statistics

- 9** When you have finished reviewing the cellular modem's statistics, press **Escape** to see the Logical Ports Statistics Menu again.
- 10** When you have finished reviewing statistics, press **Escape** until you reach the Main Menu.