

# TOTAL CONTROL™

**Dual E1/PRI Card  
Dual E1 NIC  
Version 1.5**

## RELEASE NOTES

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# ***About these Notes***

Release 1.5 of the Dual E1/PRI Network Application Card (NAC) and the E1 Network Interface Card (NIC) supports Euro ISDN Primary Rate Interface (PRI) call routing protocols including VN4 for France. The following features are new in this release:

- ◆ VN4 Protocol Support
- ◆ Inbound Call Configuration Menu
- ◆ Digital Incoming Call Support (Sync PPP, V.110, V.120)
- ◆ Multiple PRI Card Configuration Support
- ◆ Single-sided Modem Support
- ◆ G.704 support without CRC-4 frame format

## ***Minimum Compatible Release Levels***

In order to support the new features for release 1.5, the minimum compatible release levels shown in Table 1-1 must be met or exceeded.

*Table 1-1. Minimum Compatible Release Levels*

<b>System Entity</b>	<b>Minimum Release Level</b>
Quad V.34 Analog/Digital Modem	Version 3.1
Single-sided Quad V.34 Analog/Digital Modem	Version 3.6
Network Management Card	Version 4.1
Total Control Manager/SNMP	Version 4.1

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## For More Information

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This Release Notes document is intended to point out new features, as well as revisions and enhancements to existing features. This document should be used in conjunction with the manuals in the Total Control Reference Library. The manuals in the library are updated for major releases only (version 2.0, version 3.0, etc.). Interim releases are documented solely by Release Notes. If you would like to obtain a copy of the manuals in the Total Control Reference Library, contact a U.S. Robotics sales representative, or download them in Adobe Portable Data Format from the U.S. Robotics BBS.

The information listed below is available in the Total Control directory (#15) on the U.S. Robotics BBS (847-982-5092) and Internet ftp site (<ftp.usr.com/dl15>). You may use anonymous ftp to download the files. All the files are available in Adobe Acrobat Portable Data Format (\*.PDF).

- ◆ Regularly updated MIBs  
This information is provided in ASCII text (\*.MIB).
- ◆ Application Notes
- ◆ Technical Bulletins
- ◆ Reference Manuals
- ◆ Release Notes

### A Note about PDF Files

Files in Adobe Acrobat \*.PDF format may be downloaded easily. The Acrobat Reader program is required to view the Acrobat files. Adobe provides free Reader software (DOS, Windows, Macintosh, and UNIX versions are available) at both an Internet ftp site (under the directory <ftp.adobe.com/pub/adobe/Applications/Acrobat>) and their World Wide Web Home Page (<http://www.adobe.com/>).

U.S. Robotics also provides Acrobat Reader software on its BBS in the MISC directory. Simply download the Reader software and install it on the computer, launch the program, and open the \*.PDF document file.

# ***New Version 1.5 E1/PRI Features***

## ***VN4 Protocol Support***

The Dual E1/PRI NAC and NIC now support VN4 Protocol for France. The rate adaptation and signaling protocols used to standardize the transformation of this information include:

- P 10 20A** Document defining French deltas from variations on ETS ICTR-4 standards for Euro ISDN.
- P 10 21A** Document defining French deltas from variations on ETS ICTR-4 standards for Euro ISDN.

## ***Inbound Call Configuration Menu***

Connecting a VT100 terminal, or a PC using a terminal emulation program, to the RS-232 Operator Interface port on the Dual E1 NIC allows an operator to configure and manage the Dual E1/PRI NAC using menu-driven screens. Once the PC or terminal is connected, press the Return key to display the Operator Interface Main Menu.

**Note:** A remote operator configures the E1/PRI NAC by dialing into a modem connected to the RS-232 Operator Interface. Once the modems are connected, pressing the Return key displays the following Main Menu on the remote terminal screen.

```
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Dual E1/PRI Application Card Revision 1.5.1
Boot Code Linked Date:      Mon Dec 04 17:41:48 1995
Operation Code Linked Date: Sun Mar 10 16:24:40 1996
Main Menu
1 Command
2 Status
3 Card Configuration
4 Inbound Call Routing Configuration
5 Span Line 1 Configuration
6 Span Line 2 Configuration
7 SW Fault Manager Event Logging

Enter menu selection and press Return.
Menu Selection (1-7):_
```

To select an option from the Main Menu, type the number of the desired selection and press Return. At any point within the menu structure, press Esc to return to the previous menu.

The Inbound Call Routing Configuration option has been added to the Main Menu as option 4. This option provides access to the following new submenus:

- ◆ Default ISDN-GW Slot
- ◆ Allow Analog Modem Calls
- ◆ Inbound Phone Number Routing Configuration
- ◆ Inbound Phone Number Routing Configuration Status (Entries 1-32)
- ◆ Inbound Phone Number Routing Configuration Status (Entries 33-64)

Select option 4, Inbound Call Routing Configuration, from the Main Menu to display the following menu.

```
Inbound Call Routing Configuration
Current
 1 Default ISDN-GW Slot:          NONE
 2 Allow Analog Modem Calls:      Enabled
 3 Inbound Phone Number Routing Configuration
 4 Inbound Phone Number Routing Configuration Status (Entries 1-32)
 5 Inbound Phone Number Routing Configuration Status (Entries 33-64)
Enter menu selection and press Return or press Esc to exit.
Menu Selection (1-5):
```

Press Esc to return to the Inbound Call Routing Configuration menu from any of the submenus.

**Default ISDN-GW NAC.** Select Inbound Call Routing Configuration option 1 to assign the Dual E1/PRI NAC digital calls to a specific ISDN-GW. Type the chassis slot number for the ISDN-GW NAC, or type the letter N to activate the default setting. Save the setting to NVRAM the first time. The selection appears on the Inbound Call Routing Configuration screen.

```
Default ISDN-GW Slot
This ISDN-GW will handle this PRI NAC's Digital Calls.
Enter a slot number between 1-16 or N(default) for no ISDN-GW
and press enter or press Esc to exit
>:
```

**Allow Analog Modem Calls** Select this option to enable or disable analog modem call acceptance. The selection appears on the Inbound Call Routing Configuration screen.

```
Allow Analog Modem Calls
```

```
1 Enable
```

```
2 Disable
```

```
Enter menu selection and press Return or press Esc to exit.
```

```
Menu Selection (1-2):
```

**Inbound Phone Number Routing Configuration.** Select this option to assign a call type to a called party phone number entry. Use the following when assigning a call type: Phone Number Index (PHIDX#); remove phone number(s) from phone # index (rmv); specify phone number (ph); specify Call Type for phone number entry (ct); treat call type as digital (D); treat call type as analog (A); and an up to 18 numeric character phone number including (), -, #, and \* (PH#).

```
Inbound Phone Number Routing Configuration
```

```
Assign a call type to a called party phone number using the
format
below:
```

```
PHIDX# [:rmv][:ph=PH# | rmv] [,ct=A/D]
```

```
Where,
```

```
PHIDX#->Phone Number index (1-48).
```

```
rmv -> A keyword for removing phone numbers from a phone# index
```

```
ph -> Keyword specifying phone number
```

```
ct -> Keyword specifying call type for phone num. entry
```

```
(A=Treat call as analog, D = treat call as Digital)
```

```
PH#= numeric character phone number up to 18 numeric
characters including (), -, # and *.
```

```
PHIDX#:rmv -> Remove ph# and set ct to D (default)
```

```
PHIDX#:ph=rmv -> Remove this phone number entry from PHIDX#
```

```
Example: 1:ph=982-5010,ct=D adds the phone# 982-5010,
and sets call type to Digital
```

```
>:
```



**Inbound Phone Number Routing Configuration Status (Entries 1-32/33-64).** This submenu displays the Inbound Phone Number Routing Configuration Status for channels 1-32.

Inbound Phone Number Routing Configuration Status (Entries 1-32)			
#	Phone Number	CT	#
CT			
1		A	17
A			
2		A	18
A			
3		A	19
A			
4		A	20
A			
5		A	21
A			
6		A	22
A			
7		A	23
A			
8		A	24
A			
9		A	25
A			
10		A	26
A			
11		A	27
A			
12		A	28
A			
13		A	29
A			
14		A	30
A			
15		A	31
A			
16		A	32
A			
Press Esc to exit.			

The following submenu displays the Inbound Phone Number Routing Configuration Status for channels 33-64.

Inbound Phone Number Routing Configuration Status (Entries 33-64)			
#	Phone Number	CT	#
CT			
33		A	49
A			
34		A	50
A			
35		A	51
A			
36		A	52
A			
37		A	53
A			
38		A	54
A			
39		A	55
A			
40		A	56
A			
41		A	57
A			
42		A	58
A			
43		A	59
A			
44		A	60
A			
45		A	61
A			
46		A	62
A			
47		A	63
A			
48		A	64
A			
Press Esc to exit.			

## ***Digital Incoming Call Support***

The Dual E1/PRI NAC version 1.5 supports digital incoming calls based on the Sync PPP, V.110 and V.120 protocols. Each of these protocols is described as follows:

<b>Sync PPP</b>	Protocol, used primarily in the United States, that defines a fixed rate method for transmitting packets over serial, point-to-point links.
<b>V.110</b>	Protocol, used primarily in Europe and Japan, that defines the ISDN Data Terminal Equipment (DTE) specifications.
<b>V.120</b>	Protocol, used primarily in the United States, that defines the ISDN Data Terminal Equipment (DTE) specifications.

## ***Multiple PRI Card Configuration Support***

The Total Control Chassis now allows for the support of multiple Dual E1/PRI Card configurations. The chassis allows for support of two Dual E1/PRI Cards, which are located in slots one and two. A total of 120 B-channels are supported. As a result, the Dual E1/PRI version 1.5 firmware has been revised to support the chassis.

## ***Single-sided Modem Support***

The Total Control Chassis now allows for the support of single-sided modems. The chassis allows for support of up to five Dual E1/PRI Cards in slots one through five. As a result, the Dual E1/PRI version 1.5 firmware has been revised to support the chassis.

## ***G.704 support without CRC-4 frame format***

The two frame type services supported by the E1/PRI cards are G.704 with G.704-CRC (CCS with CRC-4 error detection), and G.704 (CCS without CRC-4 error detection). The CRC-4 error detection standard is defined in ITU-T G.704 and G.706.

The CCS frame type with CRC-4 error detection, also known as CEPT, minimizes potential framing problems and false alarm events. The non-CRC-4 option (new in release 1.5) is provided for VN4 protocol compatibility and compatibility with older Telecom equipment that does not support the more robust CRC-4 options.

