



Cisco 3600 Series Gateway-PBX Interoperability: Inter-Tel Axxess PBX with T1 PRI Signaling

This document describes the interoperability and configuration of a Cisco 3600 series voice gateway with an Inter-Tel Axxess PBX using ISDN T1 PRI signaling. It includes the following sections:

- System Components
- Configuration Tasks
- Caveats

System Components

PBX Model	Inter-Tel Axxess-256
PBX Release	5.2FO
Telephony Signaling	ISDN T1 PRI
Voice Gateway	Cisco 3660
Gateway Release	IOS™ Release 12.2(1b)
VoX Protocol	H.323

Configuration Tasks

See the following sections for configuration tasks for this feature:

- Set Up
- Inter-Tel Axxess PBX Configuration
- Cisco 3660 Gateway Configuration

Set Up

This section includes the following information:

- Connectivity Diagrams
- Set Up Notes

Connectivity Diagrams

Figure 1: Test Configuration

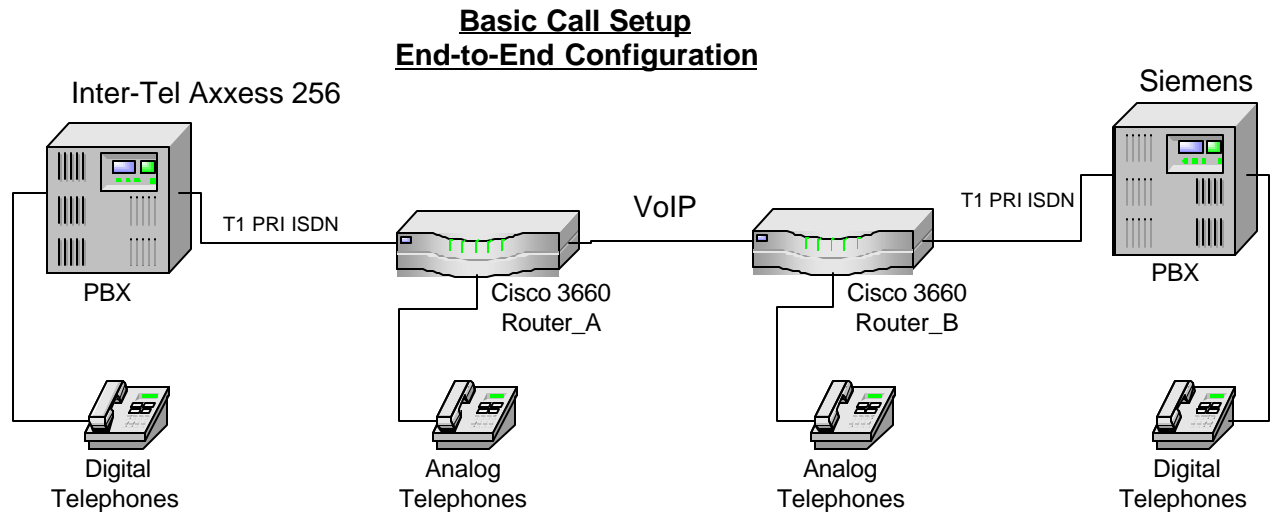


Figure 1 represents the configuration used for testing: an Inter-Tel Axxess-256 PBX connected to a Cisco 3660 voice gateway with 2MFT T1 card via an ISDN T1 PRI connection.

Set Up Notes

- The Inter-Tel PBX T1/E1/PRI interface can accept or provide clock. Both modes were tested and performed equally well.
- In order to change the circuit pack from T1 to E1 operation and vice versa, the correct software must be downloaded to the Inter-Tel PBX T1/E1/PRI interface from the console.
- In order for PRI to be operational, the PRI chip must be installed on the T1/E1/PRI card. (The PRI chip must be removed from the T1/E1/PRI card in order for the card to use T1-CAS, E1-CAS, and E1-R2.)

Inter-Tel Axxess PBX Configuration

T1 Primary Rate Interface Card

The screenshot shows the DB Studio configuration window for a T1 Primary Rate Interface Card. The left pane displays a tree view of the system configuration, with the '01:06 T1 Primary Rate Interface Card' selected. The right pane shows a table of configuration parameters for this card.

Name	Value
T1 Circuits	
T1 Diagnostics	
Timers	
Call Type	
Description	T1 PRI Card
Framing Type	Extended Superframe
Zero Code Suppression	B8ZS
Line Build-Out	0 dB (DSX-1)
Central Office Switch Type	National ISDN 2
CO Provides Progress Tones	No
Connect on Call Proceeding	Yes
Operator System Access	No

The status bar at the bottom of the window shows 'Node 1', 'Direct Cable', and 'New Session'.

T1 PRI Card: T1 Circuits

The screenshot shows the DB Studio application window titled "DB Studio - System\Cabinets\01:06 T1 Primary Rate Interface Card\T1 Circuits". The interface is divided into three main sections:

- Tree View (Left):** Displays a hierarchical structure of system components. The "T1 Circuits" folder is selected and highlighted in blue. Other visible items include "T1 Error Thresholds", "T1 Reference-Clock List", "01:01 Digital Keypset 16 Card", "01:02 Uninstalled", "01:03 Uninstalled", "01:04 Uninstalled", "01:05 Loop Start Card", "01:06 T1 Primary Rate Interface Ca", "T1 Diagnostics", "Timers", "Call Type", "01:07 T1 Card", "01:08 Central Processor/PCM", "01:09 Uninstalled", "01:10 Uninstalled", "01:11 Uninstalled", and "01:13 Uninstalled".
- T1 Circuits Table (Right):** A table listing individual T1 circuits. The first row is selected.

T1 Circuit Type	T1 Circuit Device
01:06.01.01 B-Channel	94101
01:06.01.02 B-Channel	94102
01:06.01.03 B-Channel	94103
01:06.01.04 B-Channel	94104
01:06.01.05 B-Channel	94105
01:06.01.06 B-Channel	94106
01:06.01.07 B-Channel	94107
01:06.01.08 B-Channel	94108
01:06.01.09 B-Channel	94109
01:06.01.10 B-Channel	94110
01:06.01.11 B-Channel	94111
01:06.01.12 B-Channel	94112
01:06.01.13 B-Channel	94113
01:06.01.14 B-Channel	94114
01:06.01.15 B-Channel	94115
01:06.01.16 B-Channel	94116
01:06.01.17 B-Channel	94117
01:06.01.18 B-Channel	94118
01:06.01.19 B-Channel	94119
01:06.01.20 B-Channel	94120
- Status Bar (Bottom):** Shows "Node 1", "Direct Cable", and "New Session" buttons.

T1 PRI Card: Timers

The screenshot shows the DB Studio interface for configuring T1 PRI Card Timers. The left pane displays a tree view of the system configuration, with 'Timers' selected under the '01:06 T1 Primary Rate Interface Card'.

The right pane displays a table of timer configurations:

Name	Value	Units
Call Proceeding (T310)	25	Seconds
Connect Acknowledge (T313)	9	Seconds
Data Link Disconnect (T309)	90	Seconds
Disconnect (T305)	4	Seconds
Idle Link (T203)	100	Tenths
Release (T308)	4	Seconds
Restart Acknowledge (T316)	5	Seconds
Re-Transmission (T200)	10	Tenths
Setup Request Acknowledge (T303)	9	Seconds
XID Request (T204)	20	Tenths

The status bar at the bottom shows 'Node 1', 'Direct Cable', and 'New Session'.

Timers and Limits

The screenshot shows the 'DB Studio - System\Timers and Limits' window. The left pane displays a tree view under 'Trunk-Related Information' with 'Call Routing Tables' expanded to show 15 numbered entries. Below this are 'Premium Features', 'Timers and Limits' (highlighted), 'Report Programming', and 'Passwords'. The right pane shows a table of timer settings.

Timers and Limits	Value
GS Dialing Wait After Connect	30
GS Tip-Ground Debounce	50
GS Transition Delay	10
Hold	60
Hold - Alternate	180
Inactivity Alarm	60
Interdigit - Long	15
Interdigit - Short	4
LS Dialing Wait After Connect	15
LS/GS Caller-ID Relay Hold	2500
LS/GS Caller-ID Ring Idle	500
LS/GS CD Hookflash	60
LS/GS CD-CO Disconnect	35
LS/GS Dialing Disconnect	120
LS/GS Dialing Wait After Hookflash	30
LS/GS IC-CO Disconnect	60
LS/GS Inter-ring Silence	60
LS/GS Loop Current Debounce	100
LS/GS Outpulse-dial Inter-digit Pause	700

At the bottom of the window, there are buttons for 'Node 1', 'Direct Cable', and 'New Session'.

The screenshot shows the 'DB Studio - System\Timers and Limits' window. The left pane displays a tree view with the following structure:

- Trunk-Related Information
 - Call Routing Tables
 - 1
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7
 - 8
 - 9
 - 10
 - 11
 - 12
 - 13
 - 14
 - 15
 - Premium Features
 - Timers and Limits**
 - Report Programming
 - Passwords

The right pane displays a table of timer settings:

Timers and Limits	Value
LS/GS Outpulse-dial Inter-Pulse Pause	40
LS/GS Outpulse-dial Pulse Hold Duration	60
LS/GS Ring Frequency - High Boundary	100
LS/GS Ring Frequency - Low Boundary	15
LS/GS Trunk Ring Detection	5
Message Wait	5
Off-Hook Voice Announce Screening	5
Page	15
Pause Dialing Digit Length	3
Queue Callback	15
Recall	60
Record-A-Call Tone Interval	0
SL Disconnect Flash Duration	15
SL Hookflash Maximum	12
SL Hookflash Minimum	2
SL Impulse-dial Inter-digit Pause	300
SL Wait for Disconnect	2
System Forward Advance	15
System Forward Initiate	15

At the bottom of the window, there are buttons for 'Node 1', 'Direct Cable', and 'New Session'.

The screenshot shows the 'DB Studio - System\Timers and Limits' window. The left pane displays a tree view with the following structure:

- Trunk-Related Information
 - Call Routing Tables
 - 1
 - 2
 - 3
 - 4
 - 5
 - 6
 - 7
 - 8
 - 9
 - 10
 - 11
 - 12
 - 13
 - 14
 - 15
 - Premium Features
 - Timers and Limits**
 - Report Programming
 - Passwords

The right pane displays a table of timer settings:

Timers and Limits	Value
SL Disconnect Flash Duration	15
SL Hookflash Maximum	12
SL Hookflash Minimum	2
SL Impulse-dial Inter-digit Pause	300
SL Wait for Disconnect	2
System Forward Advance	15
System Forward Initiate	15
Busyout Switch Timeout	60
Loopback Timeout	600
Transfer - Attendant	30
Transfer - Available	20
Transfer - Voice Processor	20
Transfer - Busy	24
Trunk Busy Out	180
Trunk Key Debounce	3
UCD Station-Monitor Indication Frequency	15
Unsupervised CO	255
Valid Call	15
Voice Mail Dial Delay	5

At the bottom of the window, there are buttons for 'Node 1', 'Direct Cable', and 'New Session'.

Digital Keypad 16 Card

The screenshot shows the DB Studio interface for a system cabinet. The left pane displays a tree view of components, with '01:01 Digital Keypad 16 Card' selected. The right pane shows a table of port configurations for this card.

Port	Circuit 1	Circuit
01:01.01 Keypad	2000	
01:01.02 Keypad	2001	
01:01.03 Keypad	2002	
01:01.04 Keypad	2003	
01:01.05 Keypad	4000	
01:01.06 Keypad	4001	
01:01.07 Keypad	4002	
01:01.08 Keypad	4003	
01:01.09 Keypad	5000	
01:01.10 Keypad	5001	
01:01.11 Keypad	5002	
01:01.12 Keypad	5003	
01:01.13 Keypad	1012	
01:01.14 Keypad	1013	
01:01.15 Keypad	1014	
01:01.16 Dual Single Line	2004	200

At the bottom of the window, there are buttons for 'Node 1', 'Direct Cable', and 'New Session'.

Station Extension Lists

DB Studio - System\Devices and Feature Codes\Extension Lists\Station\P0001

File Edit View Operations Favorites Help

← → ? [Icons]

Timers

- Call Type
- 01:07 T1 Card
- 01:08 Central Processor
- 01:09 Uninstalled
- 01:10 Uninstalled
- 01:11 Uninstalled
- 01:12 Uninstalled
- 01:13 Uninstalled
- 01:14 Uninstalled
- 01:15 Uninstalled
- 01:16 Not Used

Devices and Feature Codes

- Extension Lists
 - ACD Agent ID
 - Keypad
 - P0002
 - Single Line
 - Station
 - P0001
 - CD Trunk Group
 - Hunt Group Member

Extension	Description	Username	Type	Address
2000			Keypad	01:01.01.
2001			Keypad	01:01.02.
2002			Keypad	01:01.03.
2003			Keypad	01:01.04.
4000			Keypad	01:01.05.
4002			Keypad	01:01.07.
4003			Keypad	01:01.08.
5000			Keypad	01:01.09.
5001			Keypad	01:01.10.
5002			Keypad	01:01.11.
5003			Keypad	01:01.12.
1012			Keypad	01:01.13.
1013			Keypad	01:01.14.
1014			Keypad	01:01.15.
2004			Single Line	01:01.16.
2005			Single Line	01:01.16.

Node 1 Direct Cable New Session

Trunks

Extension	CO Trunk Group	Type	Address
94001	9201	Loop Start	01:05.01.01
94002	9201	Loop Start	01:05.02.01
94003	9201	Loop Start	01:05.03.01
94004	9201	Loop Start	01:05.04.01
94201	9204	Loop Start	01:07.01.01
94202	9204	Loop Start	01:07.01.02
94203	9204	Loop Start	01:07.01.03
94204	9204	Loop Start	01:07.01.04
94209	9202	Ground Start	01:07.01.09
94210	9202	Ground Start	01:07.01.10
94211	9202	Ground Start	01:07.01.11
94212	9202	Ground Start	01:07.01.12
94101	PP011	B-Channel	01:06.01.01
94102	PP011	B-Channel	01:06.01.02
94103	PP011	B-Channel	01:06.01.03
94104	PP011	B-Channel	01:06.01.04
94105	PP011	B-Channel	01:06.01.05
94106	PP011	B-Channel	01:06.01.06
94107	PP011	B-Channel	01:06.01.07
94108	PP011	B-Channel	01:06.01.08

Cisco 3660 Gateway Configuration

The following is the configuration of the Cisco 3660 voice gateway with 2MFT T1 card connected to the ISDN T1 PRI interface on the Inter-Tel Axxess-256 PBX.

Cisco 3660 Voice Gateway Version Information

```
Cisco_3660# show version
```

```
Cisco Internetwork Operating System Software
IOS (tm) 3600 Software (C3660-A3JS-M), Version 12.2(1b), RELEASE
SOFTWARE (fc1)
Copyright (c) 1986-2001 by cisco Systems, Inc.
Compiled Thu 14-Jun-01 22:05 by pwade
Image text-base: 0x60008960, data-base: 0x61680000
```

```
ROM: System Bootstrap, Version 12.0(6r)T, RELEASE SOFTWARE (fc1)
```

```
Cisco_3660 uptime is 1 week, 32 minutes
System returned to ROM by reload
System image file is "flash:c3660-a3js-mz.122-1b.bin"
```

```
cisco 3660 (R527x) processor (revision C0) with 56320K/9216K bytes of
memory.
Processor board ID JAB052880X4
R527x CPU at 225Mhz, Implementation 40, Rev 10.0, 2048KB L2 Cache
Bridging software.
X.25 software, Version 3.0.0.
SuperLAT software (copyright 1990 by Meridian Technology Corp).
TN3270 Emulation software.
Primary Rate ISDN software, Version 1.1.
```

```
3660 Chassis type: ENTERPRISE
1 Ethernet/IEEE 802.3 interface(s)
1 FastEthernet/IEEE 802.3 interface(s)
1 Token Ring/IEEE 802.5 interface(s)
25 Serial network interface(s)
4 ATM network interface(s)
2 Channelized T1/PRI port(s)
2 Voice FXS interface(s)
DRAM configuration is 64 bits wide with parity disabled.
125K bytes of non-volatile configuration memory.
16384K bytes of processor board System flash (Read/Write)
16384K bytes of processor board PCMCIA Slot0 flash (Read/Write)

Configuration register is 0x2
```

Cisco 3660 Voice Gateway Sample Configuration

```
Cisco_3660# show running-config

Building configuration...

Current configuration : 2949 bytes
!
version 12.2
no service single-slot-reload-enable
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname Cisco_3660
!
logging rate-limit console 10 except errors
!
voice-card 4
!
ip subnet-zero
!
!
no ip finger
!
```

```
no ip dhcp-client network-discovery
isdn switch-type primary-ni
call rsvp-sync
!
!
!
!
!
fax interface-type modem
mta receive maximum-recipients 0
!
!
controller T1 4/0
    framing esf
    linecode b8zs
    pri-group timeslots 1-24
!
controller T1 4/1
    framing esf
    clock source internal
    linecode b8zs
    ds0-group 1 timeslots 1-4 type fxs-loop-start
    ds0-group 2 timeslots 5-8 type e&m-immediate-start
    ds0-group 3 timeslots 9-12 type fxs-ground-start
    ds0-group 4 timeslots 13-16 type e&m-wink-start
    ds0-group 5 timeslots 17-20 type e&m-delay-dial
!
!
interface FastEthernet0/0
    ip address 10.1.1.200 255.255.255.0
    no keepalive
    duplex auto
    speed auto
!
interface Ethernet1/0
    no ip address
    shutdown
    half-duplex
!
interface Serial1/0
    no ip address
    shutdown
    no fair-queue
!
interface TokenRing1/0
    no ip address
    shutdown
    ring-speed 16
!
interface ATM3/0
    no ip address
    atm vc-per-vp 256
    no atm ilmi-keepalive
    scrambling-payload
```

```
    impedance 120-ohm
!
interface ATM3/0.1 point-to-point
 ip address 1.1.1.1 255.255.255.0
 pvc 10/1
  encapsulation aal5snap
!
!
interface ATM3/1
 no ip address
 shutdown
 atm vc-per-vp 256
 no atm ilmi-keepalive
 scrambling-payload
 impedance 120-ohm
!
interface ATM3/2
 no ip address
 shutdown
 atm vc-per-vp 256
 no atm ilmi-keepalive
 scrambling-payload
 impedance 120-ohm
!
interface ATM3/3
 no ip address
 shutdown
 atm vc-per-vp 256
 no atm ilmi-keepalive
 scrambling-payload
 impedance 120-ohm
!
interface Serial4/0:23
 no ip address
 no logging event link-status
 isdn switch-type primary-ni
 isdn protocol-emulate network
 isdn incoming-voice voice
 isdn T310 10000
 no cdp enable
!
interface Group-Async1
 physical-layer async
 ip address negotiated
 encapsulation ppp
 dialer in-band
 dialer string 2000X123456789012345678901234567
 dialer-group 5
!
!
router rip
 network 1.0.0.0
 network 7.0.0.0
!
```

```
ip kerberos source-interface any
ip classless
no ip http server
!
!
!
!
!
!
!
!
dialer-list 5 protocol ip permit
!
snmp-server manager
!
voice-port 2/0/0
!
voice-port 2/0/1
!
voice-port 4/0:23
!
voice-port 4/1:1
    output attenuation 0
!
voice-port 4/1:2
!
voice-port 4/1:3
    output attenuation 0
!
voice-port 4/1:4
!
voice-port 4/1:5
!
dial-peer cor custom
!
!
!
dial-peer voice 3 voip
    destination-pattern 2...
    progress_ind setup enable 1
    session target ipv4:10.1.1.201
!
dial-peer voice 4 pots
    destination-pattern 6...
    port 2/0/0
    prefix 6
!
dial-peer voice 5 voip
    destination-pattern 7...
    progress_ind setup enable 1
    session target ipv4:10.1.1.201
!
dial-peer voice 7 pots
```

```

destination-pattern 4...
direct-inward-dial
port 4/0:23
prefix 4
!
!
line con 0
  exec-timeout 0 0
  transport input none
line aux 0
line vty 0 4
  login
!
end

```

Cisco_3660# **show diag**

3660 Chassis type: ENTERPRISE

c3600 Backplane EEPROM:

```

Hardware Revision           : 1.0
Top Assy. Part Number      : 800-04740-02
Board Revision             : C0
Deviation Number          : 0-0
Fab Version                : 02
PCB Serial Number         : HAD04471H7X
RMA Test History          : 00
RMA Number                 : 0-0-0-0
RMA History                : 00
Chassis Serial Number     : JAB052880X4
Chassis MAC Address       : 0006.53b7.1900
MAC Address block size    : 112
Manufacturing Test Data   : 00 00 00 00 00 00 00 00
Fab Part Number           : 28-2651-02
Number of Slots           : 6
EEPROM format version 4
EEPROM contents (hex):
0x00: 04 FF 40 00 C8 41 01 00 C0 46 03 20 00 12 84 02
0x10: 42 43 30 80 00 00 00 00 02 02 C1 8B 48 41 44 30
0x20: 34 34 37 31 48 37 58 03 00 81 00 00 00 00 04 00
0x30: C2 8B 4A 41 42 30 35 32 38 38 30 58 34 C3 06 00
0x40: 06 53 B7 19 00 43 00 70 C4 08 00 00 00 00 00 00
0x50: 00 00 85 1C 0A 5B 02 01 06 FF FF FF FF FF FF FF
0x60: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0x70: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF

```

Slot 0:

```

C3600 Mother board 1FE(TX) Port adapter, 1 port
Port adapter is analyzed
Port adapter insertion time unknown
EEPROM contents at hardware discovery:
PCB Serial Number         : JAB05270BAC
Processor type            : 34

```



```

Top Assy. Part Number      : 800-05293-04
Board Revision            : A0
Fab Part Number          : 28-3234-02
Deviation Number         : 65535-65535
Manufacturing Test Data  : FF FF FF FF FF FF FF FF
RMA Number                : 255-255-255-255
RMA Test History         : FF
RMA History               : FF
Field Diagnostics Data   : FF FF FF FF FF FF FF FF

```

EEPROM format version 4

EEPROM contents (hex):

```

0x00: 04 FF C1 8B 4A 41 42 30 35 32 37 30 42 41 43 09
0x10: 34 40 00 DA C0 46 03 20 00 14 AD 04 42 41 30 85
0x20: 1C 0C A2 02 80 FF FF FF FF C4 08 FF FF FF FF FF
0x30: FF FF FF 81 FF FF FF FF 03 FF 04 FF C5 08 FF FF
0x40: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0x50: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0x60: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0x70: FF FF FF FF FF FF FF FF FF FF FF FF FF FF 00

```

Slot 1:

Combo 1E, 1R, 2W Port adapter, 4 ports

Port adapter is analyzed

Port adapter insertion time unknown

EEPROM contents at hardware discovery:

```

Hardware revision 1.0          Board revision G0
Serial number      25201774     Part number      800-01223-03
Test history      0x0           RMA number       00-00-00

```

EEPROM format version 1

EEPROM contents (hex):

```

0x20: 01 1F 01 00 01 80 8C 6E 50 04 C7 03 00 00 00 00
0x30: 80 00 00 00 01 06 12 17 FF FF FF FF FF FF FF FF

```

WIC Slot 0:

Serial 1T WAN daughter card

```

Hardware revision 1.0          Board revision J0
Serial number      24931018     Part number      800-01514-01
Test history      0x0           RMA number       00-00-00

```

Connector type Wan Module

EEPROM format version 1

EEPROM contents (hex):

```

0x20: 01 02 01 00 01 7C 6A CA 50 05 EA 01 00 00 00 00
0x30: 98 00 00 00 12 01 09 01 FF FF FF FF FF FF FF FF

```

Slot 2:

4 PORT Voice PM for MARs Port adapter

Port adapter is analyzed

Port adapter insertion time unknown

EEPROM contents at hardware discovery:

```

Hardware revision 1.0          Board revision B0
Serial number      7968567     Part number      800-02491-01
Test history      0x0           RMA number       00-00-00

```

EEPROM format version 1

EEPROM contents (hex):

```

0x20: 01 65 01 00 00 79 97 37 50 09 BB 01 00 00 00 00
0x30: 58 00 00 00 98 04 01 17 FF FF FF FF FF FF FF FF

```

WIC Slot 0:

```

FXS Voice daughter card (2 port)
Hardware revision 1.0          Board revision B0
Serial number      7088068     Part number      800-02493-01
Test history      0x0          RMA number       00-00-00
Connector type    Wan Module
EEPROM format version 1

```

EEPROM contents (hex):

```

0x20: 01 0E 01 00 00 6C 27 C4 50 09 BD 01 00 00 00 00
0x30: 58 00 00 00 98 01 28 01 FF FF FF FF FF FF FF FF

```

Slot 3:

IMA 4 port E1 Port adapter, 4 ports

Port adapter is analyzed

Port adapter insertion time unknown

EEPROM contents at hardware discovery:

```

Hardware Revision      : 1.0
Top Assy. Part Number  : 800-03968-03
Board Revision        : C0
Deviation Number      : 0-0
Fab Version           : 05
PCB Serial Number     : JAB05090HZ0
RMA Test History      : 00
RMA Number            : 0-0-0-0
RMA History           : 00

```

EEPROM format version 4

EEPROM contents (hex):

```

0x00: 04 FF 40 00 BE 41 01 00 C0 46 03 20 00 0F 80 03
0x10: 42 43 30 80 00 00 00 00 02 05 C1 8B 4A 41 42 30
0x20: 35 30 39 30 48 5A 30 03 00 81 00 00 00 00 04 00
0x30: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0x40: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0x50: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0x60: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
0x70: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF

```

Slot 4:

High Density Voice Port adapter

Port adapter is analyzed

Port adapter insertion time unknown

EEPROM contents at hardware discovery:

```

Hardware Revision      : 1.1
Top Assy. Part Number  : 800-03567-01
Board Revision        : F1
Deviation Number      : 0-0
Fab Version           : 02
PCB Serial Number     : JAB05080M0C
RMA Test History      : 00
RMA Number            : 0-0-0-0
RMA History           : 00

```

EEPROM format version 4

```

EEPROM contents (hex):
 0x00: 04 FF 40 00 CC 41 01 01 C0 46 03 20 00 0D EF 01
 0x10: 42 46 31 80 00 00 00 00 02 02 C1 8B 4A 41 42 30
 0x20: 35 30 38 30 4D 30 43 03 00 81 00 00 00 00 04 00
 0x30: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
 0x40: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
 0x50: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
 0x60: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF
 0x70: FF FF FF FF FF FF FF FF FF FF FF FF FF FF FF

```

```

WIC Slot 0:
T1 (2 Port) Multi-Flex Trunk (Drop&Insert) WAN Daughter Card
Hardware revision 1.0          Board revision A0
Serial number      24236904    Part number      800-04614-03
Test history      0x0          RMA number      00-00-00
Connector type    PCI
EEPROM format version 1
EEPROM contents (hex):
 0x20: 01 24 01 00 01 71 D3 68 50 12 06 03 00 00 00 00
 0x30: 50 00 00 00 01 07 07 00 FF FF FF FF FF FF FF FF

```

```

HDV firmware: Compiled Wed 04-Oct-00 20:58 by mani
HDV memory size 524280 heap free 180601

```

```
Cisco_3660# show controller t1 4/0
```

```

T1 4/0 is up.
  Applique type is Channelized T1
  Cablelength is long gain36 0db
  No alarms detected.
  alarm-trigger is not set
  Version info Firmware: 20010315, FPGA: 15
  Framing is ESF, Line Code is B8ZS, Clock Source is Line.
  Data in current interval (58 seconds elapsed):
    0 Line Code Violations, 0 Path Code Violations
    0 Slip Secs, 0 Fr Loss Secs, 0 Line Err Secs, 0 Degraded Mins
    0 Errored Secs, 0 Bursty Err Secs, 0 Severely Err Secs, 0 Unavail
  Secs

```

Caveats

- The Inter-Tel PBX does not support Network emulation for PRI ISDN, and Cisco IOS only supports Network emulation for National ISDN, so the only combination possible is the one tested.
- Inter-Tel has developed its own PRI-ISDN protocol for use between two Inter-Tel PBXs, but Cisco does not support this proprietary ISDN protocol.

- The tested configuration supports both Called Number and Calling Number.
- The Inter-Tel PBX does not support Calling Name and Called Name.