

Cabling and Wiring

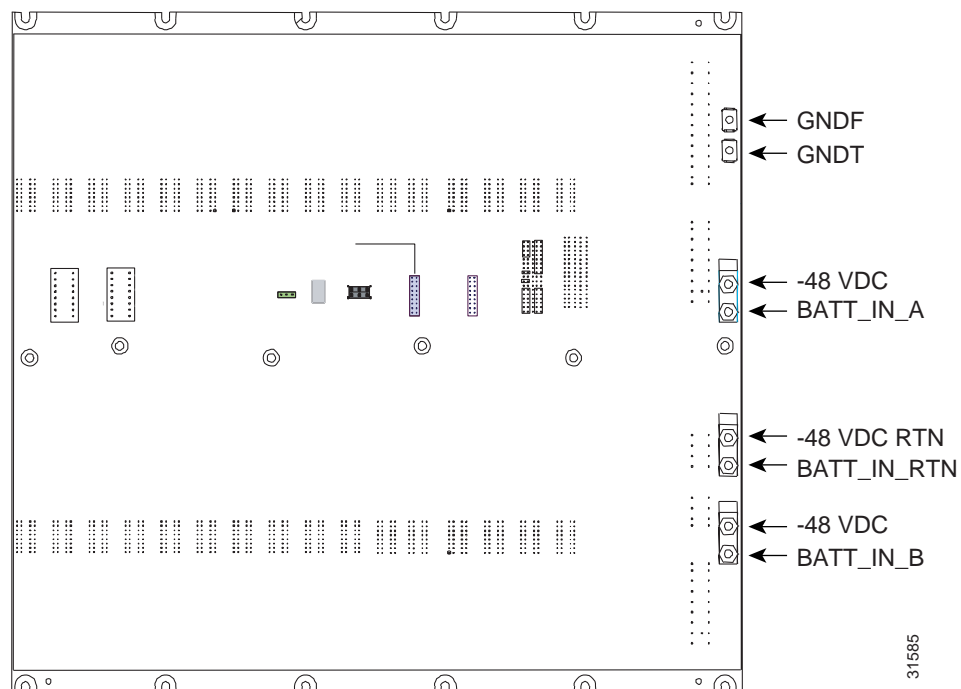
Power Wiring



Caution

The following backplane information is provided exclusively for use by a Cisco certified technician or field engineer. Removing the backplane of the Cisco 6732 full access device chassis can void the limited warranty. Please contact Cisco Systems' technical assistance center (TAC) before making any modifications to the chassis.

Figure 3-1 Cisco 6732 Backplane Power Wiring Terminals

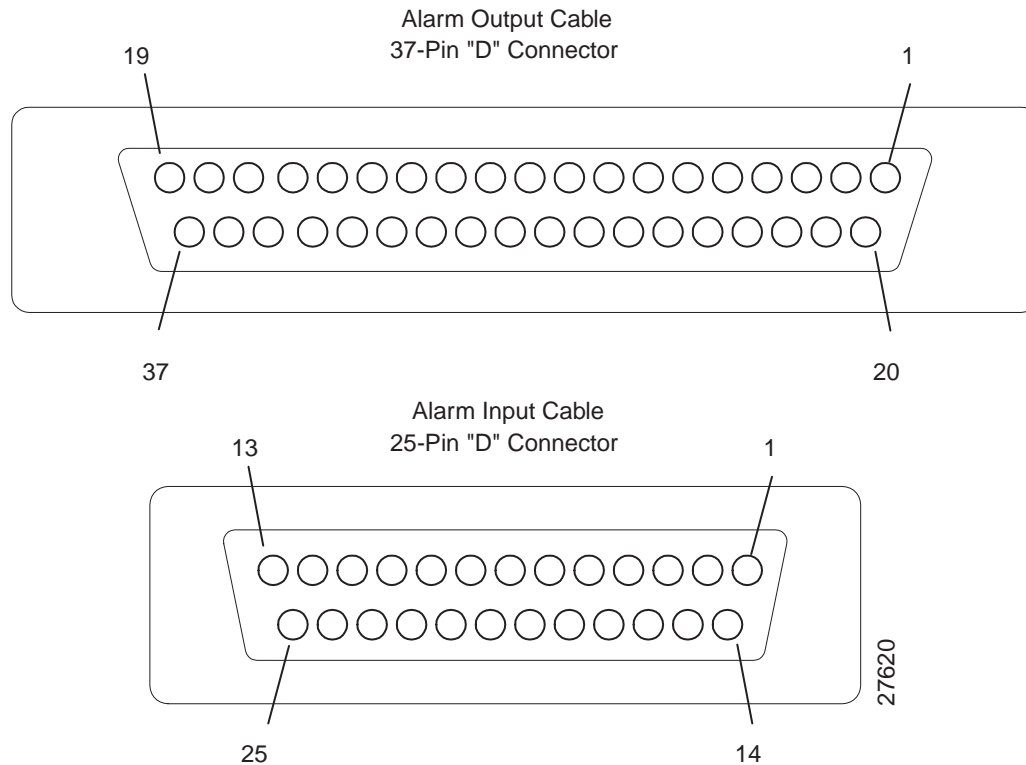


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Alarm Input and Output Cables

Cisco uses a cable with a 25-pin female D-subconnector for alarm inputs and a cable with a 37-pin female D-subconnector for alarm outputs. Refer to Figure 3-2 for cable specifications.

Figure 3-2 Alarm Input and Output Cables



Alarm Outputs

Six alarm outputs are used to indicate defined system conditions:

- Alarm outputs 1 through 3 are used for remote alarm distribution, reflecting the state of the three system alarm LEDs (critical, major, and minor).
- Alarm outputs 4 through 6 can be used for audible alarms for each alarm category and are subject to the alarm cut-off control.

Alarm outputs 7 and 8 are reserved for future use.

To provide alarm notification of a pulled or missing AMM module, the alarm output connector contains a fail-safe or bay alarm relay output (labeled Bay Alarm). This alarm will remain active if power is removed from the bank.

*ALPHA DRAFT - CISCO CONFIDENTIAL**Table 3-1 Alarm Output Assignments*

Pin Number	Signal Alarm Output
1	Bay Alarm NO
2	Bay Alarm C
3	Bay Alarm NC
4	---
5	---
6	1 NO
7	1 C
8	1 NC
9	5 NO
10	5 C
11	5 NC
12	---
13	---
14	2 NO
15	2 C
16	2 NC
17	6 NO
18	6 C
19	6 NC
20	---
21	---
22	3 NO
23	3 C
24	3 NC
25	7 NO
26	7 C
27	7 NC
28	---
29	---
30	4 NO
31	4 C
32	4 NC
33	8 NO
34	8 C
35	8 NC

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Pin Number	Signal Alarm Output
36	---
37	---

C = Closed, NC = Normally Closed, NO = Normally Open

External Alarm Inputs

There are 16 external alarm inputs available through the alarm input cable, each with a configurable name and severity level. The alarm inputs are configurable via the Element Management System (EMS). By default, alarm input number 1 is assigned to the remote alarm cut-off (ACO) function.

Table 3-2 Alarm Input Assignments

Pin Number	Signal Alarm Input/State
1	ALARM IN -1
2	ALARM IN -2
3	ALARM GND -1
4	ALARM IN -3
5	ALARM IN -4
6	ALARM GND -2
7	ALARM IN -5
8	ALARM IN -6
9	ALARM GND -3
10	ALARM IN -7
11	ALARM IN -8
12	ALARM GND -4
13	ALARM IN -9
14	ALARM IN -10
15	ALARM GND -5
16	ALARM IN -11
17	ALARM IN -12
18	ALARM GND -6
19	ALARM IN -13
20	ALARM IN -14
21	ALARM GND -7
22	ALARM IN -15
23	ALARM IN -16
24	ALARM GND -8

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Backplane Fail-safe Alarm

To provide alarm notification of a pulled or missing AMM module, the alarm output connector contains a fail-safe or bay alarm relay output (labeled Bay Alarm). This alarm will remain active if power is removed from the bank.

Alarm Cut-off

Alarm input number 1 and the ACO push-button on the front panel of the AMM module provide access to the alarm cut-off function. Pushing the ACO push-button toggles the state of the ACO.

If alarm input number 1 is used for the ACO function, you must wire a momentary push-button to the alarm input. Do not use a toggle switch. The momentary push-button serves the same purpose as the ACO button on the AMM module.

If the ACO is in the on state, the AMM ACO LED will light and alarm outputs 3 through 6 will be cleared. Any new alarms will reactivate the corresponding alarm output.

If the ACO is in the off state, the AMM ACO LED will be off and alarm outputs 1 through 3 will remain in their current states.

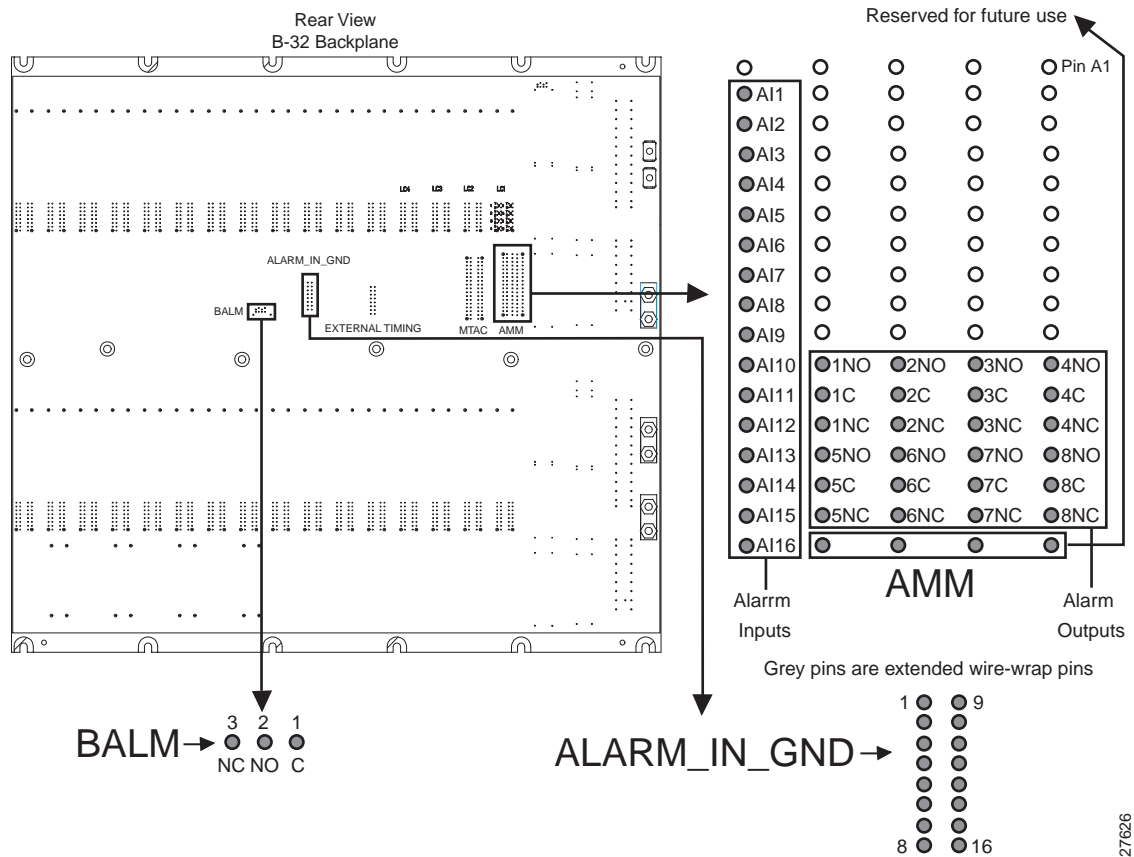
Alarm Input and Output Wiring

**Caution**

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Figure 3-3 Alarm Connections on the Cisco 6732 Backplane



Line Interface Module Cables

The Cisco 6732 backplane line interface module connections are prewired at the factory with cables that are terminated with 50-wire (25-pair) male RJ-21 connectors (also referred to as AMP-Champ). These cables must be terminated into female RJ-21 cables to mate the two cables. Figure 3-4 shows the pin placements on the male RJ-21 connector.

Figure 3-4 AMP-Champ Pin Assignments

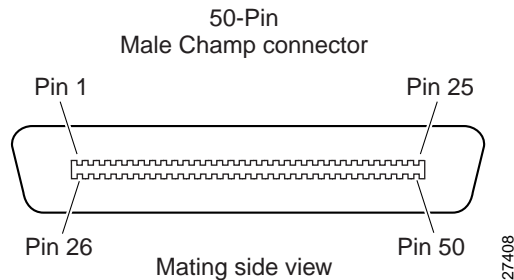


Table 3-3 contains the wiring configuration for Cisco 6732 line interface module cables. The wiring is organized in logical cable groups. Up to three line interface modules can be configured with each cable.

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Do not mix 4-wire (DSX/1) and 2-wire (analog, ISDN/BRI-8, or MSDSL-2W) connections on the same cable.

Table 3-3 Subscriber Cabling (Logical Grouping)

Cable	LIM Slots	2-Wire Lines	4-Wire Lines
P1	2-4	1-8	1-8 Tx
P2	2-4	9-16	1-8 Rx
P3	5-7	1-8	1-8 Tx
P4	5-7	9-16	1-8 Rx
P5	8-10	1-8	1-8 Tx
P6	8-10	9-16	1-8 Rx
P7	11-13	1-8	1-8 Tx
P8	11-13	9-16	1-8 Rx
P9	14-16	1-8	1-8 Tx
P10	14-16	9-16	1-8 Rx
P11	17-19	1-8	1-8 Tx
P12	17-19	9-16	1-8 Rx
P13	20-22	1-8	1-8 Tx
P14	20-22	9-16	1-8 Rx
P15	23-25	1-8	1-8 Tx
P16	23-25	9-16	1-8 Rx
P17	26-28	1-8	1-8 Tx
P18	26-28	9-16	1-8 Rx
P19	29-31	1-8	1-8 Tx
P20	29-31	9-16	1-8 Rx
P21	32 & 1	1-8	1-8 Tx
P22	32 & 1	9-16	1-8 Rx

FXS/16, RPOTS/16, RUVG/8, ISDN-BRI/8, and MSDSL-2W (2-Wire) Cabling

Table 3-4 contains the 2-wire circuit-to-tip/ring legend mapping scheme.

Table 3-4 2-Wire Circuit Tip/Ring Post Mapping

LIM Slot	Circuit	Tip/Ring Pin Assignments	Circuit	Tip/Ring Pin Assignments
2	1	P1: 26, 1	9	P2: 26, 1
2	2	P1: 27, 2	10	P2: 27, 2
2	3	P1: 28, 3	11	P2: 28, 3

*ALPHA DRAFT - CISCO CONFIDENTIAL**Table 3-4 2-Wire Circuit Tip/Ring Post Mapping (continued)*

LIM Slot	Circuit	Tip/Ring Pin Assignments	Circuit	Tip/Ring Pin Assignments
2	4	P1: 29, 4	12	P2: 29, 4
2	5	P1: 30, 5	13	P2: 30, 5
2	6	P1: 31, 6	14	P2: 31, 6
2	7	P1: 32, 7	15	P2: 32, 7
2	8	P1: 33, 8	16	P2: 33, 8
3	1	P1: 34, 9	9	P2: 34, 9
3	2	P1: 35, 10	10	P2: 35, 10
3	3	P1: 36, 11	11	P2: 36, 11
3	4	P1: 37, 12	12	P2: 37, 12
3	5	P1: 38, 13	13	P2: 38, 13
3	6	P1: 39, 14	14	P2: 39, 14
3	7	P1: 40, 15	15	P2: 40, 15
3	8	P1: 41, 16	16	P2: 41, 16
4	1	P1: 42, 17	9	P2: 42, 17
4	2	P1: 43, 18	10	P2: 43, 18
4	3	P1: 44, 19	11	P2: 44, 19
4	4	P1: 45, 20	12	P2: 45, 20
4	5	P1: 46, 21	13	P2: 46, 21
4	6	P1: 47, 22	14	P2: 47, 22
4	7	P1: 48, 23	15	P2: 48, 23
4	8	P1: 49, 24	16	P2: 49, 24

DSX1/8 (4-Wire) Cabling

Table 3-5 contains the DSX1 circuit-to-tip/ring legend mapping scheme.

Table 3-5 DSX1 Circuit Tip/Ring Post Mapping

DSX1	Tip/Ring Pair	Tip/Ring Pin Assignments
XMT1	T1, R1	P1: 26, 1
XMT2	T2, R2	P1: 27, 2
XMT3	T3, R3	P1: 28, 3
XMT4	T4, R4	P1: 29, 4
XMT5	T5, R5	P1: 30, 5
XMT6	T6, R6	P1: 31, 6
XMT7	T7, R7	P1: 32, 7

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Table 3-5 DSX1 Circuit Tip/Ring Post Mapping (continued)

DSX1	Tip/Ring Pair	Tip/Ring Pin Assignments
XMT8	T8, R8	P1: 33, 8
RCV1	T9, R9	P2: 26, 1
RCV2	T10, R10	P2: 27, 2
RCV3	T11, R11	P2: 28, 3
RCV4	T12, R12	P2: 29, 4
RCV5	T13, R13	P2: 30, 5
RCV6	T14, R14	P2: 31, 6
RCV7	T15, R15	P2: 32, 7
RCV8	T16, R16	P2: 33, 8

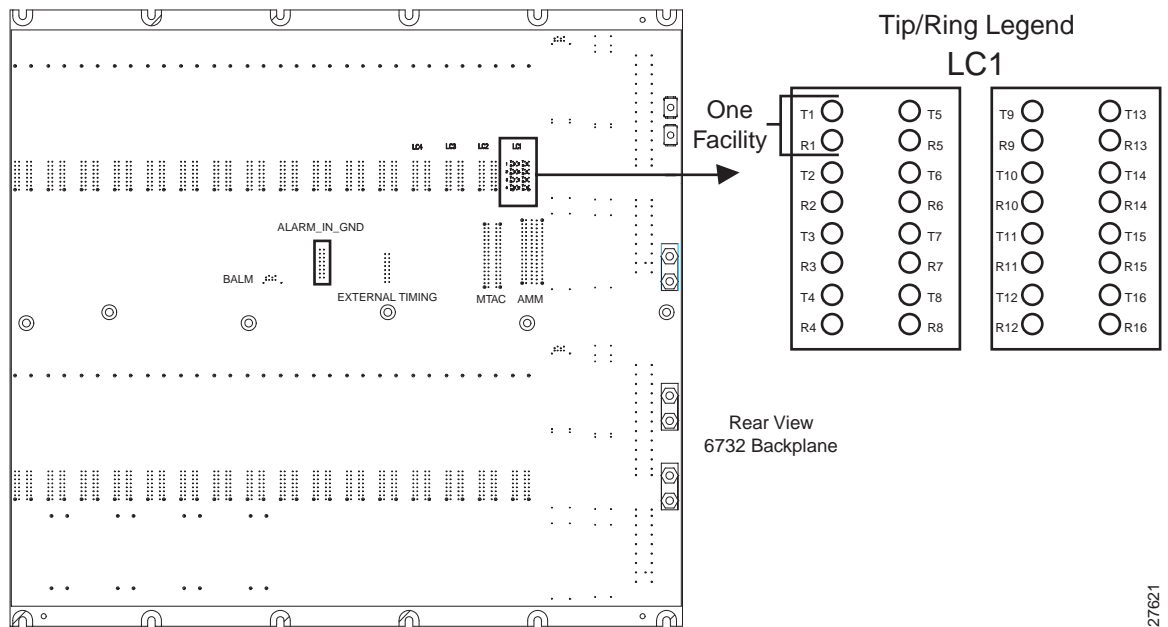
Subscriber Backplane Wiring



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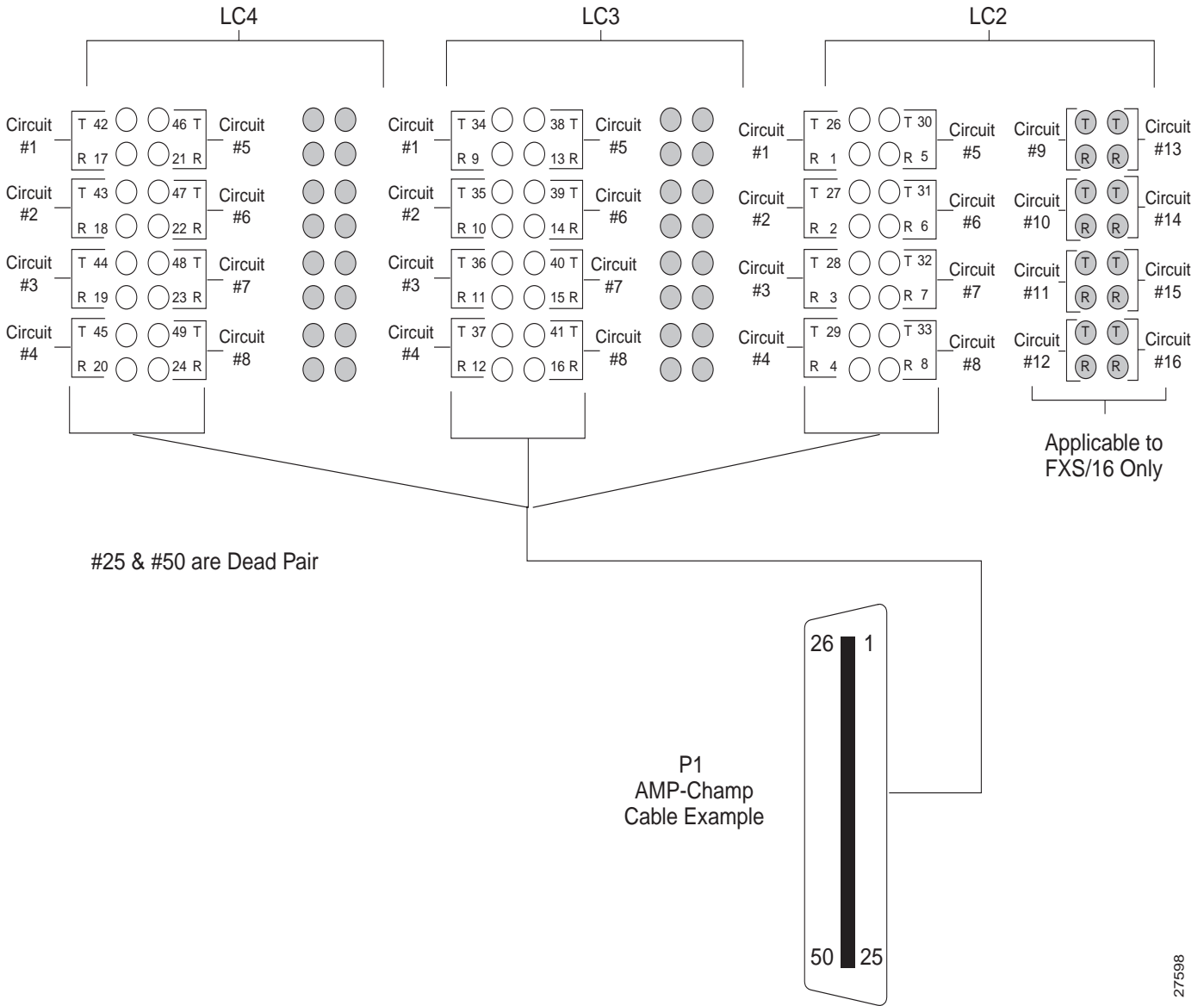
Figure 3-5 Tip/Ring Legend for RPOTS Termination



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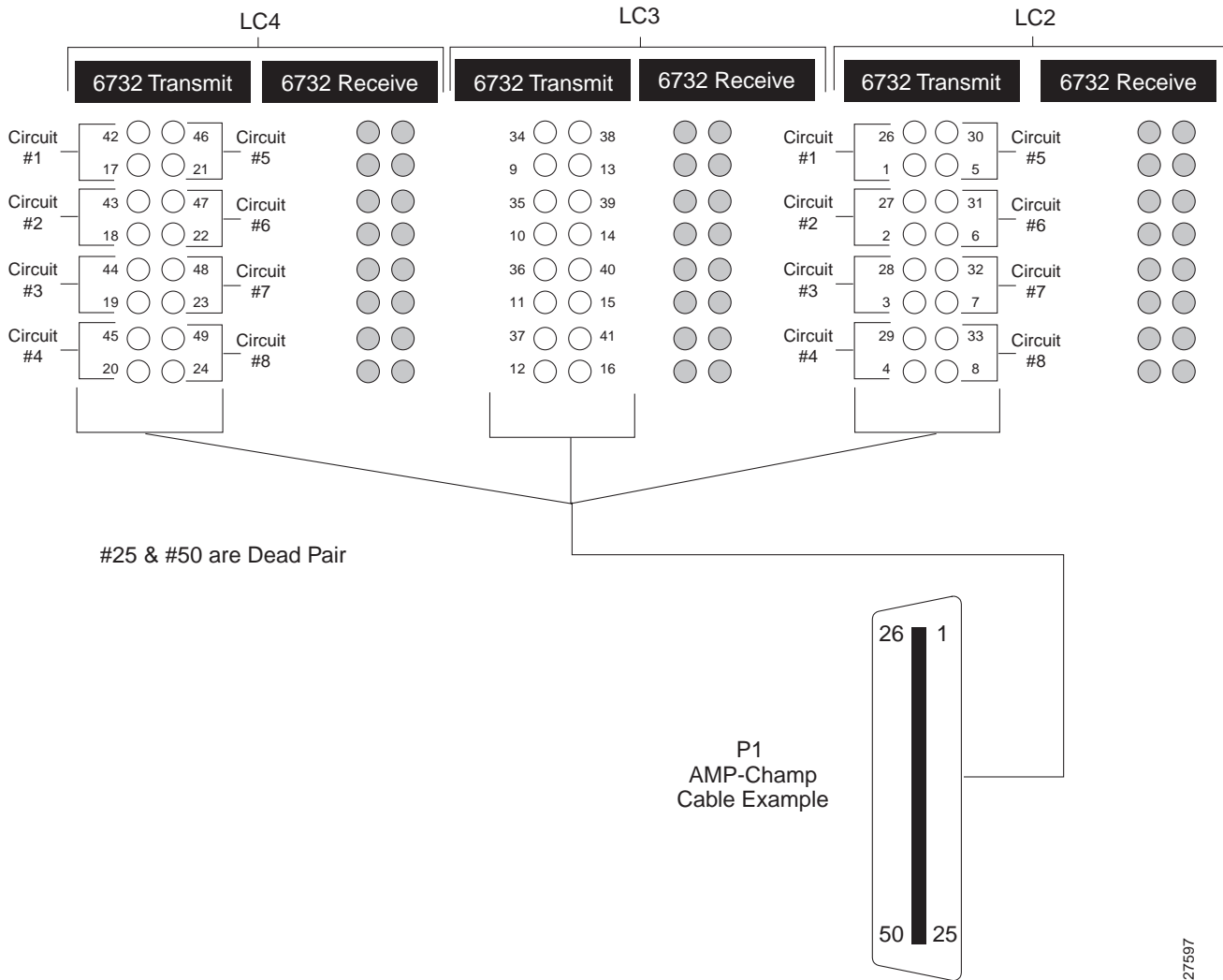
Figure 3-6 FXS/16, RPOTS/16, RUVG/8, ISDN-BRI/8, and MSDSL-2W Wiring Configuration



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Figure 3-7 DSX1/8 Wiring Configuration



T1-2-V35 Cable

The T1-2-V35 card ships with a 5-foot V.35 cable that provides connectivity to Cisco 1000 and Cisco 4500 series routers. You can order a spare using product number CAB-67-011=. Table 3-6 lists pin assignments for the V.35 cable.

*ALPHA DRAFT - CISCO CONFIDENTIAL**Table 3-6 T1-2-V35 Cable Pinouts*

Signal No.	From DB-25	To V.35	Signal Name	Pair
R	16	P1-1	RXDP	1
T	3	P1-2	RXDN	
Y	12	P1-3	TXCCP	2
AA	15	P1-4	TXCCN	
V	9	P1-5	RXCP	3
X	17	P1-6	RXCN	
S	2	P1-7	TXDN	4
P	14	P1-8	TXDP	
W	24	P1-9	TXCN	5
U	11	P1-10	TXCP	
D	5	P1-11	CTS	6
C	4	P1-12	RTS	
K	18	P1-13	LL	7
E	6	P1-14	DSR	
H	20	P1-15	DTR	8
F	8	P1-16	DCD	
No Connect	21	P1-17	RL	9
No Connect	25	P1-18	TM	
B	7	P1-19	SIG GND	10
A	1	P1-20	FRM GND	
–	–	P1-21	–	11
–	–	P1-22	–	
–	–	P1-23	–	12
–	–	P1-24	–	
–	–	P1-25	–	13
–	–	P1-26	–	

DSX3/CHNL and STSX1/CHNL Cables

The STSX1/CHNL and DSX3/CHNL line interface modules each ship with two 18-inch coaxial SMB female to coaxial BNC male cables. Connect the cables to the transmit (Tx) and receive (Rx) coaxial connectors terminals of the line interface module. You can order a spare using product number CAB-SMB-BNC=. Cisco recommends 75-ohm telecommunications cables for these connections (RG 59/U Type, 20AWG [solid]).

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1:1 Protection Cables

One to one (1:1) protection of the STSX1/CHNL and DSX3/CHNL line interface modules is achieved through a pair of coaxial Y cables installed on the Tx and Rx coaxial connectors of the protected modules. You can order a spare pair of 1:1 protection cables using product number CAB-1X1PRO=.

To install 1:1 protection cables, connect the female connectors at each end of the Y cable to the Tx terminals of two adjacent line interface modules. Connect the male connector in the middle of the Y cable to the SMB female coaxial connector of a DSX3/CHNL or STSX1/CHNL cable. Repeat this procedure for the Rx terminals using the other Y cable.

**Caution**

Do not twist or turn the female coaxial connectors (connecting to the Tx or Rx terminals on the line interface modules). To change orientation of the Y cable, rotate the male connector in the middle.

**Note**

After the 1:1 protection cables are installed, 1:1 protection must be activated using the Cisco 6700 Series Element Management System (EMS).

OC3c-UNI Cables

The OC3c-UNI line interface module has a female duplex SC connector on the faceplate. You must supply a single-mode intermediate reach fiber cable to connect to the connector.

MTAC-TEI Cables

The MTAC-TEI service module uses prewired cables on the Cisco 6732 chassis to connect with third-party test equipment. For information on MTAC-TEI cabling, refer to the *Release Notes for Cisco 6700 Series*.

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