

E&M Cable Pinouts to Connect Cisco 1750/2600/3600 E&M VIC to Nortel PBX Option 11 E&M Trunk

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Introduction

These are the E&M Cable Pinouts used to connect a Cisco 1700/2600/3600/3700 E&M Voice Interface Card (VIC) to a Nortel PBX Option 11 E&M Trunk.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

This document is not restricted to specific software and hardware versions.

Conventions

For more information on document conventions, refer to the [Cisco Technical Tips Conventions](#).

Pinout Configuration

The Nortel PBX 25 pair wire Amphenol Cable must be punched down with the standard Nortel PBX E&M punch down scheme as seen in this list in order for the E&M Cable Pinouts to work.

Wires: 5 pairs to a group:

- White-blue, white-orange, white-green, white-brown, white-slate(grey)
- Red-b, R-O, R-G, R-B, R-S

- Black-b, B-O, B-G, B-B, B-S
- Yellow-b, Y-O, Y-G, Y-B, Y-S
- Violet-b, V-O, V-G, V-B, V-S

Nortel Option 11 PBX

Type 1; 2-wires; router to PBX -----NorTel-----

Router	Pins		PBX	
				1 -- 7
M		2 -- 6		M
	3 --			
R1		4 -- 4	TA	
T1		5 -- 5	TB	
				6 --
E		7 -- 3	E	
				8 --

Type 1; 4-wires; router to PBX -----NorTel-----

Router	Pins		PBX	
				1 --
M		2 -- 6		M
R		3 -- 4	TA	
R1		4 -- 1	RA	
T1		5 -- 2	RB	
T		6 -- 5	TB	
E		7 -- 3	E	
				8 --

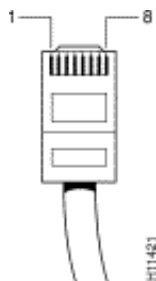
Type 2; 4-wires; router to PBX -----NorTel-----

Router	Pins		PBX	
SB		1 -- 7	SB	
M		2 -- 8		M
R		3 -- 4	TA	
R1		4 -- 1	RA	
T1		5 -- 2	RB	
T		6 -- 5	TB	
E		7 -- 3	E	
SG		8 -- 6	SG	

VIC-2E&M Pinout

The E&M voice interface card uses an RJ48S connector. The pinout depends on the PBX type and connection. This figure shows the wiring pattern for this connector, and the lists typical configurations.

RJ48S Wiring



Note: Pins that are not used should not be connected.

E&M Pinouts

Pin	Signal	Description	Two-Wire Operation, Type				Four-Wire Operation, Type			
			1	2	3	5	1	2	3	5
1	SB	-48V signaling battery		SB	SB			SB	SB	
2	M-lead	Signaling input	M	M	M	M	M	M	M	M
3	R	Ring, audio input					R	R	R	R
4	R or R1	Ring, audio input/output or output	R	R	R	R	R1	R1	R1	R1
5	T or T1	Tip, audio input/output or output	T	T	T	T	T1	T1	T1	T1
6	T	Tip, audio input					T	T	T	T
7	E-lead	Signaling output	E	E	E	E	E	E	E	E
8	SG	Signaling ground return		SG	SG			SG	SG	


Note: The Nortel Option11C PBX E&M Type I signaling matches the Cisco 3640 (or any other Cisco IOS gateway) Type V signaling. For more information about the Nortel PBX and Cisco Gateway Configuration, refer to [Cisco 3640 Series Gateway-PBX Interoperability: Nortel Meridian 1 Option 11C PBX with Analog E&M Signaling](#).

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Related Information

- [Analog E&M Signaling Overview](#)
- [Understanding and Troubleshooting Analog E&M Interface Types and Wiring Arrangements](#)
- [Understanding and Troubleshooting Analog E&M Start Dial Supervision Signaling](#)
- [Cisco 3640 Series Gateway-PBX Interoperability: Nortel Meridian 1 Option 11C PBX with Analog E&M Signaling](#)
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