



Job Aid: Connector and Cable Diagrams (Pinout Charts)

The pinout charts in this document provide wire color and connector pin numbers for:

- [Circuit pack codes and descriptions for all circuit packs \(unless otherwise noted\)](#)
- [Tip/Ring/Sleeve codes and descriptions](#)
- [Cross-connect cable](#)
- [Circuit pack and auxiliary equipment leads—RJ21](#)
- [RJ21 circuit pack name cross-reference for Table 4](#)
- [Circuit pack and auxiliary equipment leads—MDF](#)
- [MDF circuit pack name cross-reference for Table 6](#)
- [Circuit pack lead pin numbers and color designations](#)
- [DS1 interface cable H600-307](#)
- [DS1 interface cable C6F](#)
- [Port circuit pack and telephone pin designations](#)
- [Auxiliary lead appearances at the AUX connector \(RJ21\) for MCC1 and SCC1 media gateways](#)
- [Global power distribution unit \(MCC1–J58890CH\) external alarm \(RJ21\) connector](#)
- [TN799 C-LAN](#)
- [Ethernet adapter \(black\) for TN799DP C-LAN, TN2302AP IP Media Processor, and TN2501AP VAL](#)
- [TN2312AP IP server interface adapter](#)
- [TN2312BP IP server interface adapter \(grey–700263502\)](#)

Pinout chart tables

Columns with the heading "Color" use the following codes and values (unless otherwise noted): W— white, BL—blue, O—orange, BR—brown, S—slate (grey), R—red, BK—black, V—violet, Y—yellow, and G—green. When the color code has two values, for example, V-BR, the code on the left is the color of the wire. The code on the right is the color of the stripe on the wire

Table 1: Circuit pack codes and descriptions for all circuit packs (unless otherwise noted)

Lead name identifier	Description
T,R	PBX transmit voice
T1,R1	PBX receive voice
M	PBX transmit signal
E	PBX receive signal
PX	PBX transmit
TX	Terminal transmit
LI, LI*	Digital Trunk IN
LO, LO*	Digital Trunk OUT

Table 2: Tip/Ring/Sleeve codes and descriptions

Lead name identifier	Description	Code	Color
T	Tip	(A)	G
R	Ring	(B)	R
S	Sleeve		

An Ethernet CAT5 cable that is used to directly connect a laptop to the services port on the Avaya S8500 or S8700 series media servers must have the following pinouts.

Table 3: Cross-connect cable

Pin to the services Ethernet port on the media server	Pin to Ethernet card on the laptop
8	8
7	7
6	2
5	5
4	4
3	1
2	6
1	3

Table 4: Circuit pack and auxiliary equipment leads—RJ21

Color	Cross-connect RJ21 Pins	ISDN-BRI 4-wire S interface (8)	ISDN-BRI 2-wire U interface (12)	Analog line and CO trunk 2-wire (8)	Digital/ analog line 2-wire (16)	Data/ digital line 4-wire (8)	Digital/ analog line 2-wire (24)	Hybrid line (8)	MET line (4)	AUX trunk (4)
W-BL	26	TXT.1	T.1	T1	T1		T1	V1T1	T1	T1
BL-W	01	TXR.1	R.1	R1	R1		R1	V1R1	R1	R1
W-O	27	PXT.1	T.2		T2	TXT1	T2	CT1	TXT1	SZ1
O-W	02	PXR.1	R.2		R2	TXR1	R2	CR1	TXR1	SZ11
W-G	28	TXT.2	T.3		T3	PXT1	T3	P-1	PXT1	S1
G-W	03	TXR.2	R.3		R3	PXR1	R3	P+1	PXR1	S11
W-BR	29	PXT.2	T.4	T2	T4		T4	V1T2	T2	T2
BR-W	04	PXR.2	R.4	R2	R4		R4	V1R2	R2	R2
W-S	30	TXT.3	T.5			TXT2	T5	CT2	TXT2	SZ2
S-W	05	TXR.3	R.5			TXR2	R5	CR2	TXR2	SZ12
R-BL	31	PXT.3	T.6			PXT2	T6	P-2	PXT2	S2
BL-R	06	PXR.3	R.6			PXR2	R6	P+2	PXR2	S12

1 of 3

Job Aid: Connector and Cable Diagrams (Pinout Charts)

Table 4: Circuit pack and auxiliary equipment leads—RJ21 (continued)

Color	Cross-connect RJ21 Pins	ISDN-BRI 4-wire S interface (8)	ISDN-BRI 2-wire U interface (12)	Analog line and CO trunk 2-wire (8)	Digital/ analog line 2-wire (16)	Data/ digital line 4-wire (8)	Digital/ analog line 2-wire (24)	Hybrid line (8)	MET line (4)	AUX trunk (4)
R-O	32	TXT.4	T.7	T3			T7	V1T3	T3	T3
O-R	07	TXR.4	R.7	R3			R7	V1R3	R3	R3
R-G	33	PXT.4	T.8			TXT3	T8	CT3	TXT3	SZ3
G-R	08	PXR.4	R.8			TXR3	R8	CR3	TXR3	SZ13
R-BR	34	TXT.5	T.9		T5	PXT3	T9	P-3	PXT3	S3
BR-R	09	TXR.5	R.9		R5	PXR3	R9	P+3	PXR3	S13
R-S	35	PXT.5	T.10	T4	T6		T10	V1T4	T4	T4
S-R	10	PXR.5	R.10	R4	R6		R10	V1R4	R4	R4
BK-B L	36	TXT.6	T.11		T7	TXT4	T11	CT4	TXT4	SZ4
BL-B K	11	TXR.6	R.11		R7	TXR4	R11	CR4	TXR4	SZ14
BK-O	37	PXT.6	T.12		T8	PXT4	T12	P-4	PXT4	S4
O-BK	12	PXR.6	R.12		R8	PXR4	R12	P+4	PXR4	S14
BK-G	38	TXT.7		T5	T9		T13	V1T5		
G-BK	13	TXR.7		R5	R9		R13	V1R5		
BK-B R	39	PXT.7			T10	TXT5	T14	CT5		
BR-B K	14	PXR.7			R10	TXR5	R14	CR5		
BK-S	40	TXT.8			T11	PXT5	T15	P-5		
S-BK	15	TXR.8			R11	PXR5	R15	P+5		
Y-BL	41	PXT.8		T6	T12		T16	V1T6		
BL-Y	16	PXR.8		R6	R12		R16	V1R6		
Y-O	42					TXT6	T17	CT6		
O-Y	17					TXR6	R17	CR6		
Y-G	43					PXT6	T18	P-6		
G-Y	18					PXR6	R18	P+6		
Y-BR	44			T7			T19	V1T7		
BR-Y	19			R7			R19	V1R7		

Table 4: Circuit pack and auxiliary equipment leads—RJ21 (continued)

Color	Cross-connect RJ21 Pins	ISDN-BRI 4-wire S interface (8)	ISDN-BRI 2-wire U interface (12)	Analog line and CO trunk 2-wire (8)	Digital/ analog line 2-wire (16)	Data/ digital line 4-wire (8)	Digital/ analog line 2-wire (24)	Hybrid line (8)	MET line (4)	AUX trunk (4)
Y-S	45					TXT7	T20	CT7		
S-Y	20					TXR7	R20	CR7		
V-BL	46				T13	PXT7	T21	P-7		
BL-V	21				R13	PXR7	R21	P+7		
V-O	47			T8	T14		T22	V1T8		
O-V	22			R8	R14		R22	V1R8		
V-G	48				T15	TXT8	T23	CT8		
G-V	23				R15	TXR8	R23	CR8		
V-BR	49				T16	PXT8	T24	P-8		
BR-V	24				R16	PXR8	R24	P+8		
V-S	50	GRD	GRD	GRD	GRD	GRD	GRD	GRD	GRD	GRD
S-V	25	GRD	GRD	GRD	GRD	GRD	GRD	GRD	GRD	GRD
3 of 3										

Table 5: RJ21 circuit pack name cross-reference for [Table 4](#)

ISDN-BRI 4-wire S interface (8)	ISDN-BRI 2-wire U interface (12)	Analog line, CO, and DID trunk 2-wire (8)	Digital/ analog line 2-wire (16)	Data/ digital line 4-wire (8)	Digital/ analog line 2-wire (24)	Hybrid line (8)	MET line (4)	AUX trunk (4)
TN2185	TN2198	TN429	TN448	TN726	TN793	TN762	TN735	TN763
		TN436	TN479	TN754	TN2214			
		TN438	TN746		TN2224			
		TN447	TN791		TN2793			
		TN459	TN2135					
		TN465	TN2149					
		TN742	TN2181					
		TN747	TN2183					
1 of 2								

Table 5: RJ21 circuit pack name cross-reference for [Table 4](#) (continued)

ISDN-BRI 4-wire S interface (8)	ISDN-BRI 2-wire U interface (12)	Analog line, CO, and DID trunk 2-wire (8)	Digital/ analog line 2-wire (16)	Data/ digital line 4-wire (8)	Digital/ analog line 2-wire (24)	Hybrid line (8)	MET line (4)	AUX trunk (4)
		TN753	TN2215					
		TN769						
		TN797						
		TN2138						
		TN2139						
		TN2146						
		TN2147						
		TN2308						
2 of 2								

Table 6: Circuit pack and auxiliary equipment leads—MDF

Color	Cross-connect pin (MDF)	CO trunk 3-wire (4)	Tie trunk (4)	DS1 trunk	ISDN BRI line 4-wire (12)	4 port DIOD
W-BL	26	A1	T1		PXR1	T1
BL-W	01	B1	R1		PXT1	R1
W-O	27		T11		TXT1	
O-W	02		R11		TXR1	
W-G	28		E1		PXR2	
G-W	03	C1	M1		PXT2	
W-BR	29	A2	T2		TXT2	T2
BR-W	04	B2	R2		TXR2	R2
W-S	30		T12		PXR3	
S-W	05		R12		PXT3	
R-BL	31		E2		TXT3	
1 of 3						

Table 6: Circuit pack and auxiliary equipment leads—MDF (continued)

Color	Cross-connect pin (MDF)	CO trunk 3-wire (4)	Tie trunk (4)	DS1 trunk	ISDN BRI line 4-wire (12)	4 port DIOD
BL-R	06	C2	M2		TXR3	
R-O	32	A3	T3		PXR4	T3
O-R	07	B3	R3		PXT4	R3
R-G	33		T13		TXT4	
G-R	08		R13		TXR4	
R-BR	34		E3		PXR5	
BR-R	09	C3	M3		PXT5	
R-S	35	A4	T4		TXT5	T4
S-R	10	B4	R4		TXR5	R4
BK-BL	36		T14		PXR6	
BL-BK	11		R14		PXT6	
BK-O	37		E4		TXT6	
O-BK	12		M4		TXR6	
BK-G	38				PXR7	
G-BK	13				PXT7	
BK-BR	39				TXT7	
BR-BK	14				TXR7	
BK-S	40				PXR8	
S-BK	15				PXT8	
Y-BL	41				TXT8	
BL-Y	16				TXR8	
Y-O	42				PXR9	
O-Y	17				PXT9	
Y-G	43				TXT9	
G-Y	18				TXR9	

2 of 3

Table 6: Circuit pack and auxiliary equipment leads—MDF (continued)

Color	Cross-connect pin (MDF)	CO trunk 3-wire (4)	Tie trunk (4)	DS1 trunk	ISDN BRI line 4-wire (12)	4 port DIOD
Y-BR	44				PXR10	
BR-Y	19				PXT10	
Y-S	45				TXT10	
S-Y	20				TXR10	
V-BL	46				PXR11	
BL-V	21				PXT11	
V-O	47			LI*	TXT11	
O-V	22			LI	TXR11	
V-G	48			LO	PXR12	
G-V	23			LO*	PXT12	
V-BR	49			LBACK2	TXT12	
BR-V	24			LBACK1	TXR12	
V-S	50	GRD	GRD	GRD	GRD	GRD
S-V	25	GRD	GRD	GRD	GRD	GRD
						3 of 3

Table 7: MDF circuit pack name cross-reference for [Table 6](#)

CO trunk 3-wire (4)	Tie trunk (4)	DS1 trunk	ISDN BRI line 4-wire (12)	ISDN PRI line	4 port DIOD
TN2199	TN458	TN464	TN556	TN2242	TN2184
	TN760	TN722			
	TN2140	TN767			
	TN2209	TN2207			
		TN2313			
		TN2464			

Table 8: Circuit pack lead pin numbers and color designations

Color	Cross-connect pin (MDF)	RJ21 Amphenol pin	Backplane pin
W-BL	1	26	102
BL-W	2	01	002
W-O	3	27	103
O-W	4	02	003
W-G	5	28	104
G-W	6	03	004
W-BR	7	29	105
BR-W	8	04	005
W-S	9	30	106
S-W	10	05	006
R-BL	11	31	107
BL-R	12	06	007
R-O	13	32	108
O-R	14	07	008
R-G	15	33	109
G-R	16	08	009
R-BR	17	34	110
BR-R	18	09	010
R-S	19	35	111
S-R	20	10	011
BK-BL	21	36	112
BL-BK	22	11	012
BK-O	23	37	113
O-BK	24	12	013
BK-G	25	38	302
			1 of 2

Table 8: Circuit pack lead pin numbers and color designations (continued)

Color	Cross-connect pin (MDF)	RJ21 Amphenol pin	Backplane pin
G-BK	26	13	202
BK-BR	27	39	303
BR-BK	28	14	203
BK-S	29	40	304
S-BK	30	15	204
Y-BL	31	41	305
BL-Y	32	16	205
Y-O	33	42	306
O-Y	34	17	206
Y-G	35	43	307
G-Y	36	18	207
Y-BR	37	44	308
BR-Y	38	19	208
Y-S	39	45	309
S-Y	40	20	209
V-BL	41	46	310
BL-V	42	21	210
V-O	43	47	311
O-V	44	22	211
V-G	45	48	312
G-V	46	23	212
V-BR	47	49	313
BR-V	48	24	213
V-S	49	50	300
S-V	50	25	200
			2 of 2

Table 9: DS1 interface cable H600-307

Color	50-pin Pin	Lead Designation	Color	15-pin Pin	Lead Designation
W-BL	02	—	—	—	—
BL-W	03	—	—	—	—
W-G	47	L _I (High)	W-G	11	L _I (High)
G-W	22	L _I	G-W	03	L _I
W-BR	48	LO	W-BR	09	LO
BR-W	23	LO (High)	BR	01	LO (High)
W-S	49	LOOP2	W-S	06	LOOP2
S-W	24	LOOP1	S-W	05	LOOP1
All other pins are empty.					

Table 10: DS1 interface cable C6F

Color	Lead Designation	Pin Number
White/Green	L _I * (High Side)	47
Green	L _I	22
White/Brown	LO	48
Brown	LO* (High Side)	23
White/Slate	LBACK2	49
Slate	LBACK1	24

Table 11: Port circuit pack and telephone pin designations

Pin on Modular Plug	4-wire: 8400-Series, 606A1	2-wire: 302D, 8400-Series, 603E	8510T BRI (with adjunct speaker phone)	Analog Station and Modem	NT1
1	TXT	—	—	—	—
2	TXR	—	—	T	—
3	PXT	—	TXT	R	—
4	—	T	PXR	—	T
5	—	R	PXT	No connection 4-pin modular jack	R
6	PXR	—	TXR	No connection 4-pin modular jack	—
7	-48VDC	(-48VDC)	(-48VDC)	No connection 4-pin modular jack	-48VDC
8	GRD	GRD	GRD		GRD
Circuit pack	TN754 4-wire digital (8 port)	TN2181 2-wire digital (16 Port) TN2224 2-wire digital (24 port)	TN556 ISDN-BRI line	TN2183 analog line (16 port)	TN2198 2-wire BRI line
PX PBX transmit—T Tip (A) TX Terminal transmit—R Ring (B)					

Table 12: Auxiliary lead appearances at the AUX connector (RJ21) for MCC1 and SCC1 media gateways

Color	Pinouts	Output	Power
W-BL	26	Major ¹	—
BL-W	1	Major GRD	—
W-O	27	Minor ²	—
O-W	2	Minor GRD	—
W-G	28	—	—
G-W	3	GRD	—
1 of 3			

Table 12: Auxiliary lead appearances at the AUX connector (RJ21) for MCC1 and SCC1 media gateways (continued)

Color	Pinouts	Output	Power
W-BR	29	—	—
BR-W	4	GRD	—
W-S	30	—	—
S-W	5	GRD	—
R-BL	31	—	—
BL-R	6	GRD	—
R-O	32	—	—
O-R	7	GRD	—
R-G	33	Not connected	—
G-R	8	Not connected	—
R-BR	34	Not connected	—
BR-R	9	Not connected	—
R-S	35	Not connected	—
S-R	10	Not connected	—
BK-BL	36	-48	Emergency transfer relay power
BL-BK	11	GRD	Emergency transfer relay power
BK-O	37	-48	Emergency transfer relay power
O-BK	12	GRD	Emergency transfer relay power
BK-G	38	-48	Emergency transfer relay power
G-BK	13	GRD	Emergency transfer relay power
BK-BR	39	-48	Emergency transfer relay power
BR-BK	14	GRD	Emergency transfer relay power
BK-S	40	-48	Emergency transfer relay power
S-BK	15	GRD	Emergency transfer relay power
Y-BL	41	-48	Emergency transfer relay power
2 of 3			

Table 12: Auxiliary lead appearances at the AUX connector (RJ21) for MCC1 and SCC1 media gateways (continued)

Color	Pinouts	Output	Power
BL-Y	16	GRD	Emergency transfer relay power
Y-O	42	-48	Emergency transfer relay power
O-Y	17	GRD	Emergency transfer relay power
Y-G	43	Not Connected	—
G-Y	18	Not Connected	—
Y-BR	44	GRD	AUX power for attendant consoles
BR-Y	19	-48	AUX power for attendant consoles
Y-S	45	GRD	AUX power for attendant consoles
S-Y	20	-48	AUX power for attendant consoles
V-BL	46	GRD	AUX power for attendant consoles
BL-V	21	-48	AUX power for attendant consoles
V-O	47	Not connected	—
O-V	22	Not connected	—
V-G	48	Ext alarm A ³	—
G-V	23	Ext alarm return	—
V-BR	49	Not connected	—
BR-V	24	Not connected	—
V-S	50	INADS tip	—
S-V	25	INADS ring	—
3 of 3			

1. External major alarm input pair from an external isolated contact closure (60 VDC max, 5 mA max)

2. External minor alarm input pair from an external isolated contact closure (60 VDC max, 5 mA max)

3. Output alarm from the Media Gateway, via a contact closure, to the equipment room alarm light or bell

Table 13: Global power distribution unit (MCC1–J58890CH) external alarm (RJ21) connector

Pin	Designation	Definition
26	Not used	—
1	Not used	—
27	Not used	—
2	Not used	—
28	Not used	—
3	Not used	—
29	Not used	—
4	Not used	—
30	Not used	—
5	Not used	—
31	Not used	—
32	Not used	—
7	Not used	—
33	RFA2+	Rectifier failure (positive)
8	RFA2-	Rectifier failure return (negative)
34	ACF2+	AC failure (positive)
9	ACF2-	AC failure return (negative)
35	BIF2+	Battery interface unit failure (positive)
10	BIF2-	Battery interface unit failure return (negative)
36	BOD2+	Battery on discharge (positive)
11	BOD2-	Battery on discharge return (negative)
37	Not used	—
12	RXD	Receive data—not used
38	TXD	Transmit data—not used
13	DTR	Data terminal ready—not used
1 of 2		

Table 13: Global power distribution unit (MCC1–J58890CH) external alarm (RJ21) connector (continued)

Pin	Designation	Definition
39	RS-232 GRD	RS-232 ground—not used
14	DSR	Data set ready—not used
40	RTS	Request to send—not used
15	Not used	—
41	Not used	—
16	Not used	—
42	Not used	—
17	Not used	—
43	Not used	—
18	Not used	—
44	Not used	—
19	Not used	—
45	Not used	—
20	Not used	—
46	Not used	—
21	Not used	—
47	Not used	—
22	Not used	—
48	Not used	—
23	Not used	—
49	Not used	—
24	Not used	—
50	Not used	—
25	Not used	—
2 of 2		

Table 14: TN799 C-LAN

Backplane Pin	25-Pair Wire Color	Lead Name	Peripheral Connector Pin
103	White/Orange	TD+	27
003	Orange/White	TD-	2
104	White/Green	RD+	28
004	Green/White	RD-	3

Table 15: Ethernet adapter (black) for TN799DP C-LAN, TN2302AP IP Media Processor, and TN2501AP VAL

To RJ45 jack	From 50-pin plug	Function
1	32	TX+
2	7	TX-
3	44	RX+
4	18	GRD
5	43	GRD
6	19	RX-
7	45	GRD
8	20	GRD

Table 16: Ethernet adapter for TN2602AP IP Media Resource 320 (can be used for TN2302AP)

To RJ45 jack (port 1)	To RJ45 jack (port 2)	From 50-pin plug	Function
1		43	TX+
2		18	TX-
3		44	RX+
4		17	GRD
5		42	GRD
6		19	RX-
7		45	GRD
8		20	GRD
	1	27	TX+
	2	2	TX-
	3	29	RX+
	4	1	GRD
	5	26	GRD
	6	4	RX-
	7	30	GRD
	8	5	GRD

Table 17: TN2312AP IP server interface adapter

To RJ45 jack	From 50-pin plug	Function
1	43	TX+
2	18	TX-
3	44	RX+
6	19	RX-
—	39 ¹	FP-NBPSEL
—	14 ¹	GRD

1. The pins are shorted on a 50-pin plug.

Table 18: TN2312BP IP server interface adapter (grey-700263502)

Function	50-pin wire color ¹	From 50-pin plug (terminal number)	To RJ45 jack	To DB9 connector (terminal number)	DB9 cable color
TX+	Y-G	43	1	—	—
TX-	G-Y	18	2	—	—
RX+	Y-BR	44	3	—	—
RX-	BR-Y	19	6	—	—
FP-NBPSEL	BK-BR	39 ²	—	—	—
GRD	BR-BK	14 ²	—	—	—
XFER48	BK-BL	36	—	1	BL-W
GRD	BL-BK	11	—	2	W-BL
Minor (~AP2)	R-BR	34	—	3	O-W
GRD	V-S	50	—	8	W-O
Major (~AP1)	BR-R	9	—	6	BR-W
GRD	S-V	25	—	7	W-BR
EXTALMA	R-O	32	—	4	G-W
EXTALMB	O-R	7	—	5	W-G

1. The code on the left is for the color of the wire. The code on the right is for the color of the stripe on the wire. The codes and their corresponding colors are as follows: W— white, BL—blue, O—orange, BR—brown, S—slate (grey), R—red, BK—black, V—violet, Y—yellow, and G—green.

2. The pins are shorted on a 50-pin plug.

