



**Table 1. P9 Connector Pinout**

P9 Connector Pin	PCB Pad Identifier	Signal Details	Label Color	Label Text	HD15-F Connector Pin
1	E1	Channel 2 I Clock Output	BLU	Ch2 ICLK OUT (1)	-
2	E2	Channel 2 I Data Output	BLU	Ch2 IDAT OUT (2)	-
3	E3	Channel 2 Q Clock Output	GRY	Ch2 QCLK OUT (3)	-
4	E4	Channel 2 Q Data Output	GRY	Ch2 QDAT OUT (4)	-
5	E5	Channel 2 I Clock (+) Output	-	-	1
6	E6	Channel 2 I Clock (-) Output	-	-	11
7	E7	Channel 2 I Data (+) Output	-	-	2
8	E8	Channel 2 I Data (-) Output	-	-	12
9	E9	Channel 2 Q Clock (+) Output	-	-	4
10	E10	Channel 2 Q Clock (-) Output	-	-	14
11	E11	Channel 2 Q Data (+) Output	-	-	5
12	E12	Channel 2 Q Data (-) Output	-	-	15
13	E13	Channel 2 Open Collector Output	PNK	Ch2 O/C OUT (13)	15
20	E20	J9 User Defined Input 20	WHT	J9 UIN1 (20)	-
21	E21	J9 User Defined Input 21	WHT	J9 UIN2 (21)	-
23	E23	J9 User Defined Output 23	YEL	J9 UOUT1 (23)	-
24	E24	J9 User Defined Output 24	YEL	J9 UOUT2 (24)	-
14-19, 22	--	Ground	-	-	6, 7, 9, 10

**Table 2. Assembly BOM**

Description	Qty	Manufacturers PN	Manufacturer
Micro-DSub Aluminum Backshell	2	MEC-28M-01-301-02	Lumistar
MDM 25-pin Female Connector	1	CONN-380-025-213L001	NorComp
MDM 25-pin Female Backshell PCB	1	HARM-3428M0138901	Lumistar
UNC2-56 Thumbscrews	2	NTEC-B71014305	Northern Technologies
BNC Female RG174 Pigtail, 12"	9	LCOM-SP7363	LCOM
Heat-shrink Tubing	AR	(Common Stock)	(Various)
0-80 82-Degree Stainless Steel Screw, Flathead, 0.3125 Length	4	(Common Stock)	(Various)
HD15 Female Connector, Solder Cup	1	CONN-180-015-203L001	NorComp
HD15 Backshell Kit w/Thumbscrews	1	CONN-973-009-10R011	NorComp
1 Ft. Twisted-Shielded Pair, 26AWG, 110 Ohm	4	CABL-55A1121-26-6/9-9	TE/Raychem

**Assembly Notes:**

- 1.) Place connector identification label containing "P9" on the key side at this location. On the bottom cover place cable assembly number. You may omit the CBL- portion of the assembly number due to size constraints.
- 2.) Place pigtail identification labels with shown text and colors from table 1 at the locations shown and cover with clear heat shrink.
- 3.) Bundle twisted-shielded pair cables at approximate 4" intervals to keep cables together.
- 4.) Remove plastic thumbscrew covers prior to assembly.
- 5.) Table 2 provides assembly component Bill of Materials.
- 6.) Label HD15 Backshell as shown.

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**LS-28-M P9 Cable Assembly**

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## User IO Selection Table for J9

Signal Mnemonic	Connector Pin	Signal Description	Signal Direction	Signal Characteristics
C1EGPIO9	J9-13	Ch2 Open Collector Out	Output	Open/Collector
J9UIO1	J9-20	Ch2 External Clock In	Input	5V TTL
		PCM Encoder2 Clock In	Input	5V TTL
		Trigger3 In	Input	5V TTL
		AUX2 Clock In	Input	5V TTL
J9UIO2	J9-21	Ch1 External Data In	Input	5V TTL
		PCM Encoder2 Data In	Input	5V TTL
		Trigger4 In	Input	5V TTL
		AUX2 Data In	Input	5V TTL
J9UIO3	J9-23	Simulator1_TXD1 Clock Out N	Output	5V TTL
		Simulator2_TXD2 Clock Out	Output	5V TTL
		Slave2 Clock Out	Output	5V TTL
		AUX2 Clock Out	Output	5V TTL
		Simulator2_TXD2 Strobe Out	Output	5V TTL
		Decom2 Strobe Out	Output	5V TTL
		Simulator2_TXD2 Strobe Out N	Output	5V TTL
		Decom2 Strobe Out N	Output	5V TTL
J9UIO4	J9-24	Simulator1_TXD1 Data Out N	Output	5V TTL
		Simulator2_TXD2 Data Out	Output	5V TTL
		Slave2 Data Out	Output	5V TTL
		AUX2 Data Out	Output	5V TTL
		Simulator2_TXD12 Strobe Out	Output	5V TTL
		Decom2 Strobe Out	Output	5V TTL
		Simulator2_TXD2 Strobe Out N	Output	5V TTL
		Decom2 Strobe Out N	Output	5V TTL

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