



Embedded Computer Systems

Cable Assembly

**12 Bit Color Panel Interface:
Sharp LQ10D368, LQ64D343, et al**

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ORIGINATOR B. Ngo	SIGNATURE	DATE
MANUFACTURING MANAGER D. Basham	SIGNATURE	DATE
CONFIGURATION MANAGER H. Wilson	SIGNATURE	DATE
ENGINEERING MANAGER M. Blattau	SIGNATURE	DATE

1.0 OVERVIEW

This document describes how to build a cable that connects the 34 pin display header of ADS single-board computers to the LQ10D368, LQ64D343, LP064V1 and other flat panel displays. This cable can be used as a replacement for the ADS 610110-3008 display cable.

2.0 BILL of MATERIALS

ITEM	QTY	ADS P/N	DESCRIPTION
1	1	210030-00342	P1: 34 Pin IDC Connector, AMP #1-746288-8, or equivalent
2	1	600000-1020A	P2/P3: Quadrangle 31 pin Molex Interface Connector Kit #QD2968
3	1	250070-00003	Strain Relief for 34 pin connector (P1), AMP#499252-6

3.0 ASSEMBLY INSTRUCTIONS

- 3.1 Trim cable (Item 2) such that finished length will be 12.0 inches (-0.25 in., +0.5 in).
- 3.2 Combine pairs of wires on ribbon cable (e.g. P2 24 and 26) to a single wire suitable for crimping. This is most typically achieved by soldering two or more wires to a third wire and shrink-wrapping the assembly. It is also acceptable to crimp up to two wires to a single contact.
- 3.3 Crimp conductors from panel connector (P2) into the appropriate locations on the 34 pin IDC connector (P1) as shown in the wire table in Section 5.0. Ensure that the keys and pin 1 are properly oriented on both connectors.
- 3.4 Install strain relief (Item 3) if desired
- 3.5 Identify with part number using permanent adhesive label.

4.0 NOTES

(none)

5.0 WIRE TABLE

Shaded area indicates pins connected with ribbon cable.
P2 is a keyed socket. A small triangle indicates pin 1.

ADS Connector		Quadrangle Kit		
ADS Signal Name ¹	P1	P2	P3	Panel Signal Name
GND	2	31	1	GND
PIXCLK	3	30	2	PIXCLK
HSYNC	4	29	3	HSYNC
VSYNC	5	28	4	VSYNC
GND	6	27	5	GND
LDD8: R0	17 *	26	6	R0
LDD9: R1	18 *	25	7	R1
LDD8: R0	17 *	24	8	R2
LDD9: R1	18 *	23	9	R3
LDD10: R2	19	22	10	R4
LDD11: R3	8	21	11	R5
GND	13	20	12	GND
LDD4: G0	26 *	19	13	G0
LDD5: G1	14 *	18	14	G1
LDD4: G0	26 *	17	15	G2
LDD5: G1	14 *	16	16	G3
LDD6: G2	15	15	17	G4
LDD7: G3	16	14	18	G5
GND	20	13	19	GND
LDD0: B0	22 *	12	20	B0
LDD1: B1	23 *	11	21	B1
LDD0: B0	22 *	10	22	B2
LDD1: B1	23 *	9	23	B3
LDD2: B2	24	8	24	B4
LDD3: B3	25	7	25	B5
GND	27	6	26	GND
L_BIAS	28	5	27	ENAB
PNL_PWR	29	4	28	VCC
PNL_PWR	30	3	29	VCC
RL	31	2	30	R/L
UD	32	1	31	U/D

¹ Color designation shown for each signal (R0, B3, etc) is the color bit assigned in 12 bit-per-pixel mode.
* Asterisk indicates paired wires. See Assembly Note 3.2 for correct termination.

Unconnected pins

ADS Connector		Quadrangle Kit		
ADS Signal Name ²	P1	P2	P3	Panel Signal Name
VEE	1	n/c	n/a	n/a
LDD15	7			
LDD12	9			
LDD13	10			
LDD14	11			
LDD15	12			
LDD4:G0	21			
PNL_ENA	33			
VCON ³	34			

6.0 REVISION HISTORY

LTR	DESCRIPTION	DATE	ENGINEER
A	Production release	2/10/03	ak

² Color designation shown for each signal (R0, B3, etc) is the color bit assigned in 12 bit-per-pixel mode.

³ The Vcon voltage is not available on all ADS products