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ICD

Interface Control Document

AVDU-2648-xx-ICD

10.4" XGA Multi-function LCD Display (with touch screen and soft keys 2x8) (Connectors on rear face)



General Description

This document applies to the 264mm (10.4") Colour TFT-LCD Display AVDU-2648-xx and its variants.

The monitor supports the XGA (1027(H) x 768(V)) screen format and 16.7M colours (RGB 8/6-bits data) at high response speeds optimised for high-speed motion video typical in airborne surveillance applications.

The monitor features two menu/soft key switch banks to the left and right of the screen which interface to external equipment using a serial RS232/RS244/RS485, PS2 keyboard or USB interface.

The monitor front window forms a touch screen interface to the monitor which may be interfaced using a serial RS232/RS422/RS285, PS2 mouse emulator or USB interface.

This Display contains:

- Power input filter and power supply module
- Video display driver Panel Electronic Circuit (PEC)
- Inverter PEC for the backlight
- Backlight light box assembly
- Touch screen overlay


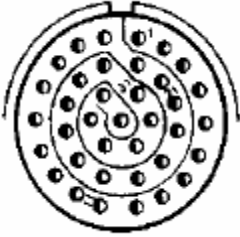

The unit is designed to connect directly and provide power to the associated external control panel which encodes the Left and Right menu switch banks.

The front panel brightness control also controls the back lit brightness of the attached control panel.

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Electrical

Pin assignment

Power connector		
 <p>Size 20 contacts Wire Size 24,22,20 Gauge 3, 5, 7.5A max</p>	Unit connector	
	D38999/20WB 98PN	FLANGE MT RECEP 6 WAY PIN
	Mating half (cable connector)	
	D38999/26WB 98SN	PLUG 6 WAY SKT
	G8801-11M	SIZE 11 Backshell
Signal connector		
 <p>Size 22D contacts Wire size 28,26,24,22 Gauge 1.5, 2, 3, 5A max</p>	Unit Connector	
	D38999/20WD 35PN	FLANGE MT RECEP 37 WAY PIN
	Mating Half (cable connector)	
	D38999/26WD 35SN	PLUG 37 WAY SKT
	G8801-15M	SIZE 15 Backshell
Remote connector		
 <p>Size 22D Contacts Wire size 28,26,24,22 Gauge 1.5, 2, 3, 5A max</p>	Unit connector	
	D38999/20WB 35SN	FLANGE MT RECEP 13 WAY PIN
	Mating Half (cable connector)	
	D38999/26WB 35PN	PLUG 13 WAY SKT
	G8801-11M	SIZE 11 Backshell
Video IN/OUT connectors		
	Unit connector	
	Isolated BNC	

For pin outs see table on next page

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Power Connector	
A	+28V DC Power
B	28V DC Power Return
C	Chassis
D	+ Heater (where fitted)
E	= Heater (where fitted)
F	Enable (Ground to pin B for Disable)

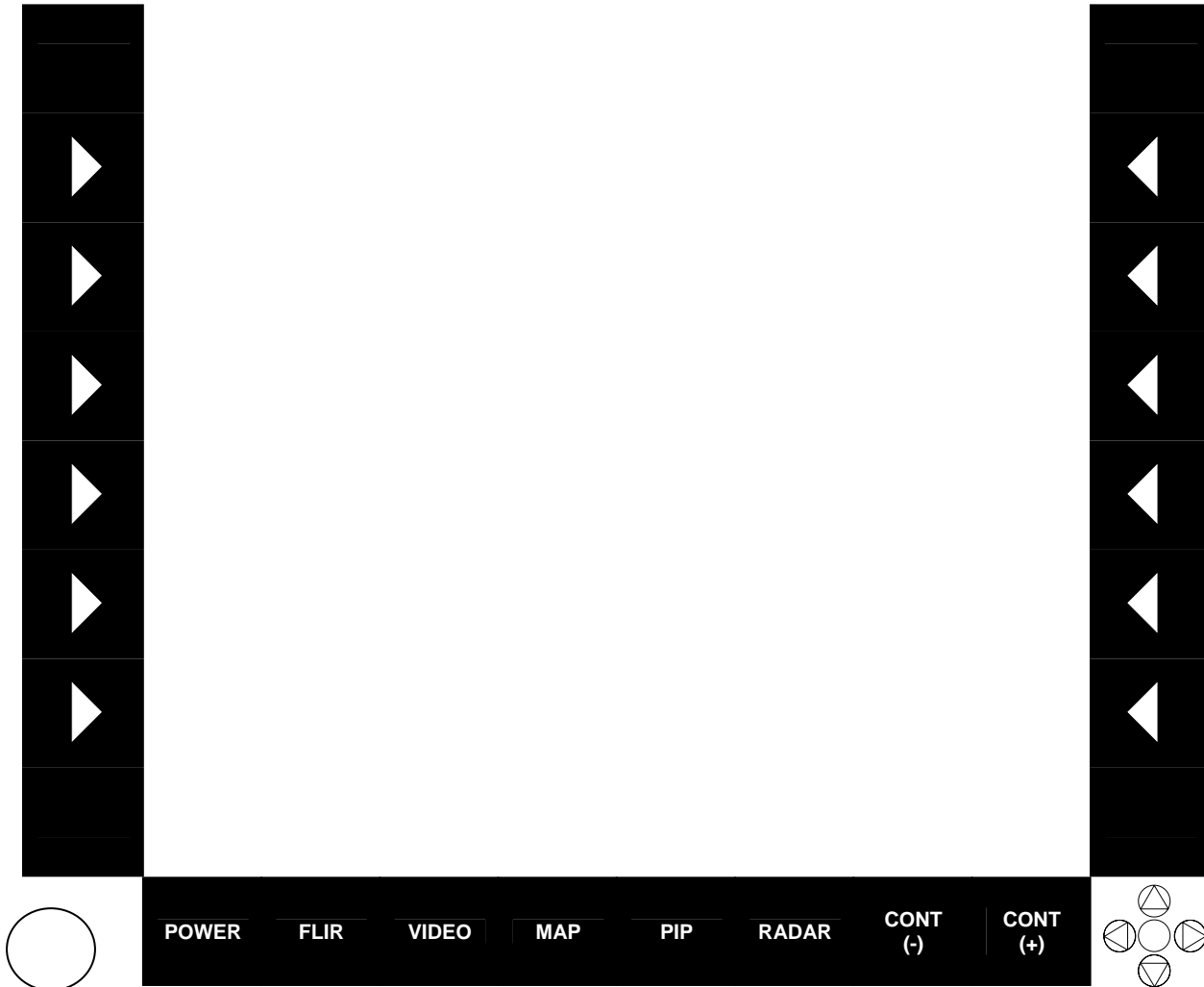
Remote Connector	
1	+28V DC Output
2	28V Return
3	Chassis
4	Data (+)
5	Data (-)
6	Data screen
7	+12V DC Output
8	12V DC return
9	RS422 + Out (option)
10	RS422 – Out (Option)
11	
12	Illumination Bus
13	Remote On/Off (Power inhibit)

Signal Connector

1	Video 2	S-Video : Chroma in	
2		Ground	
3		S-Video : Luma in	
4		Ground	
5	Video 1	Composite video in	
6		Ground	
7	Video 3	Luma in / Green in	
8		Ground	
9		Cb in / Blue in	
10		Ground	
11		Cr in / Red in	
12		Ground	
13	Video 5	S-Video_2 : Chroma in	
14		Ground	
15		S-Video_2 : Luma in	
16		Ground	
17	Video 4	Composite video in_2	
18		Ground	
19	Video 6 YCrCb/RGB selected internally	Cr in_2 / Red in_2	
20		Ground	
21		Luma in_2/Green in_2 (SOG)	
22		Ground	
23		Cb in_2 / Blue_2	
24		Ground	
25		/Composite sync in	
26		Ground	
27		Graphics	PCR
28	AGND		Analogue ground red
29	PCG		Green, analogue
30	AGND		Analogue ground green
31	PCB		Blue analogue
32	AGND		Analogue ground blue
33	HS_IN		Horizontal sync or composite sync, input
34	DGND		Digital ground
35	VS_IN		Vertical sync, input
36	DGND		Digital ground
37	NC	No connection	

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Control Key Functions and legend



The Unit defaults to power on when power is applied.

Holding "Power for >4 sec when powered will put the unit into standby

Holding "Power for >4 sec in standby will power the unit up

The unit will auto power off (< 15 secs) when there is no input on the selected video port.

Map -Selects Graphic input 1 (RGBHV computer signal from the signal connector)

FLIR -Selects Composite Video 1 (From the BNC on the back)

VIDEO -Selects Composite Video 4 (From the BNC on the back)

RADAR -Selects Component Video 3 (RGB from the signal connector)

PIP will select the one of the video inputs as a picture in picture overlaid on the map

CONT (-) and CONT (+) will adjust the display contrast.

The menu, Up, Down, Left and Right keys (right bottom above) operate the on-screen display menu system

The brightness rotary control (left bottom above) adjusts the display illumination and the associated backlights.

Note: Key legends can be customised during manufacturing to match customer specific configurations or to address specific installation requirements.

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Handling Precautions

Handling of the display should be in compliance with Real-Time Vision's handling principles.

- 1) Since front window is an optical assembly and is easily damaged, observe precautions in order not to scratch it.
- 2) Be sure to turn off power supply when inserting or disconnecting the input connectors.
- 3) Wipe off water or fluid droplets immediately. Long contact with water or other fluids may cause discoloration or spots.
- 4) When the front window surface is soiled, wipe it with absorbent cotton or other soft cloth.
- 5) Since the panel is made of glass, it may break or crack if dropped or bumped on hard surface.
- 6) Since CMOS LSI is used in this module, take adequate static electricity precautions and ensure correct human earth bonding when handling.
- 7) Do not open nor modify the assembly.
- 8) Do not press the front window sheet a in any direction.
- 9) At the insertion or removal of the power and signal interface connectors, ensure that the sockets are free from debris and be sure not to damage the Interface pins
- 10) After installation of the display into a mounted position, do not twist nor bend the display even momentary. When designing a suitable mounting, it should be taken into consideration that no bending/twisting forces are applied to the display from outside. Otherwise the TFT -LCD module or backlight may be damaged.

LIMITATION OF LIABILITY

The manufacturer's liability for damages to customer or others resulting from the use of any product supplied hereunder shall in no event exceed the purchase price of said product.

IMPORTANT USAGE NOTE

This equipment is for use by developers and integrators, the manufacturer accepts no liability for damage or injury caused by the use of this product. It is the responsibility of the developer, integrators or other user of this product to:

- Ensure that all necessary and appropriate safety measures are taken.
- Obtain suitable regulatory approvals as may be required.
- Check power settings to all component parts before connection.

Disclaimer

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This product shall not be used for or in connection with equipment that requires an extremely high level of reliability, such as life critical systems, nuclear power control equipment and medical or other life support equipment. Real-Time Vision. takes no responsibility for damage caused by improper use of this product which does not meet the conditions for use specified in this specification sheet.

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