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Interface Control Document

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8.4" XGA Multi-function LCD Display

General Description

This specification applies to the 210mm (8.4") Colour TFT-LCD Display AVDU-2100-01 and its variants. The display 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.

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

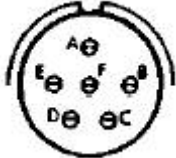
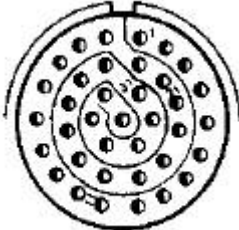

Physical

See attached drawing

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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 Socket
	Mating Half (cable connector)	
	D38999/26WB 35PN	PLUG 13 WAY Plug
	G8801-11M	SIZE 11 Backshell
Video IN/OUT connectors		
	Unit connector	
	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)

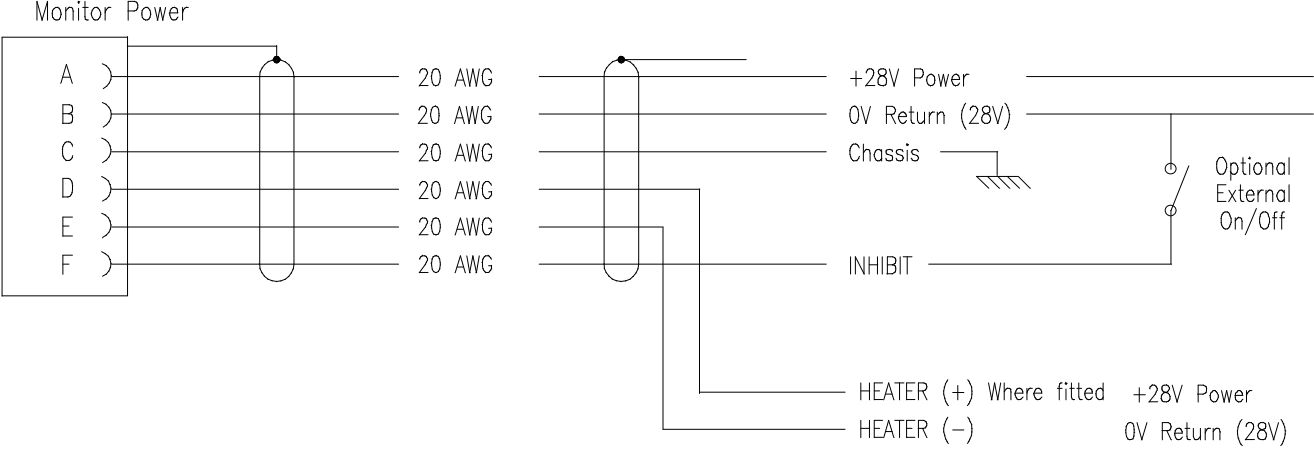
Remote Connector	
1	+28V DC Output
2	28V Return
3	Chassis
4	Data (+)
5	Data (-)
6	Data screen
7	+12V DC Output
8	12V DC return
9	
10	
11	
12	Illumination Bus
13	Inhibit/Enable

Signal Connector

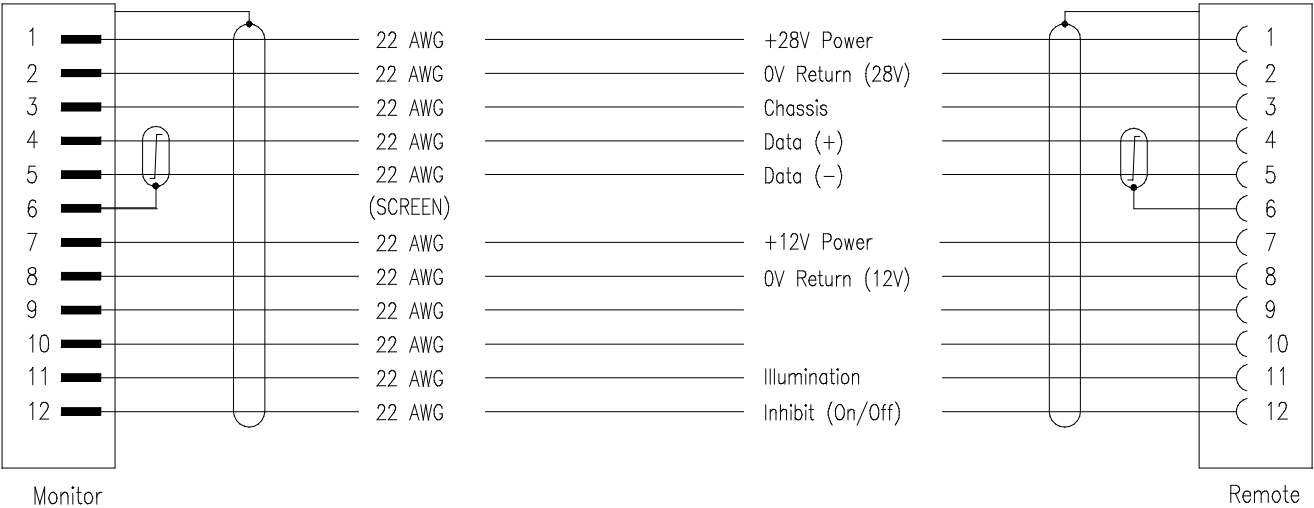
1	Video 2	S-Video : Chroma in	
2		Ground	
3		S-Video : Luma in	
4		Ground	
5	Video 1	Composite video in	
6		Ground	
7	Video 3	Luma in / Green in	
8		Ground	
9		Cb in / Blue in	
10		Ground	
11		Cr in / Red in	
12	Ground		
13	Video 5	S-Video_2 : Chroma in	
14		Ground	
15		S-Video_2 : Luma in	
16		Ground	
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	Red, analogue
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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Typical Power connector wiring



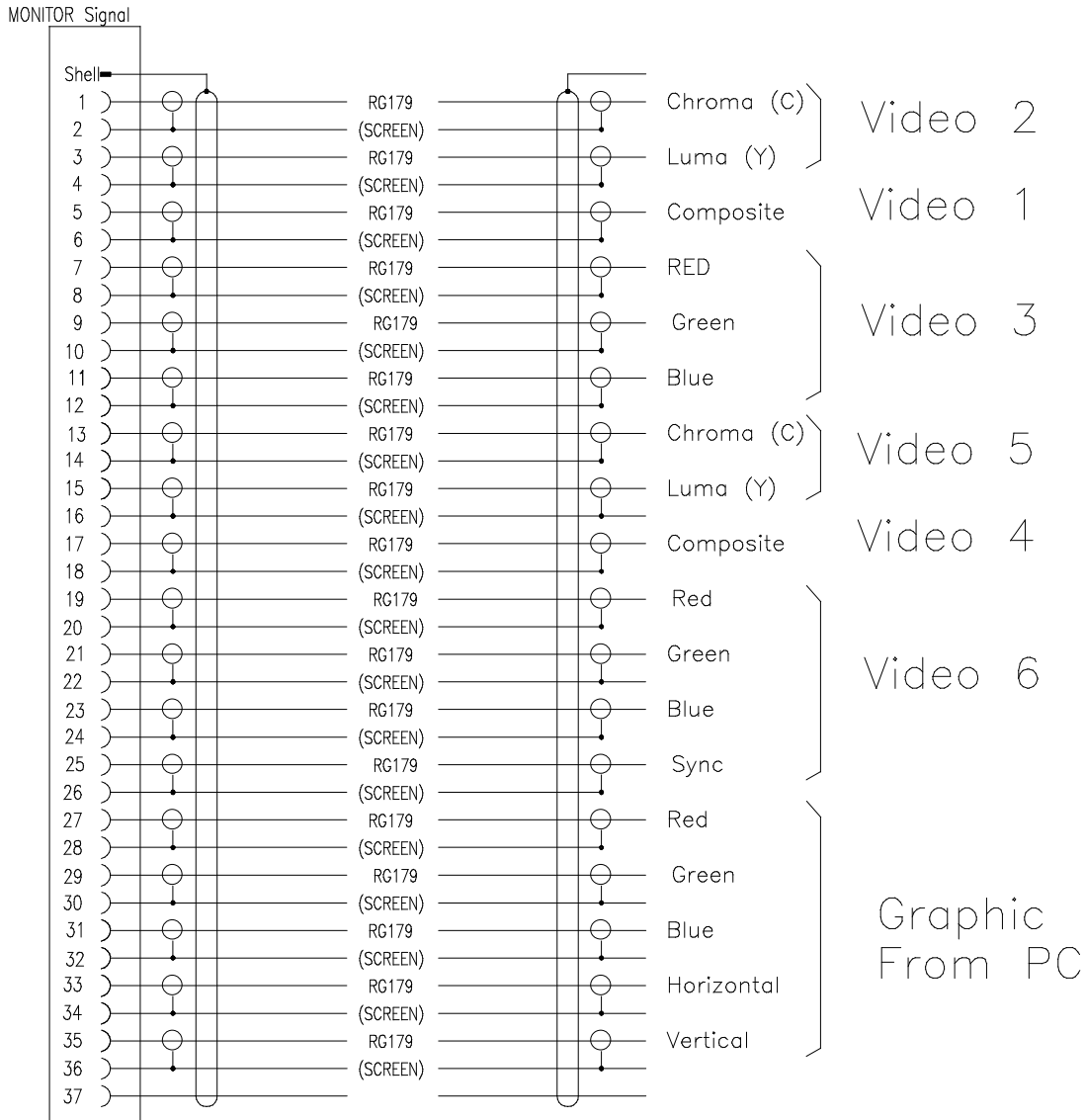
Typical Remote system wiring





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Control functions



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 (after n sec) when there is no input on the selected video port.

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

VIDEO A Selects Composite Video 1 (From the BNC on the back)

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

PIP will select the one of Video A or B as a Picture in picture overlaid on MAP

FRZ will freeze the video image (Pressing again will return to the Live image)

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 (See manual)

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



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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 in any direction.
- 9) At the insertion or removal of the Power and Signal Interface Connector, 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.

Packaging

TBD

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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