

VT104XA4

ISO
9001:2008
REGISTERED



VARTECH SYSTEMS INC.

Solutions for Demanding Applications

All-Weather All-Terrain Fully Sealed IP67 (NEMA 6) Submersible Extreme Operational Temperature Sunlight Readable LCD

VarTech's 10.4" **All-Weather, All-Terrain**, Harsh-Duty LCD Display System is waterproof (fully submersible) and engineered to withstand the harshest environments and most demanding real world applications.

The sunlight readable VT104XA4 is equipped with VarTech's proprietary **Enhanced Light Transmission Technology (ELTT)** which allows for **true Sunlight Readability** and as well provides exceptional clarity and viewing angles. This advanced user friendly LCD display system provides extensive operational temperatures of -20° to +70°C (standard) or -40°C to 70°C (optional) and unprecedented video input capabilities from traditional VGA to up to **FOUR individual direct composite BNC video feeds with easy one-touch toggle select function between all feeds!**



FEATURES

- ◆ Fully Sealed IP67 (NEMA 6) Submersible Machined Aluminum Enclosure
- ◆ Harsh Duty LCD Panel w/ Optically Bonded Overlay
- ◆ True High Brightness Low-Power, high reliability **Solid State LED Backlighting**
- ◆ VarTech's advanced VTLED driver technology
- ◆ Ultra-Wide Viewing Angles , Very High Contrast
- ◆ Extreme Wide Operational Temperatures
- ◆ Variable Power Supply, 9 to 36 VDC (Optional AC Power)
- ◆ One-Touch Toggle Between Multiple Video Feeds

Marks of Conformity:

FCC47 CFR part 15, subpart B
EMC: EN 55022:2006, EN 55024:1998, CISPR 22:2005, CISPR 24:1997
Canada: ICES-003
Australia/New Zealand: AS/NZS CISPR 22
CE
RoHS
WEEE



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SPECIFICATIONS

Construction

IP67 (NEMA 6) Fully-Enclosed Submersible Machined 6061 T6 Aluminum Enclosure

Display Size – Viewable Area

10.4 inches

Panel Type

Harsh Duty LCD cell w/ Optically Bonded Protective Overlay (VBOND)

Resolution

Standard: SVGA 800 x 600 Native
Optional: XGA 1024 x 768 native

Brightness

True High Brightness:
Standard SVGA Type: 1000nits (cd/m2)
Optional XGA Type: 1000 nits (cd/m2)
Low-Power, high reliability **Solid State LED**

Backlighting

Pixel Pitch

0.24 x 0.24

Response Time

25ms

Color

16.77 M

Dimming Ratio

5000:1 minimum

Backlight Driver

VarTech's advanced VTLED driver technology, the latest in technology for driving solid state High Bright Light Emitting Diodes (HBLEDs)

Viewing Envelope

Standard SVGA: Up/Dwn/L/R: 80°/80°/80°/80°
Optional XGA: Up/Dwn/L/R: 85°/85°/85°/85°

Contrast Ratio

Standard SVGA Type: 900:1
Optional XGA Type: 700:1

Video Input

- IP67 Sealed VGA Connector for Computer interface

OPTIONAL

- IP67 Sealed Single VGA Connector, Single Composite BNC Feed for NTSC/PAL, Optional Touch Interface

- IP67 Sealed Single VGA Connector, Dual Composite BNC Feed for NTSC/PAL, Optional Touch Interface

- IP67 Sealed Single Composite BNC Feed for NTSC/PAL

- IP67 Sealed Dual Separate Composite BNC Feed for NTSC/PAL

- IP67 Sealed Three Separate Composite BNC Feed for NTSC/PAL

- IP67 Sealed Four Separate Composite BNC Feed for NTSC/PAL

- IP67 DVI Input only or with various combinations including VGA and BNC video feeds

- Also available with MIL-DTL-38999 connectors

COMING SOON, CALL

- IP67 Sealed Dual VGA Connectors with/without Optional Touch Interface

- IP67 Sealed Dual VGA Connectors, Single Composite BNC Feed for NTSC/PAL, Optional Touch Interface

- IP67 Sealed Dual VGA Connectors, Dual Composite BNC Feed for NTSC/PAL, Optional Touch Interface

Video Controller

VarTech's Harsh Environment Controller Board

Max Power Requirements

28 watts, 35 watts w/heater

Electrical Input

Harsh Duty Variable Power Supply, 9 to 36 VDC, Wide Range, Low Noise, Wide Operational Temperature (Optional AC Power, Universal Input 85 to 264 VAC)

Backlight MTBF

65,000 hours

Wide Operational Temperatures

Standard -20° to +70°C (-4°F to 158°F)
Optional -40° to +70°C (-40°F to 158°F)

Storage Temperature

-40° to +75°C (-40°F to 167°F)

Dimensions

Width - 12.36", Height - 9.01", Depth - 2.59"

Humidity

Operating: 0 to 100%

Altitude

10,000 ft. (optional 45,000 ft.)

EMI / EMC

Designed to meet FCC Class B (optional MIL-STD-461E)

Shock

Designed to meet MIL-S-901D

Weight

6.5 lbs

Vibration

Designed to meet MIL-STD-167

Designed to meet Marine IEC 60945 and IACS-E10

Environmental Design

Designed to meet MIL-STD-810F

Airborne Equipment Environmental Conditions

Designed to meet DO-160E

MIL-L-85762A

sunlight readability (air force - open canopy)

MIL-C-22750 (CARC)

Enclosure aluminum, black finish with Corrosion Protection

All input connectors are rated for full submersion including:

Power, VGA, Touch and BNC Composite Video and to ensure that each connector maintains its sealing, the socket is additionally tested for helium leakage (according MIL 1344A)

Available

Optional MIL-DTL-38999 qualified - connectors

MIL-STD-1275

wide range DC power input 9-36 VDC (12 VDC, 24 VDC, 28 VDC nominal)

Product Safety

2006/95/EC, EN 60950-1:2006;
CE; RoHS;

Cables

Length - 3m (9'10") each

Available IP67 Connector (monitor end) Cables:

Power

Video - 15-pin D-Sub

Touch (optional) - Serial or USB

Direct Composite BNC Video Feed (optional)

Touch Screen (optional)

5-Wire, Durable, Resistive OR Armor Touch

Mounting

RAM/VESA Mounting - standard

Flush Mounting - optional

Console Mounting w/ Helio-Coil Inserts - optional

Electrical Protection

Internal Short Circuit Protection, Load Dump Protection, Over Voltage Protection, Reverse Polarity Protection

Optional Connectors

Optional "Right Angle" Connectors, MIL-DTL-38999 qualified - connectors

Optional EMI/EMC

MIL-STD-461E (FCC Class B is standard)

Warranty

2 years