

**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 VT104XA 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

- ◆ Completely 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)
- ◆ Shock: MIL-S-901D\*
- ◆ Vibration: MIL-STD-167\*
- ◆ Environmental Design: MIL-STD-810F\*
- ◆ EMI/EMC: FCC Class B\* (optional 461F)
- ◆ Marine IEC 60529\*
- ◆ Marine IEC 60945\*
- ◆ One-Touch Toggle Between Multiple Video Feeds

\* Designed to Meet

## CONTACT

### HEADQUARTERS

11529 Sun Belt Ct.  
Baton Rouge, Louisiana 70809

**Phone** 800.223.8050

### International

001.225.298.0300  
**Fax** 225.297.2440

### E-mail

sales@vartechsystems.com

### Website

www.vartechsystems.com

## 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

### Backlight MTBF

65,000 hours

### 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 (HBLLEDs)

### 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
- 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)

### 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 - 12.45", Height - 8.55", Depth - 2.78"

### Weight

6.5 lb.

### Humidity

Operating: 0 to 100%

### Altitude

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

### Shock

Designed to Meet MIL-S-901D

### Vibration

Designed to Meet MIL-STD-167

### Environment

Designed to Meet MIL-STD-810F

### Marine

Designed to Meet IEC 60529

### EMI / EMC

Designed to Meet FCC Class B (optional 461F)  
Designed to Meet IEC 60945

### 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

### Mounting

RAM Mounting - standard  
Flush Mounting - optional  
Panel Mounting - optional  
Gimbal Mounting - optional  
Handles (top or left & right) - optional  
Pedestal Mounting - optional  
VESA Mounting - optional

### Electrical Protection

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

### Night-Vision Compliance (optional)

NVIS MIL-STD-3009 Class B Gen 3 (MIL-L-85762A)

### Optional Connectors

Optional "Right Angle" Connectors

### Overlay (optional and available only with non-touch)

Chemically Strengthened Bonded Overlay

### Warranty

2 years

