

### Environmental and Functional Upgrade Packages

VarTech products are built tough and resilient for hard use, however factors such as location, function, and application can play an important part in determining what rugged monitor or panel PC solution is required.

After 3 decades of designing and manufacturing industrial grade monitors and panel computers for essentially every division of industry around the world we understand not all rugged solutions are created equal. VARTECH's Environmental and Functional Upgrade packages are available to better serve our customer base and offer a custom solution as a standardize rugged product.

High Bright Sunlight Readable Package	Component Ruggedization Package
<ul style="list-style-type: none"> <li>• High Luminance LED Backlights</li> <li>• Proprietary Film Stack</li> <li>• Optical Bonding (VBOND)</li> <li>• Anti-Reflective Coatings</li> <li>• Advanced Wide Range Dimming Ratio – From 100% to True Black</li> <li>• Brightness Levels ranging from 700 nits to 1500 nits (depending on screen size)</li> </ul> <p><i>Series Availability: All</i></p>	<ul style="list-style-type: none"> <li>• Vibration Resistant Low-Profile Video Controller board or Motherboard</li> <li>• Low Profile cable assemblies/connections</li> <li>• Potted components where applicable</li> <li>• Vibration Dampening Standoffs for affixing Circuit Boards to milled enclosure</li> <li>• Optical Bonding of Protective Window or Touch screen to LCD</li> <li>• MIL-STD 38999 I/O Connectors (not available on hazardous area models)</li> </ul> <p><i>Series Availability: All-Weather, ToughStation, DiamondVue</i></p> <p><i>* Designed to meet by using best industry standards: tolerances specified by select subcategories of MIL-STD 810F and/or DEFSTAN 00-35 inclusive of Part 3 Issue 4</i></p>
Extreme Temperature Package (-40°C to 70°C)	NVIS Dual Mode Compatibility Package
<ul style="list-style-type: none"> <li>• Integrated Heater and Thermostat</li> <li>• Uninterrupted Wide Temperature Dual PSU System</li> <li>• Wide Temperature LCD Panel</li> <li>• Harsh Duty Video Controller Board or Motherboard/SSD/RAM</li> <li>• Optional Heat Reflective White Powder-Coat</li> </ul> <p><i>Series Availability: All-Weather, ToughStation, DiamondVue</i></p>	<ul style="list-style-type: none"> <li>• NVIS MIL-STD-3009 Class B Green (Night Mode)</li> <li>• 4nit brightness (Night Mode)</li> <li>• Toggle between Day/Night Mode via one touch tactile button</li> <li>• Backlight Kill Switch</li> <li>• ITAR Restrictions Apply</li> </ul> <p><i>Series Availability: All-Weather, DiamondVue</i></p>
EMI/EMC 461 AS Package	EMI/EMC 461 FS Package
<ul style="list-style-type: none"> <li>• All Surface Ingress Protection Coupled with an All Surface Faraday Cage Design</li> <li>• Integrated 8 Ohm ITO/100 OPI Stainless Steel Mesh Protective Window or Touchscreen equipped with Conductive U Busbar (8 Ohm ITO for Surface Ships Limits/ 100 OPI SS Mesh for Army Ground Limits)</li> <li>• Chromated Metal and EMI Copper Conductive Tape to assure conductivity of Conductive Window/Busbar and Enclosure</li> <li>• Enhanced EMI Conductive Gaskets for MIL-STD 461 protection while maintaining seal up to IP67</li> <li>• MIL-DTL 38999 connectors with backshell assembly</li> <li>• Cable Braiding, Ferrites and in-line Bandpass filters where applicable</li> <li>• CE101, CE102, CS101, CS106, CS114, CS115, CS116, RE101, RE102, RS101, RS103 (Designed to Meet based on similar VarTech Systems Designs)</li> </ul> <p><i>Series Availability: All-Weather, ToughStation</i></p>	<ul style="list-style-type: none"> <li>• EMI protection front surface</li> <li>• Integrated 8 Ohm ITO/100 OPI Stainless Steel Mesh Protective Window or Touchscreen equipped with Conductive U Busbar</li> <li>• Chromated Metal and EMI Copper Conductive Tape to assure conductivity of ITO/Busbar and Enclosure</li> <li>• Enhanced EMI Conductive Gaskets for MIL-STD 461 protection while maintaining seal up to IP66 at front panel surface</li> <li>• CE101, CE102, CS101, CS106, CS114, CS115, CS116, RE101, RE102, RS101, RS103 (Designed to Meet based on similar VarTech Systems Designs)</li> </ul> <p><i>Series Availability: All-Weather, DiamondVue</i></p> <p><i>* This package is typically coupled with a flush or panel mount design</i></p>
Field Serviceable Peripheral Compartment	Vandal/Impact Resistant Package
<ul style="list-style-type: none"> <li>• IP65 Sealing</li> <li>• Available on ToughStation Sizes from 15" to 43"</li> <li>• Auxiliary DC power terminal block (Available voltage/amperage varies with design)</li> <li>• Exterior connectors/cables can be routed to sealed compartment</li> <li>• Bulkhead connectors, exterior surface connectors</li> <li>• Allows for aftermarket support of KVMs, Video Amplifiers, SFF PCs, Storage Drives</li> </ul> <p><i>Series Availability: ToughStation sizes 15" to 43"</i></p>	<ul style="list-style-type: none"> <li>• 6mm Impact Resistant Protective Overlay Glass</li> <li>• 8H Abrasion Resistant Surface</li> <li>• Chemical Stain Resistant</li> <li>• Tamper-Proof Conduit Connectors for VESA Applications</li> <li>• Optional Optically Bonded PCAP Touchscreen</li> </ul> <p><i>Series Availability: All</i></p>

### Light Duty General Purpose Industrial Package

- Same Rugged Compact Machine Milled Enclosure but with an IP54 Ingress rating
- Bottom Exit Connectors
- Non sealed standard VESA I/O Connectors (Available with Plastic Sealed connectors for IP65 rating)
- Mylar OSD Membrane Switch on Monitor Models for Controlling Video and Brightness
- VGA, DVI or HDMI video inputs available
- Standard Processor/Storage/RAM on Panel PC Models: 2GHZ Quad Core/4GB/128GB SSD
- Standard I/Os on Panel PC Models: 1 x LAN, 2 X USB 2.0 and 1 x RS232
- 350-450 nit brightness LCD (based on display size)
- Optically Bonded Resistive Touch Screen or AR Protective window
- -10 to 60C Operational temperature
- 100mm x 100mm VESA mount pattern on rear surface
- 12VDC PSU (Available with Optional AC/DC 90-264VAC external power transformer)

*Series Availability: All-Weather*

### Keypad Function Control Package

- Up to Four 1 x 6 Function Keypad switches embedded around Displays' Perimeter
- Maximum of 24 programmable key switches
- Membrane contact Switch converts to a standard USB keyboard code
- USB keyboard encoders enumerate as a standard HID keyboard
- Available as an Auxiliary Interface for a Remote PC or Integrated with an iPC solution
- Sealed Dome Push Buttons also Available on Select Sizes

*Series Availability: All-Weather, DiamondVue*

### Railway Ruggedization Package (Built to meet EN50155)

- 24, 48, 72, 96, and 110 VDC Nominal Inputs Available (Complies with EN50155, Meets EN50121-3-2)
- Universal Power Input Screw Terminal Connector. Phoenix
- Vibration dampening standoffs
- Reverse Polarity Protection
- Fan-less
- Fuse-less
- Protective coating on all Circuit Boards
- VT Bonded

Additional optional Connector Upgrades:

- M-Series Connectors
- D38999 Connectors

*Series Availability: DiamondVue*

**Over 30 Years of Rugged HMI and Industrial Computer Manufacturing Experience**

