



# IP68 Rugged SDI Display Electronics Unit

## Overview

AVI’s DEUXX1-100 Display Electronics Unit is part of our IP68 rated rugged display line. Designed to drive AVI LCD modules in the 7” to 24” range, the unit can be directly attached to the LCD frame or can be placed up to two meters from the display.

The unit supports up to four SMPTE 259M, 292M, or 425M SDI inputs and provides re-clocked SDI output of the current displayed image. Low latency, high performance processing provides up to 16 displayed configurations of the four SDI video inputs.

Hosting AVI’s general purpose processor based on the AM335x 1GHz Arm Cortex-A8, the DEU provides Digital I/O, Analog I/O, USB, and Ethernet control/processing. Hosting AVI’s LCD control software applications, it can also support other Linux based applications along with web-based hosted applications.

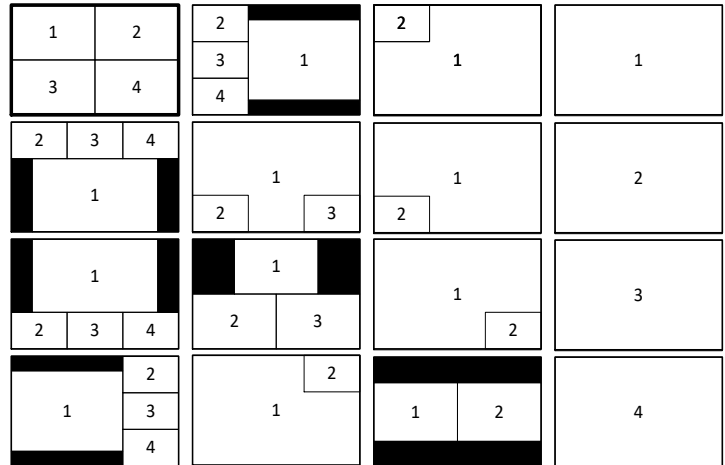
Combined with AVI’s User Interface Modules, this unit can generate commands from customized buttons, general I/O buttons, switches, rotary encoders, and analog devices.

## Standard Features

- Four SDI inputs
- SDI output
- Inputs auto detected
- SMPTE 259M, 292M, 296M, 425M, ITU-R BT.656 and ITU-R BT.601 compliant
- 9 – 36 V DC Power
- MIL-STD circular power and signal connectors
- -45C° to 70C° operation
- Heat dissipating enclosure
- Three-year warranty
- 5 general purpose I/O
- Ethernet interface for application control
- LCD Mounted or Remote placement
- IP68 Rated



- Low latency video channel selection
- 16 selectable channel layouts



## Benefits

- Isolates components for LCD module for
  - Better heat dissipation & longer life
  - Lower customization costs
  - Lower initial and life cycle costs
  - Increased technology insertion capability
  - Reduces LCD enclosure penetrations for IP68



## IP68 Rugged SDI Display Electronics Unit

- Improved shock and vibration performance
- Increases installation flexibility
- Reduced overall size/volume/weight
- Commonality of components across display size units
- Reduces support and MTBR time and costs
- Lower's weight of LCD for articulated mounting
- Improved system design flexibility

### Typical Applications

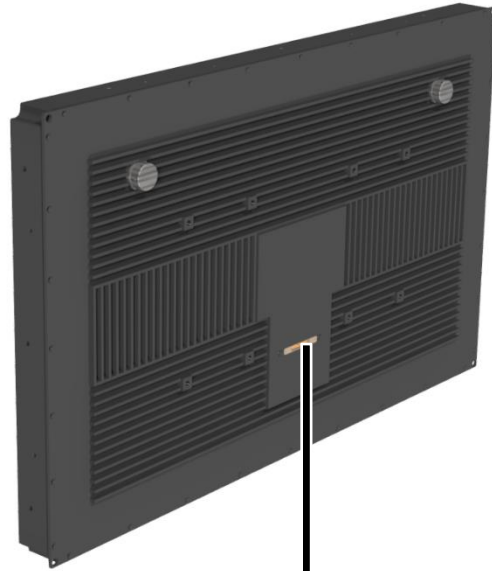
- Open cockpit marine craft
- Helicopter and fixed wing
- Ground vehicles
- Any application that requires rugged displays

### Mounting Options

Rear LCD mount



Remote mount



Up to 2 meter in length



Interface Cable





AVI – Optimize your sensor

## IP68 Rugged SDI Display Electronics Unit - Specifications

<b>Video Inputs</b> <ul style="list-style-type: none"> <li>• 3G/HD/SD (4) <ul style="list-style-type: none"> <li>○ Re-clocked</li> <li>○ 10 bit, YUV 4:2:2 color encoding</li> </ul> </li> </ul>	<b>Environmental</b>	<ul style="list-style-type: none"> <li>• Operating Temp Low -45°C DO-160G Cat B2</li> <li>• Operating Temp High +70°C DO-160G Cat B2</li> <li>• Short Term Op Temp Low -45°C DO-160G Cat B4</li> <li>• Short Term Op Temp High +70°C DO-160G Cat B4</li> <li>• Ground Survival Low Temp -55°C DO-160G Cat B4</li> <li>• Ground Survival High Temp +85°C DO-160G Cat B4</li> <li>• Temp Variation 5C° per minute DO-160G Cat B</li> <li>• Humidity 38C° to 95@ 50C° DO-160G Cat A</li> <li>• Operational Shock 6g @ 11ms, 20G DO-160G Cat B</li> <li>• Vibration Random, 10-2000Hz DO-160G Cat U, U2</li> <li>• Explosion Proofness* MIL-STD-810G Method 511.6</li> <li>• Waterproofness Drip Test DO-160G Cat Y</li> <li>• Magnetic Effect DO-160G Cat A</li> <li>• Power Input* DO-160G Cat A</li> <li>• Voltage Spike 2x Line Voltage DO-160G Cat B</li> <li>• EMI/EMC Sec 18, 19, 20, 21 DO-160G Cat B, CC, R, M</li> <li>• ESD* DO-160G Cat A</li> <li>• Ingress Rating IP68</li> <li>• Altitude Operating 50,000ft DO160G Cat D1</li> </ul>
<b>Video Outputs</b> <ul style="list-style-type: none"> <li>• 3G/HD/SD (1) <ul style="list-style-type: none"> <li>○ Re-clocked</li> <li>○ 10 bit, YUV 4:2:2 color encoding</li> <li>○ Connector type – BNC 75 Ω</li> </ul> </li> </ul>		
<b>Video Input and Output Formats</b> <ul style="list-style-type: none"> <li>• SDI SMPTE 259/292M/424M <ul style="list-style-type: none"> <li>○ 1080p 60/50/30/25/24/23.98Hz</li> <li>○ 1080i 60/50Hz</li> <li>○ 720p 60/50/30/25/24Hz</li> <li>○ 625i 50Hz</li> <li>○ 525i 60Hz</li> </ul> </li> </ul>		
<b>Model Numbers</b> <ul style="list-style-type: none"> <li>• DEU011-100 10" to 24" Display</li> </ul>	Designed to DO-160 *By Similarity	
<b>Power</b> <ul style="list-style-type: none"> <li>• +9 to +36 DC</li> <li>• Up to 3.4 A @ 28V DC</li> <li>• Connector Type LEMO HEN.1M.305.XLNP</li> </ul>	<b>Dimensions and Weight</b>	<ul style="list-style-type: none"> <li>• 224mm [8.8in] W, 31.8mm [1.3in] H, 152mm [6in] D</li> <li>• 0.910 kg [2.0 lbs] (Preliminary)</li> </ul>

