



## Sentry-X Rugged Embedded System

Connect Tech's Sentry-X Rugged Embedded System is built for the NVIDIA® Jetson AGX Xavier™, bringing out a wide assortment of I/O. Features included in this embedded system include 2x GbE, 3x USB 3.1, 2x HDMI, 2x CAN 2.0b, 1x RS-232, 1x RS-422/485, 1x UART 3.3V TTL, and 8x GPIO.

Sentry-X is designed to meet MIL-STD-810G as well as DO-160G for shock and vibration along with ingress protection of IP67.

The embedded system is ideal for aerospace and defense applications, or for any market that can benefit from the Jetson AGX Xavier's incredible performance in a rugged enclosure.



## FEATURES

- ✓ Wide I/O assortment including 2x GbE, 3x USB 3.1, 2x HDMI, 2x CAN 2.0b, 8x GPIO, 1x RS-232, 1x RS-422/485
- ✓ Unique docking station - allows for quick release of Sentry-X compute module
- ✓ Ideal for Aerospace and Defense applications
- ✓ Designed to MIL-STD-810G, DO160G for shock & vibration, ingress protection of IP67

| Specifications                        |                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System Overview                       | 1x Main Compute Unit; 1x Flexible Rear IO Module; 1x Quick Release Docking Sled                                                                                                                                                                                                                                                                                                                                 |
| Module Compatibility                  | <b>NVIDIA® Jetson AGX Xavier™</b> <ul style="list-style-type: none"> <li>- GPU: 512-core Volta GPU with Tensor Cores</li> <li>- CPU: 8-core ARM v8.2 64-bit CPU, 8MB L2 + 4MB L3</li> <li>- Memory: 16GB 256-Bit LPDDR4x   137GB/s</li> <li>- DL Accelerator: (2x) NVDLA Engines</li> <li>- Vision Accelerator: 7-way VLIW Vision Processor</li> <li>- Encoder/Decoder: (2x) 4Kp60   HEVC/(2x) 4Kp60</li> </ul> |
| USB                                   | 3x USB 3.1 Gen 2 (1x OTG capable)                                                                                                                                                                                                                                                                                                                                                                               |
| Ethernet                              | 2x GbE (1000BASE-T)                                                                                                                                                                                                                                                                                                                                                                                             |
| Video Output                          | 2x HDMI                                                                                                                                                                                                                                                                                                                                                                                                         |
| Serial/UART Communications            | 1x RS-232; 1x RS-422/485; 1x UART 3.3V TTL (Debug)                                                                                                                                                                                                                                                                                                                                                              |
| CAN                                   | 2x CAN 2.0b                                                                                                                                                                                                                                                                                                                                                                                                     |
| GPIO                                  | 4x Discrete Inputs 5V TTL; 4x Discrete Outputs 5V TTL; 1x Dedicated Input for ZEROIZE                                                                                                                                                                                                                                                                                                                           |
| System Storage                        | 1x 32GB eMMC (on Xavier module); 1x NVMe (External)                                                                                                                                                                                                                                                                                                                                                             |
| Expansion                             | 1x M.2 E-Key (WiFi/BT)                                                                                                                                                                                                                                                                                                                                                                                          |
| Flexible Rear IO Module               | Rugged IP67 Fischer MiniMax Circular Connectors (Optional M12 and 38999 Builds)                                                                                                                                                                                                                                                                                                                                 |
| Misc/System IO                        | 1x Reset Signal; 1x Force Recovery Signal                                                                                                                                                                                                                                                                                                                                                                       |
| RTC                                   | 1x RTC Battery                                                                                                                                                                                                                                                                                                                                                                                                  |
| Input Power                           | +16V to +50V DC Input (28V Nominal)<br>MIL-STD-461F<br>MIL-STD-704<br>MIL-STD-1275                                                                                                                                                                                                                                                                                                                              |
| Mechanical                            | <b>System Outer Dimensions:</b><br>IO Panel: 37mm x 140mm x 20mm<br>Main Compute Unit: 127mm x 127mm x 50mm<br>Machined Aluminum Structure with Integrated Fanless Heatsink                                                                                                                                                                                                                                     |
| IP Rating                             | IP67                                                                                                                                                                                                                                                                                                                                                                                                            |
| Compliance / Certifications (Pending) | MIL-STD-810G/DO-160G (Thermal, Shock, Vibration, Altitude, Humidity)<br>MIL-STD-461F/DO-160G (EMI/EMC)                                                                                                                                                                                                                                                                                                          |
| Operating Temperature                 | Full System Range - TBD<br>-25°C to +80°C (Xavier Module Range)                                                                                                                                                                                                                                                                                                                                                 |
| Warranty and Support                  | 1 Year Warranty and Free Technical Support                                                                                                                                                                                                                                                                                                                                                                      |