



## RE2302 Network Attached Storage

### Compact, secure storage for airborne missions

The RE2302 is a subcompact storage system that safely collects and stores mission critical data. The small system can be removed from the aircraft easily to de-classify a platform via a blind-mate tray mounted interface to the aircraft.

**Intelligent design.** The Crystal Group Network Attached Storage (NAS) is a sealed, conduction cooled system that meets or exceeds an IP65 rating. Constructed of milled, aircraft-grade aluminum with external fins for cooling, the external surfaces are sized to accommodate the system's thermal load in airborne applications without forced air convection. The system is rated for industrial temperatures of -40°C to +55°C. Thermal testing supports a power draw between 12-25 watts.

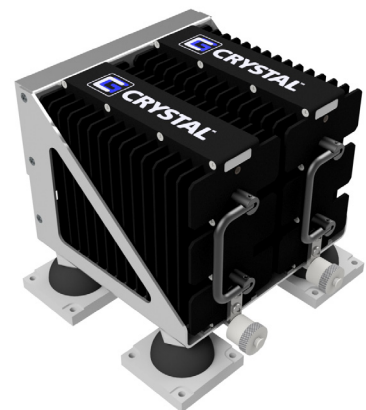
The NAS includes a Com Express Type 6 module, base carrier card, MIL-STD-704 compliant power supply, and M.2 based 2-4TB storage assembly. The system also supports a Com Express compute module with a four-core AMD Ryzen V1404I SOC CPU and Vega 8 GPU. The 16GB of ECC memory (RAM) is soldered to the Com Express module. To improve overall shock and vibration performance, the circuit boards are interfaced with connectors rather than wiring harnesses. The system meets C17, C130, and UH60 vibration requirements in accordance with MIL-STD-810.

The base carrier card is designed with an external connection to the aircraft, as well as all I/O and power between the Com Express module and the power supply, and the storage devices. All sensor I/O is routed through the mount and into the carrier and storage. The design precludes removing MIL-CIRC connectors with the aircraft making removal fast and simple.

**Significant storage in a compact footprint.** Storage is provided via a pair NVMe M.2 SSDs, which can currently support up to 4TB of capacity and a FIPS 140-2 certification. The NVMe drives are accessible for service and maintenance on their own carrier, but are not intended to be field replaceable or removed quickly for time-sensitive data sanitization. A small M.2 form factor SATA SSD (non-encrypted) hosts the Linux OS. To extract data from the aircraft, the entire five-pound computer must be removed from the mount and connected to the external docking station.

### Key features

- Two NVMe FIPS 140-2 M.2 2280 SSDs for storage and up to two SATA M.2 2242 SSDs for OS
- CSfC certification ready
- Conduction-cooled system meets or exceeds an IP65 rating
- MIL-STD-704 compliant power supply
- Com Express Type 6 module
- Com Express compute module with four-core AMD Ryzen V1404I SOC CPU and Vega 8 GPU
- 16GB DDR4 with ECC memory
- Total system—two NAS, plus mount—weighs 15 pounds
- Overall unit dimensions: 3.125"W x 5.25"H x 6.5"D



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## Ease-of-use blind-mate connection

Connection to the aircraft is via a blind-mate connection that mates with a connector built onto the mount and then connected to a MIL-CIRC connection at the rear of the mount, which remains on the aircraft when the NAS is removed for mission planning. This connection hosts data ingress via two 10GbE connections, six discrete input-only connections to the Com Express board to support software zeroize, location, and encryption key status, as well as MIL-STD-704 28VDC input power. The dual mount hosts a pair of Mission Computer NAS devices, with an optional single mount available for rotary wing platforms. A USB connection is available for video output during maintenance.

