PHYSICAL OPTICS CORPORATION

Technology that makes a difference®

DTU
DATA TRANSFER UNIT

/// OVERVIEW

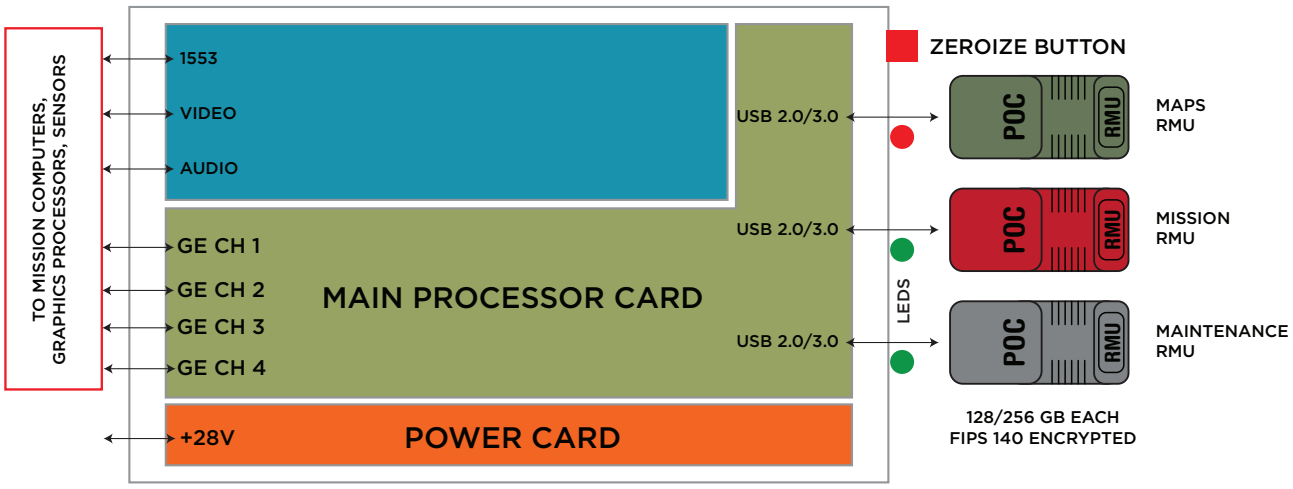
Physical Optics Corporation's **Data Transfer Unit (DTU)** is the next generation of in-flight data loading devices/digital recorders which provides NSA-defined Suite-B and FIPS 140-2 approved cryptographic solutions. It also supports NSA-approved Type-1 encryption if this level of security is required.

The unit contains four Gigabit Ethernet ports that operate at 500 Mbps per channel. The unit uses three independent Removable Memory Units for data storage with a capacity of 128 GB each (expandable to 512 GB). These units serve as the transportable storage medium for both pre and post-mission information exchanges between the mission planning system, maintenance ground station and the airborne platform. The RMUs can be inserted to any slot, and the intelligent software configures the data routing to the appropriate channel.

The DTU's primary functions are to upload mission and map data, to record in-flight mission data, and to record maintenance data during ground and flight operation. The DTU also has zeroization functionality for all RMUs as well as internal nonvolatile memory. The DTU supports the Built-in-Test (BIT) capability to isolate/detect 95% of internal failures through SBIT, PBIT, IBIT, MBIT funtions. It operates on 28 V and uses less than 40 W of power.

/// FEATURES

- Three independent 128 GB Removable Memory Units (500 Mbps throughput)
- FIPS 140-2 level encryption, compatible with NSA Type-1
- Support built-in-test functions: power, initiated, continuous, and maintenance
- Network file system (NFS) supports rapid and independent access to removable memory media
- Four Gigabit Ethernet ports operate at the 2.0 Gbps system throughput
- Black/red and classified/unclassified via kernel separation supported by VxWorks MILS RTOS
- Manual or software controlled erase/zeroization funtion
- Primary key filled via Gigabit port or, optionally, through one of the removable memory units
- Removable Memory Unit (RMU) has foolproof seal against environmental exposure, compliant with MIL-STD-1472
- Two spare slots for expanded funtionality
- MIL-STD-810 environments
- DTU Dimensions: 9 x 5 x 3 in.
- RMU Dimensions: 2.5 x 1.0 x 0.69 in.
- Weight: <4 lbs (with three RMUs installed)
- Power consumption: <40 W
- MTBF: >13,000 hours (predicted) for inhabited ARW environments
- MTTR: <15 minutes
- Interfaces
  - +28 V DTU power supply
  - Zeroize/erase (manual operation)
  - RMU interface: SATA II
  - Gigabit Ethernet



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