ELECTRONICS DIVISION

DLMS

DATA LINK MANAGEMENT SYSTEM

The Data Link Management System (DLMS) is the “CORE” element for Data Communication Systems on Manned and Unmanned Aerial Platforms. The DLMS, as a Tactical Data Link Processor evolution, represents, for onboard systems, the gateway to access voice/data communications over broadband IP-based and legacy Tactical Data Link systems.

In current military and para-military operational scenarios, fi xed, rotary and unmanned platforms are requested to enhance their communications capability and improve their level of interoperability between heterogeneous forces on air, ground and sea, yet increasing their effi ciency in terms of better performance, higher fl exibility and modularity.

These requirements can be translated into needs like multiple data link integration, modular innovative architectures to easy the on-board platform integration and to add new capabilities minimizing HW/SW changes, and security management, including support to networked data routing (IP Based) for the full integration of the platform into the net-centric operational environment.

DATA LINK MANAGEMENT SYSTEM MAIN CHARACTERISTICS

- Enables IP based Network Centric Communications incorporating Ethernet Switching, IP routing and IP Encryption
- Modular HW architecture based on units with Processing, I/O and IP routing/switching functions
- Partitioned SW architecture based on ARINC653 RTOS to supports independent CNI applications
- IP Network Encryption Module, adaptable to specifi c National, NATO and Coalition security mission requirements
- Video/Audio digitization and compression for realtime transmission
- Modular I/O for customization on diff erent application scenarios
- Redundant confi gurations for high availability applications
- DO178B-DO254 HW/SW development for safe applications’ support
- Common Criteria and Tempest certifi cation
- UAS Communication Management.

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TECHNICAL SPECIFICATION

HARDWARE ENVIRONMENT

- VPX (VITA46) 3U form factor SRUs
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- Up to 512GB of HDD Capacity

SOFTWARE ENVIRONMENT

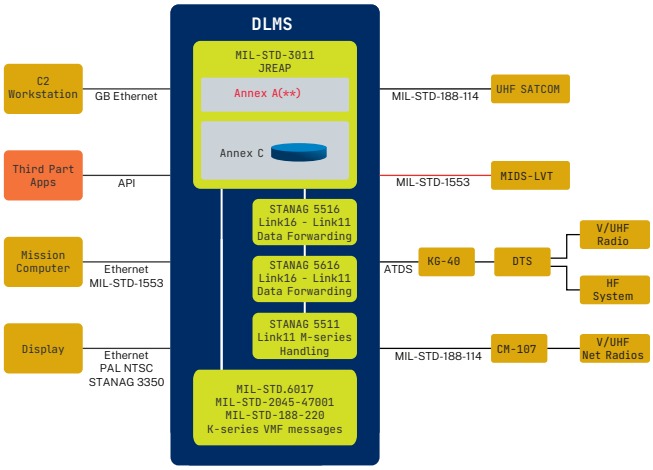
- Operating Systems — Wind River VxWorks 653 R2.4; Linux O.S. DEBIAN 6.0

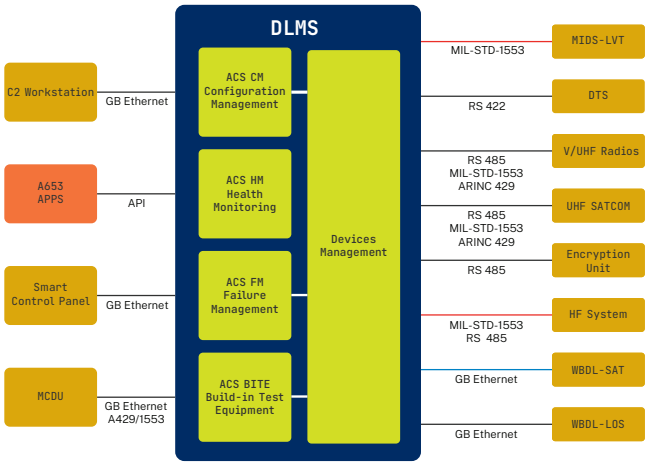
ROUTING/SWITCHING STANDARDS

- RFC 793 / RFC768 — TCP/UDP Support
- RFC 791 / RFC 2460 — IPv4/IPv6 Support
- RFC 826 / RFC1027 — ARP / Proxy ARP
- RFC 1350 — TFTP
- RFC 2328 — OSPFv2 Routing
- RFC 2131 — DHCP Server
- IEEE 802.1Q — VLAN Support
- DSCP — DiffServ QoS model
- RFC 4861 — Network Discovery

NATO STANDARDS

- STANAG 5516 — Link 16
- STANAG 5511 — Link 11A
- MIL-STD-2045-47001 — VMF
- STANAG 5519 — VMF
- STANAG 5616 — Data Forwarding
- MIL-STD-3011C — JREAP A, C
- MIL-STD-1553 — Serial Data Bus
- MIL-STD-188-114A — Digital Interface Circuits
- MIL-STD 188-220D — Digital Message Transfer Device Subsystems





EXTERNAL INTERFACES

- 10/100/1000 IEEE802.3 (Fast/Giga Ethernet)
- ARINC 429
- RS485/422
- ATDS/Link11
- Avionic CAN BUS
- Discretes in/out, Audio in/out, Video in/out
- MIL-STD 1553
- MIL-STD188-114A

ENVIRONMENTAL CHARACTERISTICS

- Temperature — Operating: -40°C to +70°C; Storage: -55°C to +85°C
- Altitude — Up to 50000 feet

QUALIFICATION

- RTCA/DO-160F — Environmental conditions
- MIL-STD-461E — EMI/EMC
- MIL-STD-1472 — Human Engineering

MECHANICAL CHARACTERISTICS

- Dimensions — ¼ ATR (57x194x324 mm)
- Weight — <4 Kg
- Cooling — No cooling required

OTHER CHARACTERISTICS

- Reliability — MTBF 2500 hours, MIL-HDBK-217, ARW Environment, 50°C
- Maintainability — MTTR < 10 min (1st level); MTTR < 60 min (2nd level)
- Consumption — < 40 W
- Input power — 28VDC i.a.w. MIL-STD-704F

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