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Avionics

# MLIU-550
## MULTI LINK INTERFACE UNIT

**MLIU550 is a Tactical Data Link Processor supporting all Tactical Data Links required by the G-550 CAEW surveillance aircraft. MLIU-550 allows participation to major Tactical Data Link networks in a small form avionic computer.**

### THE SYSTEM

MLIU-550 task is to interface the onboard aircraft mission system with the Tactical Data Link terminals, taking care of the tactical communications channels control.

It provides a standard and reusable interface to manage the Tactical Data Links, able to allow the data forwarding or concurrent operations among the tactical data links.

### MAIN FEATURES

The MLIU-550 features Link 11A, Link 16, J-REAP and VMF, guaranteeing high level of interoperability among various types of platform such as aircraft, ground based and maritime based, command posts.

MLIU is basically multilink-oriented. Its architecture allows either single-link or multi-link operation, featuring a normalised data link database.

External data link interfaces configured into the MLIU-550 independently scan the Track's Database both on a periodic and on-demand basis to generate the appropriate messages for output.

Data received over a configured data link external interface is validated for errors and processed for automatic link responses (Reporting Responsibility shifts, ID conflicts processing, command processing, etc.).

The normalised data link database provides also a common interface to the Host Tactical Data System designed in support of Host Application Requirements. Control and status, surveillance and raw data message are translated into a common format and output over a LAN to the host tactical system.

This architecture allows an easy addition of future National or Standard Tactical Data Links.

MLIU-550 embeds a VMF Improved Data Modem module.


## Supported Data Links

- Link 16
- Link 11A
- VMF (Variable Message Format) (embedded modem)
- JREAP (Joint Range Extension Application Protocol)

## External Interfaces

- MIL-STD-1553B (two)
- Ethernet (three)
- RS-232C
- ATDS
- MIL-STD-188-220

## TECHNICAL SPECIFICATION

### Software Environment

| | |
|---|---|
| Programming Language | C++ |
| Operating System | Green Hills Integrity |
| Computer platform | Multi-processor |

### NATO Standards

| | |
|---|---|
| STANAG 5516 | Link 16 |
| STANAG 5511 | Link 11 |
| MIL-STD-2045-47001 | VMF |
| STANAG 5519 | VMF |
| STANAG 5616 | Data Forwarding |
| MIL-STD-3011C | JREAP |

### Qualification

| | |
|---|---|
| MIL-STD-810G | Environmental conditions |
| RTCA/DO-160F | Environmental conditions |
| MIL-STD-461E | EMC |
| MIL-STD-1472 | Human Engineering |
| BS 3G 100 | Combustibility |

### Environmental Characteristics

| | |
|---|---|
| Temperature Operating | -15 °C to +55 °C |
| Storage | -55 °C to +85 °C |
| Altitude | Up to 15000 feet |

### Mechanichal Characteristics

| | |
|---|---|
| Dimensions (3/8 ATR Short) | Width 90.4 ± 0.76mm |
| Height | 194mm max |
| Depth | 320.5 ± 1mm |
| Weight | < 6Kg |
| Cooling | No cooling required |
| Mounting | Hard mounted |

### Other Characteristics

| | |
|---|---|
| Reliability | MTBF > 13000hours |
| Maintainability | MTTR < 20min (1st level) |
| MTTR | < 100min (2nd level) |
| Testability | 92.38% (1 SRU)<br>100% (2 SRU) |
| Consumption | < 50W |
| Input power | 28VDC i.a.w. MIL-STD-704F |

For more information please email **infomarketing@selex-es.com**
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