

LEONARDO ELECTRONICS

# M-DLP®

## Multi-Data Link Processor

Leonardo M-DLP® (Multi-Data Link Processor) is an interoperable, scalable system designed to manage and integrate multiple Tactical Data Links across all platforms - air, surface, land, and sub-surface.

Tactical Data Links are secure military communication standards used to exchange critical operational data between platforms and command posts. Leonardo's system enables Armed Forces to operate effectively in a multi-domain environment, providing real-time awareness and ensuring that all assets can make timely, accurate decisions during crucial operations. It delivers broad interoperability, guaranteeing high flexibility while minimising integration and life cycle maintenance costs. The Multi-Data Link Processor manages multiple Tactical Data Links (Link11, Link16, Link22, JREAP and VMF) through a single software suit that can be customised to customer requirements.

The M-DLP® can be deployed in two configurations:

- **Integrated System:** interfaces directly with a unit's Host/Mission System, either embedded in the Host Processor or via a Dedicated Processor, operating seamlessly within its normal mission context
- **Stand-Alone System:** operates independently, using its HMI to transmit its own unit information and receive data from other units, acting as a forwarding/routing node to extend TDL physical coverage (i.e. extending the radio range for UHF transmission).

### KEY FEATURES

- NATO STANAG compliance for: Link 16, Link 22, VMF, Link 11, JREAP, SIMPLE, Data Forwarding
- Graphical HMI: Intuitive interface for tactical data link operator control
- Seamless integration: Easily connects with the Host/Mission system for smooth operational workflow
- Advanced Data forwarding: Enables efficient transmission between different link pairs to extend network coverage
- Intelligent Data Management: Supports Correlation, Decorrelation, and Filter management to ensure clean, accurate information
- Certified Security & Reliability: Common Criteria and Tempest standards for secure operations.



# TECHNICAL INFORMATION

|                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|---------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>OPERATING SYSTEM</b>               | <ul style="list-style-type: none"> <li>Linux Red Hat 64 bit</li> <li>Windows 64 bit</li> <li>Integrity Real Time</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>STANAG EDITION</b>                 | <ul style="list-style-type: none"> <li>5511 Ed. 6; 5516 Ed. 8; 5522 Ed. 6; 5518 Ed. 4; 5616 Ed. 8</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>MIL-STD</b>                        | <ul style="list-style-type: none"> <li>MIL-STD-6017 B/D; MIL-STD 6020 B</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>SNC</b>                            | <ul style="list-style-type: none"> <li>SNC 10.4</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>LINK16 TERMINAL</b>                | <ul style="list-style-type: none"> <li>MIDS BU2; JTRS; KOR24-A</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>VMF TERMINAL</b>                   | <ul style="list-style-type: none"> <li>AerIDM; SRT800</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>SOFTWARE INTERFACE</b>             | Common Host Interface (CHI) enables integration between existing Host/Mission Systems and the M-DLP® system via IP over Ethernet. Data exchanged between components are instances of data structures defined in the CHI, independently of any data types managed by the M-DLP®, by the Host System, or exchanged via Tactical Data Links through STANAG messages.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>ANALYSIS AND TRAINING TOOLS</b>    | <p><b>Data Analysis:</b> lists all messages transmitted and received on all operational TDL interfaces, or filters specific messages so that only these are displayed.</p> <p><b>Data Recording:</b> the operator can record and store all messages transmitted and received on all operational TDL interfaces.</p> <p><b>Data Playback:</b> the operator can play back previously stored recordings to view the evolution of the tactical situation, as well as the orders transmitted and received.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>SOFTWARE CERTIFICATION</b>         | <ul style="list-style-type: none"> <li>Common Criteria EAL3</li> <li>Federated Mission Networking</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>HW SYSTEM</b>                      | <ul style="list-style-type: none"> <li>Fanless convection-cooled</li> <li>Dimensions (L x W x H) 356mm x 200 mm x 86mm</li> <li>Weight: 7 Kg</li> <li>CPU: Intel® 8th Generation Core™ i7-8665UE Processor - 4 cores, 8 threads / 8MB cache</li> <li>Memory: Up to 64GB Unbuffered non-ECC SODIMM, DDR4-2400MHz, in 2 DIMM slots</li> <li>HDD: 500GB SSD SATA MIL Certified</li> <li>Power supply range: 18-36V DC (AC/DC PSU also provided and operating at 115/220V AC 50/60Hz)</li> <li>Power consumption 80w</li> <li>6 Gbe LAN Ethernet ports, 1 Serial Port, 1 HDMI 4k - Maximum resolution 3840x2160 @ 30Hz, 1 Display Port 4k - Maximum resolution 3840x2160 @ 30Hz, 4 USB 3.1, dedicated interconnection port for redundant or fault- tolerant configuration with optional shared storage.</li> </ul>                                                                                                                                                                                                                                                                                                                                             |
| <b>HW CERTIFICATION</b>               | <ul style="list-style-type: none"> <li>CE102 10kHz~10MHzA power cord transmits radiation</li> <li>CE101 25Hz~10kHz A power cord transmits radiation</li> <li>RE102 10kHz~18GHz electric field emission</li> <li>CS101 25Hz~50kHz Conductivity sensitivity of power cord</li> <li>CS114 10kHz~400MHz Cable bundle injection conductivity sensitivity</li> <li>CS115 Conduction sensitivity of cable bundle injection pulse excitation</li> <li>CS116 Damping sinusoidal transient conductivity sensitivity of cables and power lines</li> <li>RS101 25Hz~100kHz Magnetic field radiation sensitivity</li> <li>RS103 60V/m/10kHz~18GHz electric field emission sensitivity</li> <li>MIL-STD-810G-2008; Method 5015 Operating Temperature Range 0°C~70°C - Storage Temperature Range -20°C~70°C</li> <li>MIL-STD-810G-2008; Method 5075 Operating Humidity Range 5~95% no condensation - Storage Humidity Range 5~95% no condensation</li> <li>MIL-STD-810G-2008; Method 516.6 Shock 40G 11mSec TPS 3 axis</li> <li>MIL-STD-810G-2008; Method 514.5 Vibration 5~500Hz 2.24GrmsHz~50kHz</li> <li>Tempest SDIP 27/2 Level C</li> <li>CE, RHOS, REACH</li> </ul> |
| <b>INTEROPERABILITY DURING TRIALS</b> | <ul style="list-style-type: none"> <li>Formidable Shield</li> <li>Coalition Warrior Interoperability Exercise</li> <li>Bold Quest</li> <li>Joint Warrior</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

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