Mounted Family of Computer Systems (MFoCS) II

Core Component of the Mounted Computing Environment

Enabling Mission Command Today and Tomorrow

LEONARDO DRS
MOUNTED COMPUTING EVOLVED.
OWN THE EDGE.

MFoCS II continues to be the POR choice for hosting Situational Awareness (SA), Command and Control (C2), maneuverability, and logistics on a range of platforms and weapons systems across the joint services. The rich I/O and surplus computing power can simultaneously provide integration of sensors, radios, networks, and intercom systems. The next generation enhancements and cybersecurity hardening enable Mission Command today and tomorrow.

As the seventh and most advanced evolution of rugged mounted computer, MFoCS II builds upon the strengths of its predecessors. Improvements include more processing power and storage for multi-functionality, a higher level of cyber-hardening and features such as multi-touch displays for easier interaction with software applications.

### PROTECT, CONNECT & ENABLE MISSION COMMAND

- **Edge-Assured™ CyberSecurity**
  - Factory provisioned TPM 2.0
  - Security Hardened BIOS
  - Preplaced Signing and Encryption Keys
  - Double-Signed BIOS Updates
  - Hardware Root of Trust (HRoT)
  - Embedded Integrity Management

- **Tactical Logistics**
  - CAN Bus Services
  - Embedded Diagnostics
  - Vehicle Health Monitoring
  - VICTORY Services Host

- **Tactical Applications**
  - Command & Control
  - Enhanced Situational Awareness
  - Electronic Warfare
  - A-PNT
  - Fires

- **Tactical Sensors**
  - Integrated Video Management
  - Video Source Display Configuration
  - Video Stream Network Distribution
  - DVR playback
  - Integrated Sensor Systems
  - RF, EW, IR, Shot Detection

- **System of Systems Convergence**
  - Interoperable Tactical Software Systems hosted within VMs
  - Highly Configurable System I/O to enable interoperability of Systems
  - SWaP-C Reduction

### Extreme Environments

Providing continuous operation in a wide range of military and extreme combat environments – environments where lesser hardware might jeopardize the success of the mission.

<table>
<thead>
<tr>
<th>LRU Type</th>
<th>MFoCS I</th>
<th>MFoCS II</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processor Unit (PU)</td>
<td>i7 processor</td>
<td>Xeon processor</td>
</tr>
<tr>
<td></td>
<td>16GB ECC DDR3 RAM</td>
<td>32GB ECC DDR4 RAM</td>
</tr>
<tr>
<td></td>
<td>TPM 1.2</td>
<td>TPM 2.0</td>
</tr>
<tr>
<td></td>
<td>Line level audio only</td>
<td>Amplified audio output and line level audio</td>
</tr>
<tr>
<td>Display Units (DUs)</td>
<td>Single-touch touchscreen</td>
<td>Multi-touch touchscreen</td>
</tr>
<tr>
<td>Tablet</td>
<td>Single-touch touchscreen</td>
<td>Multi-touch touchscreen</td>
</tr>
<tr>
<td></td>
<td>8GB ECC DDR3 RAM</td>
<td>16GB ECC DDR3 RAM</td>
</tr>
<tr>
<td></td>
<td>TPM 1.2</td>
<td>TPM 2.0</td>
</tr>
<tr>
<td></td>
<td>Single status LED</td>
<td>Three status LEDs</td>
</tr>
<tr>
<td></td>
<td>Speaker only</td>
<td>Amplified audio output and speaker</td>
</tr>
<tr>
<td>Dock</td>
<td>No CANBus Capability</td>
<td>CANBus Capability</td>
</tr>
</tbody>
</table>

Backward Compatible Mounted Computing POR capabilities are backward compatible with fielded Mission Command capabilities. It integrates existing Force XXI Battle Command Brigade and Below (FBCB2) and Joint Battle Command-Platform (JBC-P) capability into a powerful, modular and flexible hardware architecture.
MFoCS II is the core component of the Mounted Computing Environment. As the key enabler of any vehicle C5ISR architecture, MFoCS II provides a fully integrated Mission Command suite of capabilities. A mission critical tactical server manages communications, sensors, embedded diagnostics, and applications through a single pane of glass.

MFoCS II is empowering modernization, converging today and tomorrow.
There are many "rugged" computer technologies on the market today that promise performance in "Mil-Std" environments. MFoCS II computers have a history of demonstrated performance in mission critical environments while providing a host of sensor, application, and network integration solutions. Leonardo DRS calls the aggregation of the latest CPU technology, demonstrated rugged reliability, and broad mission capabilities – Edge-Assured™ Computing.

Mission Critical Reliability
Mission critical reliability means that warfighters have confidence in their equipment to perform their mission – every day. Every component of the MFoCS II family of computing system is designed and verified to perform their functions with a reputation of high reliability. This means that mission readiness is assured and that warfighters don’t need to be distracted with backup systems / replacement hardware when decisions matter the most.

Multi-Mission and Comms Integration
The MFoCS II computers have been refreshed with enhanced CPU and RAM capabilities to support increased Situational Understanding and Mission Command modernization. Increased situational understanding, in the form of sensor integration, means that vehicle bus, shot detection and electronic warfare sensors can all be integrated into one host and redistributed as VICTORY services. Modernization, in the form of multi-mission support, means that MFoCS II can simultaneously host Mounted Mission Command, logistics tracking, Fires, and Electronic Warfare applications in a single computer. Comms integration, in the form of VIS and radio integration, means that MFoCS II can be the hub for voice traffic, radio control, and radio cross-banding over multiple analog and IP networks.

Logical Evolution That Began with FBCB2
Today’s Mounted Computing POR capabilities have evolved to leverage nearly 20 years of mission command and battle management combat experience.

FBCB2 first fielded in the 90s providing real time position location to troops being transmitted via SINCGARS and EPLRS radios improving unit situation awareness exponentially.

Joint Capabilities Release (JCR), introduced in 2009, equips soldiers with a faster satellite network, faster map updates, secure data encryption, and joint force support. These new capabilities are hosted on the next generation JV-5 computer system.

Mounted Mission Command (MCC) is the Army’s next generation battle command application. This application will be hosted on the MFoCS II family of hardware as part of the Mounted Computing Environment (MCE). This new capability set integrates state of the art cybersecurity technologies and is designed to facilitate rapid deployment of new capabilities, host of multiple tactical applications, and interfacing to multiple platform sensors and networks.

Highly Secure
The MFoCS II embedded cybersecurity technologies enable it to become the Platform’s Trusted Host for processing platform software updates, integrity measurements, and network attestation.

Fully Customizable
Mounted Computing POR capabilities are comprised of interoperable and flexible family of hardware components. These components can be combined and configured to scale the computing architecture to meet specific platform needs.
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MFOCS II continues to be the PoR choice for hosting Situational Awareness (SA), Command and Control (C2), maneuverability, and logistics on a range of platforms and weapons systems across the joint services. The rich I/O and surplus computing power can simultaneously provide integration of sensors, radios, networks, and intercom systems. The next generation enhancements and cybersecurity hardening enable Mission Command today and tomorrow.