

TACNAV Light/GPS

emcore®

Affordable Light Vehicle Navigation Solution
with Multiple Displays



Key Features and Attributes

- Compass-based system with embedded GPS
- Heading 2.5° RMS
- Positioning accuracy with GPS within 5 meters CEP; without GPS 2-3% distance travelled
- Commander's MMD for route, waypoint entry
- Driver's UMD with steer-to functionality



Precision Capabilities for Your Entire Force

On the battlefield, maintaining 100% situational awareness is vital to crews of all military vehicles, not just heavy forces. EMCORE's TACNAV Light/GPS is the ideal solution for affordable, reliable navigation on light military vehicles, utilizing both the EMCORE Universal Multilingual Display (UMD) and the new TACNAV Moving Map Display (MMD).

TACNAV Light/GPS has a newly redesigned compass sensor mast that includes an embedded GPS providing positioning accuracy within 5 meters CEP with valid GPS, and a dead reckoning accuracy of 2-3% distance travelled without GPS. With the MMD, users can now create and store waypoints and routes with a simple touch of the screen, and view vehicle travel. Both the MMD and UMD provide intuitive easy-to-read displays of heading, position, distance, and direction to waypoint.

This system is designed specifically to meet the requirements of military vehicles such as those used for convoy operations/troop transport, recovery/maintenance, scout/reconnaissance, and special operations units. With its built-in GPS, steer-to navigation mode, backup dead reckon capability, and two options for driver and commander interface, TACNAV Light/GPS brings an added level of flexibility and performance to light vehicle navigation.



Technical Specifications:

Operational

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|--------------------|---------------------------|
| Position Accuracy: | Within 5 meters CEP |
| Dead Reckoning: | 2-3% of distance traveled |

Heading

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|-----------------|---|
| Accuracy: | 2.5° RMS |
| Repeatability: | ±1.0° Nominal |
| Resolution: | Display 1.0° |
| Digital Output: | 1° or 1 mil, Selectable |
| Dip Angle: | Operates to specified accuracy after on location auto-calibration up to 80° N/S magnetic latitude |
| Tilt Angle: | ±3.0° RMS up to ±15° pitch & roll |
| Input Voltage: | +28 VDC nominal, in accordance with MIL-STD-1275 |

Physical

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|----------------------|---|
| Driver's Control Box | |
| Dimensions: | 52 mm (h) x 250 mm (w) x 122 mm (d) (2.0" x 9.8" x 4.8") |
| Weight: | 1.4 kg (3.1 lbs.) nominal |

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|----------------|-------------------------|
| Sensor Antenna | |
| Height: | 436.3 mm (17.2") |
| Weight: | 2 kg (4.4 lbs.) nominal |

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| Driver's Universal Multilingual Display (UMD) | |
| Dimensions: | 127 mm (h) x 135 mm (w) x 44.5 mm (d) (5.4" x 5" x 1.8") |
| Weight: | 1.1 kg (2.5 lbs.) nominal |

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|--------------------------------------|---|
| Commander's Moving Map Display (MMD) | |
| Dimensions: | 187 mm (h) x 306 mm (w) x 51.4 mm (d) (7.35" x 12.07" x 2.02") |
| Weight: | 2.4 kg (5.4 lbs.) nominal |

Environmental

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|---|---|
| Designed to meet the following MIL-STD: | MIL-STD-810G |
| Altitude: | 17,000 meters (56,000 ft.) |
| Environment: | MIL-STD-810G: Humidity, Salt Fog, Sand, Dust and Fungus |
| Operational Temperature: | -20°C to +60°C |
| Storage Temperature: | -51°C to 71°C |
| Shock: | MIL-STD-810G 40G 1/2 sine-wave 11 ms |
| EMI/RFI: | MIL-STD-461F |
| Vibration: | MIL-STD-810G method 514 Cat 8 |
| MTBF: | 7200 hours @ 35°C GM |
| Service Life: | 10 years |

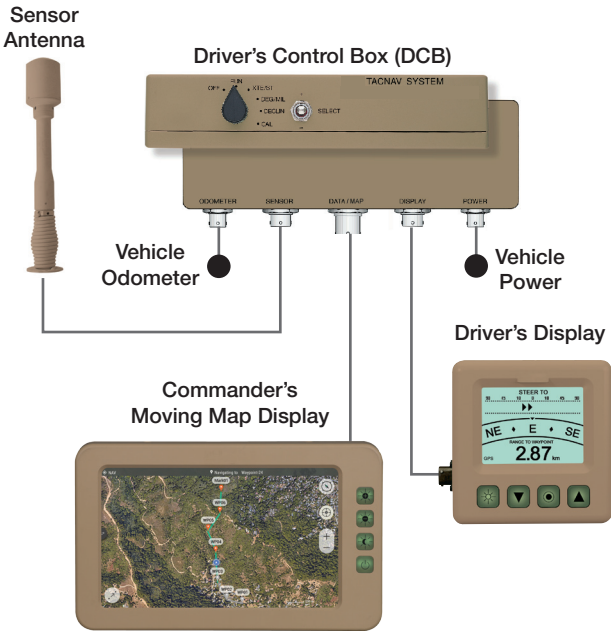


The EMCORE Moving Map Display (MMD) delivers real-time tactical moving map technology, displaying internally stored maps with a moving icon indicating vehicle location, as well as other pertinent navigation information. Users can create, store, and activate waypoints and routes from the touch-screen, which is viewable in all lighting conditions.



The EMCORE UMD is the world's first multilingual display for navigation and pointing systems.

System Diagram:



For More Information

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