

# NavGuide™ receiver

M-Code drop-in DAGR™ replacement for precise positioning and integrity

Provides assured M-Code positioning, navigation, and timing data in today's threat environment

Precise knowledge of your location is absolutely essential to mission success in challenging threat environments. The NavGuide receiver is a portable and versatile system built for vehicular, handheld, and sensor applications.

NavGuide provides users with a moving map, situational awareness capabilities, and waypoint navigation, all while meeting environmental requirements and providing M-Code enhanced jamming and spoofing protection.



## Key features and benefits

- 30-second installation time using existing DAGR mounts, wires, and accessories allows you to continue your mission with no down time
- Compact, lightweight, intuitive color GUI for ease of use
- Three independent serial data ports supporting BAE Systems' DAGR messages for backwards compatibility with existing client integrations
- Secure USB transfer of mission maps
- M-Code GPS engine with extended performance in threat environments for increased mission effectiveness
- Compatible with existing FRPA products
- Interoperability validated with third-party AJ antenna electronics

## M-Code features

- Assured navigation using proven, Increment 1 M-Code GPS engine
- Growth path to M-Code Increment 2
- Advanced correlator engine for accelerated Direct-Y and Direct-M code acquisitions
- Operational modes: encrypted codes M-Code only and Y-Code only
- Blue Force Electronic Attack (BFEA) mitigation
- Black key capable and Over-The-Air-Rekeying (OTAR)
- Unclassified-when-keyed operation
- Enhanced security architecture with robust jamming and spoofing protection
- Dual-frequency, simultaneous track of L1 and L2 GPS signals
- Maintains internal time enabling warm start assist signal acquisition with every start



## Advanced user features

- Intuitive GUI customizable for military roles and missions
- Situational awareness with regional maps (up to 24 Gbyte)
- Supports laser range finder and fire support
- Area navigation with waypoint storage
- MPE™-M position formats

# Extended performance in jamming environments

## System characteristics

<b>Dynamics (velocity)</b>	
Man-portable	10 m/s maximum
Surface vehicle	25 m/s maximum
<b>Time accuracy</b>	100 nanoseconds
<b>Position accuracy</b>	PPS:<5 meters CEP*
<b>Acquisition time</b>	
TTFF (95%):< 15 sec hot start	<70 sec warm start
TTSF (95%):< 20 sec	(Off or Standby<15 min)
TTSF (95%):<38 sec	(Off or Standby<60 min)
<b>Velocity accuracy</b>	
Man-portable	0.3 m/s steady rate (3D 95%)
Surface vehicle	4.0 m/s steady rate (3D 95%)
<b>Coordinate system</b>	4 predefined
<b>Storage capacity</b>	999 waypoints, 15 routes
<b>MTBF</b>	>10,000 hours
<b>Datums</b>	MPE-M datums
<b>Compatibility</b>	IS-GPS-153D
<b>Antenna</b>	Internal M-Code L1/L2

\* Export of precise positioning service (PPS) units is authorized for GPS Memorandum of Understanding countries only. PPS security modules must be obtained through foreign military sales (FMS) procurement.

## Map system



The Map System allows you to load and view map sets, including vector maps, raster maps, and satellite imagery. It enhances your situational awareness by enabling you to display maps, waypoints, routes, and alerts on its moving map displays.

## Physical characteristics

<b>Power external</b>	9 to 32 VDC
<b>Batteries</b>	4 - 1.5V AA cells 1 - 3.6V 1/2 AA cell for Low Power Time Source (LPTS)
<b>Battery life</b>	> 8.5 hours (dismounted)
<b>Weight (with batteries)</b>	< 1.25 lbs. (567 grams)
<b>Size/volume</b>	6.4 x 3.45 x 1.85 in. (16.25 cm x 8.76 cm x 4.7 cm)
<b>Display size (viewable)</b>	1.48 in (H) x 2.6 in (37.59 mm (H) x 66.04 mm)
<b>Temperature range</b>	
Operating:	-26°F (-32°C) to +158°F (+70°C)
Storage:	-70°F (-55°C) to +158°F (+70°C)
<b>Humidity</b>	0 to 100% (non-condensing)
<b>Water resistant</b>	to 1.0 meter (MIL-STD 810G)
<b>Altitude (operating)</b>	-400 m to 9,100 m MSL

## Interfaces

### Three (3) independent serial data ports (full duplex)

- Two (2) standard RS-232 serial data ports
- One (1) standard TIA/EIA-422 serial data port

### Other

- One (1) USB 2.0 (data only)

### Timing interfaces

- 1 PPS input
- 1 PPS and 10 PPS outputs
- HAVEQUICK output
- SINGGARS 1 PPS

### L1/L2 M-Code RF antenna port, 3.3 VDC

## For more information contact:

BAE Systems

P. O. Box 868  
Nashua, New Hampshire 03061-0868

**W:** [baesystems.com/navguide](http://baesystems.com/navguide)

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