



# US Army Lead Platform for M-Code Integration

## Enhanced Defense Advanced Global Positioning System Receiver Distributed Device (D3)



### Enhanced D3

DAGR Distributed Device with M-Code Capability

### Seamless Transition from SAASM to M-Code

The Enhanced D3 distributes centralized IS-GPS-153 and MSID messages to up to 8 independent, unique interfaces. It is designed and qualified for the mounted environment. Supported clients include tactical radios, FBCB2/BFT, Laptop/Falconview, MRT's and others.

The newest addition to the family of D3 Devices can provide SAASM or M-code protected GPS.

One Enhanced D3 can perform the function of eight independent MGUE's. This eliminates requirements for multiple MGUE's and associated antennas, creating an affordable migration plan from SAASM to M-code receivers, while reducing SWaP and system design complexity.

### Advantages

- One device that replicates four independent AN/PSN-13A (DAGR) receivers, all operating as separate units with unique or different criteria.
- Supports rapid, LRU level interchangeability between SAASM GPS receiver and M-Code capable receiver
- No Impact to Subscriber Application Software/Hardware
- Commercial Off The Shelf (COTS), enabling ease of procurement
- Internal, rechargeable supercapacitor, eliminates need for lithium battery
- Optimized for SWaP, compatible with all DAGR accessories, including mount
- All four COM2 ports are configurable to RS232 or RS422.

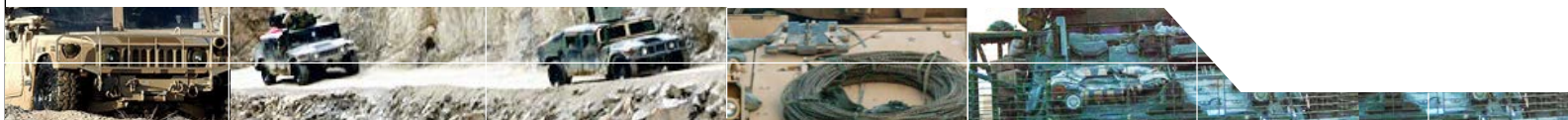
### Benefits

- Offers unique scalability and upgradeability path from SAASM to M-Code using existing vehicle architecture and components, saving time and money.
- One SAASM or M-Code card for all vehicle clients
- Will support pseudolites
- Supercapacitor means monthly battery checks are not required
- LRU is depot level upgradeable from SAASM to M-Code
- Enhanced compatibility with Anti-jam antennas operating in any mode

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*M-Code available upon GPS Directorate approval of M-Code Receiver cards*

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### Electrical Input:

28VC Operating Input Voltage  
 Range: 9V-32V (1.8W - 6.4W)  
 Antenna Load Current Range: 2-70 mA  
 Current: 200MA max (3W - 8W)  
*Assumes 250mA Type II GB-GRAM  
 (Numbers may be different depending on configuration)*  
 Supports MIL-STD-704G OR MIL-STD-1275D

### Electrical Output:

Antenna Output Voltage: 3.3V

### Interfaces:

J2-1, J2-2, J2-3, J2-4 ports support both standard  
 TIA/EIA-232 (COM1) serial data ports and standard  
 TIA/EIA-422 (COM2) serial data ports  
 (COM2 ports can also be TIA/EIA-232)

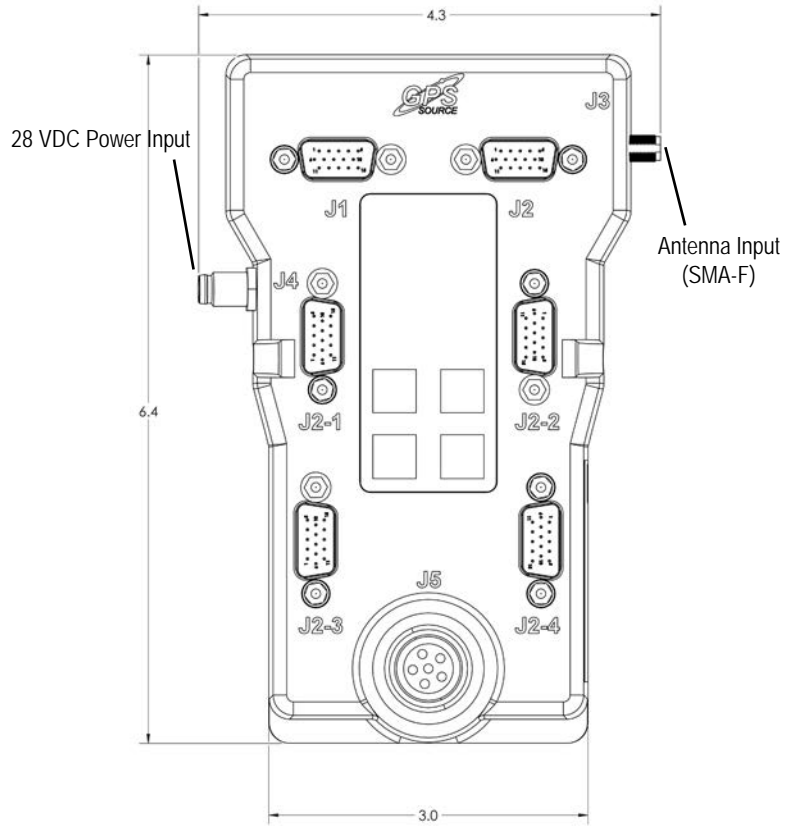
### 8 Timing Interfaces Available:

1 PPS input  
 1 PPS UTC, 1PPS T-Mark and 10 PPS output  
 HAVEQUICK output  
 One SINGARS mode 3 interface  
 DS-101/DS-102 key loading input

### Dual Frequency:

L1/L2 dual frequency tracking  
 L1 - C/A, P(Y), M\*  
 L2 - P(Y), M\*

*\*M-Code only available with an M-Code capable receiver card*



### Physical Specifications:

Total Weight: 1 lb.  
 Overall Size: 3.74 in x 6.37 in x 1.64 in  
 Fits within envelope of DAGR in DAGR Installation Mount

### Compatibility:

IS-GPS-153, IS-GPS-164, MSID-001  
 NMEA-0183 input/output

### Environmental:

Operating Temp: -40°C to +71°C  
 Humidity: 95% Per MIL-STD-810, Method 507.5 Proc. II  
 Vibration: Per MIL-STD-810, Method 514.6, Proc. I  
 Altitude: -400m to 3,048m MSL  
 Crash Safety Shock: 75 g's Per MIL-STD-810G,  
 Method 516.6, Proc. V  
 Functional Shock: 40 g's Per MIL-STD-810G,  
 Method 516.6, Proc. I  
 Sand and Dust: Per MIL-STD-810G, Method 510.5, Proc. I & II

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