

Joint Tactical Radio System HMS

Small Form Fit Radios



Custom configurable core radio architecture

Delivers mission-specific capability without the cost of custom development

Lowers Life-cycle cost

Streamlines procurement, logistics, maintenance, and training

Ensures Interoperability

Common Core Radio Approach

Team General Dynamics uses a common core radio architecture, software, and hardware design approach for all JTRS HMS products, including all small form fit radios. Special emphasis on SWAP-C (Size, Weight and Power-Cost) lightens the soldier load and maximizes battery life through efficient design and both aggressive and intelligent power management. Our common architecture and use of common core radio modules reduces both development time and cost, enables easy technology upgrades and reduces the logistics trail.

SFF Applications

JTRS HMS Small Form Fit (SFF) radios integrate the “tip of the spear” by networking systems and platforms at the edge of the battlefield. This network integration is achieved through the application of miniaturized software-defined radio technology into a family of embeddable radios. JTRS HMS radios support systems and platforms such as unattended ground sensors, intelligent munitions, UAVs, robotic vehicles, and soldier systems.

While all of the SFF configurations leverage common modules, each is packaged to meet the unique size, weight, and power consumption constraints and environmental requirements of the sets specific mission. This allows all JTRS HMS-enabled systems to become a part of the networked battlefield.

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SFF Missions

- Soldier System Communications
 - 2-CH Type 1 leader's communications SFF-B
 - 1-CH Type 2 uncleared soldier communications SFF-C
- Unmanned Aerial Vehicles
 - 1-CH Class I & II SFF-D
 - 2-CH Class III & IV SFF-E
- Small Unattended Ground Vehicle (SUGV)
 - 1-CH Command, Control and ISR Data SFF-F
- Intelligent Munitions Systems (IMS)
 - 1-CH Dispenser Radio SFF-A
 - 2-CH Gateway SFF-A
- Unattended Ground Sensor (UGS)
 - 1-CH Sensor Radio SFF-A
 - 2-CH Gateway SFF-A
- NLOS Launch System
 - LAMs/PAMs SFF-G*
 - NLOS CLU SFF-J
- Range Instrumentation Transceiver
 - Three configurations: Platform, Relay, Ground SFF-K
 - Fixed Wing SFF-K

**Increment 2*

Features and Benefits

- Modular, scalable design yields lower LCC and faster development of new form factors
- Aggressive and intelligent power management technology extends battery life
- Low recurring cost supports disposable CONOPS
- Programmable cryptography to handle new algorithms and multi-level security needs
- Greater waveform storage and configurable channels increase operational flexibility
- Integration of COTS LSI devices yields minimum size, weight, and power at lowest possible risk
- Software controlled interfaces
- Line of Sight and Beyond Line of Sight
- Up to 30-day mission life



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D-JTRSSFF-6-0210