The Department of Defense Joint Tactical Radio System (JTRS) program will provide warfighters with a flexible new approach to meet their diverse communications needs. Using software-defined radio technology, this new family of highly interoperable radios will serve as the backbone for the network-centric force.

A pioneer of software-defined radio, Thales Communications, Inc. has led the industry in meeting size, weight, and power-constrained challenges, even before JTRS. Thales’ vision to replace the heavy manpack tactical radio with the lightweight handheld (dismounted) radio, without losing functionality, became a mission success. Our focus has always been on developing the handheld radio, not “shrinking” vehicle radios or manpacks. We were the 1st to reduce the SINCGARS waveform to software.

Embracing the JTRS vision from the start, Thales has leveraged our core expertise into the JTRS world as an integral player in developing JTRS technology, from architecture definition to Software Communications Architecture (SCA) validation to production. Thales is leading all current JTRS applications where size, weight, and power are key.

The unparalleled performance of the AN/PRC-148 Multiband Inter/Intra Team Radio (MBITR), Thales’ cornerstone product, led to Thales’ selection as the prime contractor for JTRS Cluster 2 (handheld development and production). In conjunction with Cluster 2, and with the battle-proven MBITR forming the foundation, Thales has developed the world’s first JTRS production radio, the JTRS Enhanced MBITR (JEM). The 1st SCA radio to complete the Early Operational Assessment and the formal JTRS Technology Laboratory SCA verification assessment (currently awaiting formal certification from the JTRS JPO), the JEM offers total interoperability in a small, secure package. The JEM provides a seamless, cost-effective, and risk-free path to JTRS.

JEM

- JTRS SCA 2.2 Compliant
- Programmable Encryption Engine (AIM)
- 2 Meter and 20 Meter Immersible Variants
- 30-512 MHz Frequency Range
- VHF/UHF AM and FM
- Voice and Digital Data
- LPI/LPD Supported
- HAVEQUICK I/II, SINCGARS Single Channel, Frequency Hopping (ESIP), ANDVT (PSK)

The radio is just the beginning. The entire MBITR system, completely upgradeable to the JEM system, includes:

- Vehicle Adapter (VA): Cable-free jerk-and-run (<3 seconds) recharging broadband 20-watt vehicle adapter with remote
- Vehicle Adapter Amplifier (VAA): 2 MBITR radio systems, 2 MBITR VAs, and interface tray
- Base Station: Full MBITR and VA functionality for fixed applications
- Tactical Repeater: Suitcase configuration with two VAs and integral AC/DC power supply that function as a repeater
- Man Portable System: Portable 20-watt broadband amplification system
- Accessories: A complete line including power adapters, chargers, batteries, audio accessories, antennas, data and retransmission cables, connectors, and software options

Thales’ leadership in the industry led to our role as a key team member for the JTRS Cluster 5 team (handhelds, manpacks, and small form fits), further providing the foundation for total interoperability for U.S. military services, coalition forces, and allies—meeting warfighting needs for decades to come.

Developing JTRS technology for all applications,
Thales has turned the JTRS vision into reality.