Tactical Combat Training System – Increment II

REVOLUTIONIZING
AIR COMBAT TRAINING

Increased operational training realism through
next-generation capabilities

Collins Aerospace

UNMATCHED OPERATIONAL REALISM

The "Train like you fight" capability ensures live participants train in highly contested, highly congested air combat situations.

- Adds depth to exercises by securely enabling 5th-gen, legacy and coalition forces to train together in real-world environments and with real-world threats

- Integrates with current training assets such as electronic warfare threat emitters and ground-based participants

- Provides full-fidelity threat and weapon simulations for multiple weapon types

- Supports real-time kill notification with real-time RTO adjudication

- Inflight configurable training missions create more effective, efficient training missions

ENHANCED SCALABLE TRAINING CAPABILITY

The scalable system supports participants from a small squadron to large-force exercise. It advances air combat proficiency training while adapting to future training needs.

- 10x more network capacity than existing combat training system within the same bandwidth – more live participants with excess capacity for blended live, virtual constructive (LVC) exercises

- Available user defined messages can interact with the aircraft OFP, providing rapid training scenario adaptation to emerging threats and missions

- Scalable training exercises – connect multiple ranges with TCTS II capability to create a common test and/or training battlespace of one super range

CERTIFIED SECURITY

Get the secure network connectivity you need to share the right data with the right people in your most challenging training scenarios.

- The only air-combat training system with security certification that supports security requirements of today's 5th-gen and 4th-gen fighters and can be run at system high

- MLS architecture capable of four simultaneous encryption channels from Unclassified to Top Secret

- MILS in both airborne and ground subsystems for tethered or autonomous operations

OPEN ARCHITECTURE

Our FACE conformant open architecture lends itself to interfacing with a variety of debrief and live monitoring software systems. The system complies with standard interfaces such as HLA, DIS, TENA, and 1598.

- Industry Standard I/O between subsystems and major functional components (LRU/WRAs)

- Government owned IP/data rights

- Ability to advance future technology insertions through open architectures/standards

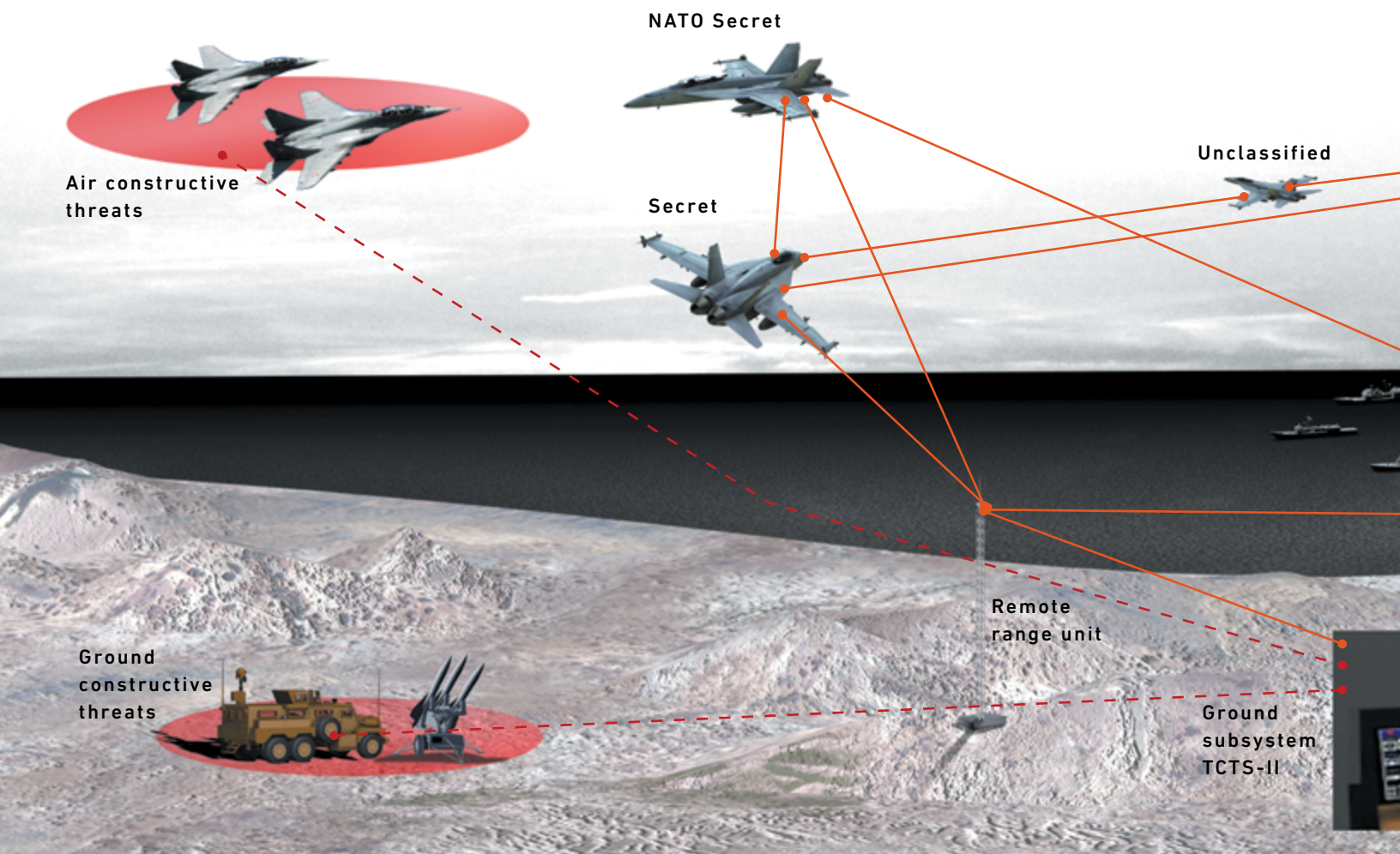# TACTICAL COMBAT
READINESS

With the U.S. Navy and U.S. Marine Corps Tactical Combat Training System (TCTS) Increment II, you'll get improved readiness across the training spectrum. TCTS II connects 5th-gen and 4th-gen aircraft training missions and brings significant real-time training benefits to all participants in a simulated, highly contested, highly congested combat environment. The system enables live, blended with synthetic (virtual and constructive), real-time air combat training with additional onboard participant-embedded processing and weapon flyout models, tethered and autonomous training operations, and low end-to-end network latency through industry interfaces.

Even as TCTS II improves training realism to "train like you fight", it protects warfighting TTPs (Tactics, Techniques and Procedures) and enables scalable training scenarios from individual to collective, home stationed to deployed, and across service, allied and coalition security boundaries. The combination of open system Multiple Independent Levels of Security (MILS) architecture and government data rights ensures rapid adaptation to emerging threats and missions, while on range or while deployed.

TCTS Inc. II replaces and advances the existing range training infrastructure and fields the first certified multi-level security (MLS) training equipment in both airborne and ground equipment. Collins Aerospace and Leonardo DRS bring mature technologies and solutions to your operational training.

TCTS Inc. II — secure, real-time, simultaneous training

NATO Secret

Unclassified

Air constructive threats

Secret

Ground constructive threats

Remote range unit

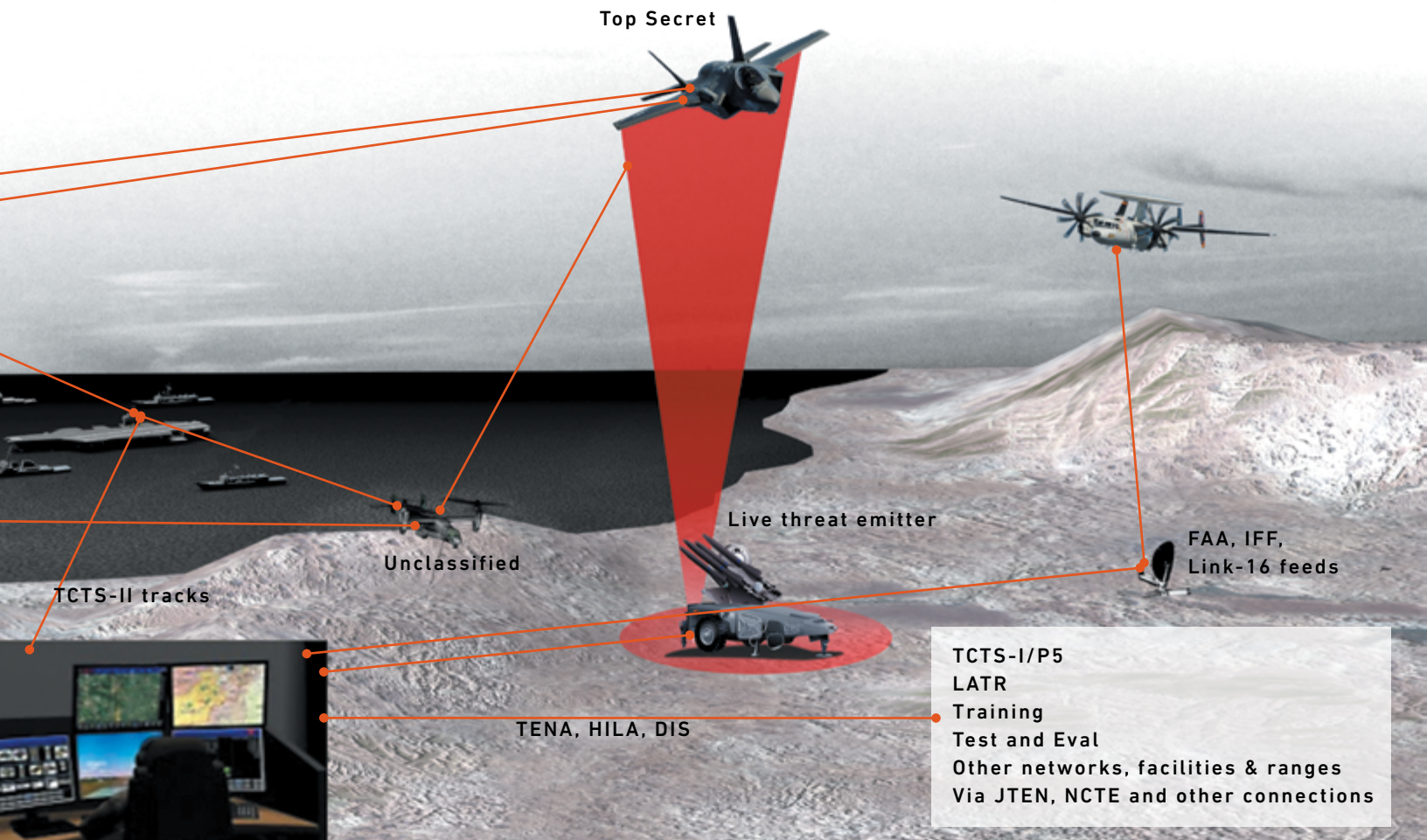Ground subsystem TCTS-II

MATURE

Leverages a fielded system, currently at Major Range and Test Facility Base (MRTFB), adds mature training functionality with an inherent capability to scale and evolves to the most current operationally relevant warfighter training needs

SECURE

Uses previously accredited multi-security level architecture, the latest NSA approved cybersecurity system, End Crytographic Unit (ECU) and cross-domain solutions (CDS) from CRIIS
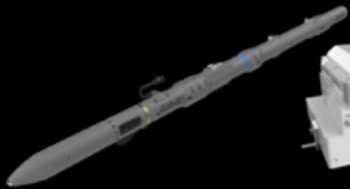
OPEN

Future Airborne Capability Environments (FACE™) conformant open architecture lends itself to interfacing with a variety of existing and future debrief and live monitoring software systems

Top Secret

Live threat emitter

FAA, IFF,
Link-16 feeds

Unclassified

TCTS-II tracks

TCTS-I/P5
LATR
Training
Test and Eval
Other networks, facilities & ranges
Via JTEN, NCTE and other connections

TENA, HILA, DIS

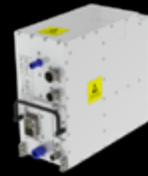## AIRBORNE FORM FACTORS

Airborne Subsystem (AS)   Internal Mount (IM)   Rack-mounted Subsystem Internal Mount (RSIM)   F35 Internal Mount (JSF IM)
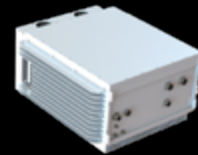
GROUND STATION FORM FACTORS

FGS/TGS/SGS   PGS   RRU Subsystem

PORTABLE SUPPORT EQUIPMENT

PLATFORM

AH-1 W/Z	F-16N	MH-60R/S
AV-8B	F-35A/B/C	MV-22B
CH-46E	F-5N/F	P-3C
E-2C/D	F/A-18A/B/C/D/E/F	P-8A
EA-18G	HH-60H	SH-60B/F
EP-3E	KC-140J	UH-1Y
F-16A/B	MH-53E	

We have a
solution for
your platform

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