PROVIDING THE PATH
TO BLENDED LVC TRAINING

Latest-generation capabilities for greater operational training realism

Collins Aerospace

To learn more, go

collinsaerospace.com

Collins Aerospace
+1.319.295.2151
fax: +1.555.555.5555
jsasisreal@collins.com
collinsaerospace.com

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IMMEDIATE COST AVOIDANCE

Deploying our P6CTS as the P5 replacement provides over $500 million in USAF sustainment cost avoidance. This includes the legacy P5 effort to:

- Encrypt transmitted TSPI
- Relocate out of L-band spectrum
- Operate in GPS-denied environment
- Replace untrusted ADIU processor
- Design out obsolete parts

It also includes an IP-based network with user-defined messaging, enabling the end user to adapt the system to evolving LVC, multi-domain and OFP communication needs.

FUTURE READY

The P6CTS is designed to advance force training as future OTI training requirements develop.

- Leverages newly developed SCA programmable data-link technologies able to host 5G-ATW or a future waveform of your choice
- Overcomes TTP training and development limitations in secure MILS blended LVC training infrastructure
- Provides immediate training response to emerging missions and threats
- Able to interface with all OFP LVC hooks the same day they are fielded using user-defined waveform messages
- Open architecture and industry standards simplify obsolescence management and future upgrades to new technologies
- Incorporates latest cybersecurity (RMF) standards
- Able to leverage USN TCTS II production manufacturing, sustainment and logistics tail

READY TO FIELD
EIGHT YEARS EARLY

Collins Aerospace is redefining aerospace by transforming air combat training for fast-evolving modern warfare. The Collins P6 Combat Training System (P6CTS) enables secure, blended live/synthetic air combat training. It's the future of multi-domain training, now fieldable by 2023.

The P6CTS offers your training program a growth path to blended live, virtual and constructive (LVC) training, and gives the USAF the data rights needed to avoid vendor lock and rapidly evolve to emerging capabilities and threats.

A collaboration between Collins Aerospace and Leonardo DRS, the P6CTS leverages previous U.S. Department of Defense investment in the Common Range Integrated Instrumentation System (CRIIS) and Tactical Combat Training System (TCTS) Increment II. It brings all the capabilities together in a high-fidelity air combat training system for the USAF.

Our P6CTS provides the only fully certified, Multiple Independent Levels of Security (MILS) architecture in both airborne and ground subsystems, enabling secure, real-time tethered and autonomous operations.

The system also provides seamless interoperability between 5th- and 4th-generation aircraft, bringing significant training benefits to all participants in a simulated, highly contested and congested combat training environment.

P6CTS incorporates advanced systems and algorithms to operate effectively in a GPS degraded or denied environment.

THE P6CTS INCLUDES KEY ATTRIBUTES REQUIRED BY THE USAF:

- Supports interoperability between and among 4th- and 5th-generation aircraft, heavy platforms and helicopters

- Uses a modular, open systems architecture with common data standards to enable interoperability between USAF, USN and coalition partner air combat training

- Capable of Synthetic Inject to Live (SITL) at entry into service in 2022

- Enables processing, segregation and dissemination of highly classified data

- Suitable for employment in operational training environments both CONUS and OCONUS

KEY TECHNOLOGY INSERTIONS

- Open systems architecture that is FACE conformant, as well as other industry standards and conformity with OMS, if desired

- A programmable 1300-2400 MHz software-defined radio with selectable frequencies for compliance with Advanced Wireless Services (AWS) spectrum adherence

- Guaranteed cohabitation with 5G LTE cell users and onboard tactical data links

- A range-proven mesh training networking waveform supporting at least 200 high-activity participants with up to 13.8 MHz shared bandwidth

- A fully hosted Next Generation Threat System (NGTS), providing hundreds of user-selectable synthetic models of threat and friendly aircraft, ground and maritime units, associated weapons, sensors and subsystems

- A tactical, 32-channel NSA certified MILS encryptor and tactical, 48-channel MILS CDS guard

- LVC processor featuring four quad cores

- Anti-spoof SAASM GPS receiver with upgrade path to M Code; GPS-denied accuracy for thousands of seconds during enemy jamming

- Over-the-air programming of encryption keys, CDS rulesets, data-link operating frequencies and operating parameters

UNMATCHED OPERATIONAL REALISM

Blending synthetic elements with live participants to realistically simulate high-threat, high-density air combat scenarios.

- Full-fidelity threat and weapon simulations for both Department of Defense and NATO weapon types

- Real-time kill notification and removal maximizes positive training

- Reconfigurable in-flight training for effective training in less time

- Secure integration with various aircraft data-bus interfaces and all operational flight programs

- At least five times more network capacity than existing air combat training systems in the same bandwidth

- Up to 55 times more network capacity for high-density LVC environment

- User-configurable MILS adapts and scales to meet mission needs

The P6CTS for secure, blended live/synthetic air combat training is now fieldable by 2023.