ST Aerospace
A company of ST Engineering

Fighter & Lead-in Trainer Avionics Upgrades

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ST Aerospace has delivered some of the world's most technologically advanced avionics upgrade solutions for fighters and trainers. Harnessing emerging technologies in our inhouse system integration and human factors laboratory, we provide modular upgrade solutions that are specifically designed to enhance the performance of your aircraft. These solutions are flexible and can be customised to your specific needs, while offering a wide selection of sub-systems from suppliers worldwide.

Complete inhouse design, development and verification capabilities

Our extensive experience and proven track record in total upgrade support provide the platform for our cost effective and reliable fighter and lead-in trainer upgrade solutions.

Enhancing Your Operational Readiness

For fighters

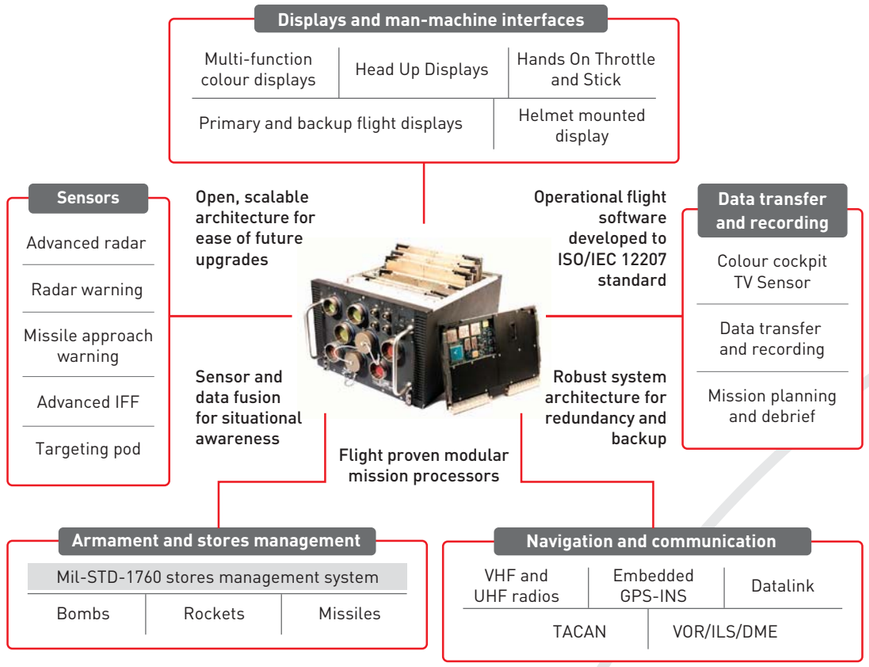
Our avionics upgrade packages can be tailored to provide the required levels of operational capabilities:

- Tactical situational awareness
  - Choices of active and passive sensors
  - Multi-sensor data processing
  - Intuitive display of processed tactical information
- Lethality
  - Advanced weapon
  - Timely detection/timely identification of targets
  - First shoot/first kill
- Night/adverse weather operating capability
  - Navigation/targeting Forward Looking Infra-Red (FLIR) and/or Night Vision Goggles (NVG)
  - Integration of suitable weapon
  - Terrain cueing, warning and avoidance
- Survivability
  - Enhanced tactical situational awareness
  - Threat detection systems
  - Automated management of chaff and flare

For trainers

- Cockpit design/layout
  - Can be tailored to represent a specific or a generic modern fighter
  - Subject to space constraints, we have the capability to provide multiple Multi-Function Colour Displays (MFCD)
- System management concept
  - Can be tailored to meet customers' preferences
  - Hands On Throttle and Stick (HOTAS) features, Head Up Display (HUD) symbols and MFCD pages can be customised
- Optional special training features
  - Virtual radar with customised operating modes/features
  - Replay of mission on the ground for debrief

Our modular avionics architecture provides flexible and cost effective upgrade solutions



Key Features

- Reduces pilots' workload through advanced man-machine interface concepts (HUD, MFCD, HOTAS, 3D audio, and so on)
- Operational flight programme developed to ISO/IEC 12207 standards
- System safety with centralised BITE monitoring and post-mission fault analysis
- Robust system architecture with redundancy and backup modes
- Mission automation through ground-based mission planning and data transfer system
- Training capability incorporated using simulated weapon loads and engagement
- Navigation: standard inertial and hybrid
- Air-to-ground attack: conventional modes (such as Continuously Computed Impact Point (CCIP) and Continuously Computed Release Point (CCRP)) as well as advanced modes for smart and guided weapons
- Air-to-air with gun and missile delivery using a variety of radar modes such as range-while-search, track-while-scan, and so on
- Reconnaissance and targeting sensor management (EO cameras, FLIR, targeting pods)

Interfaces

- MIL-STD-1760 stores management system
- Digital and analogue interfaces to inter-operate with existing and new equipment
- MIL-STD-1553B multiplexed data bus, ARINC 429, RS 422, etc.
- Analogue and digital video

Multi-Stage Improvement and Growth

Our customised upgrade solutions incorporate modular and open architecture avionics designed to suit customers' specific requirements.

As customers' needs evolve and new operational roles are established, newer systems can be added to enhance the operational capability of the aircraft, or to meet new operational requirements.