

Integrated Family of Test Equipment (IFTE) Continuing a Legacy of ATE Performance and Expertise



Today's Army relies on high-technology systems to help meet its responsibilities and maintain preparedness. These systems depend on the latest electronics for a military capability that must be useable under adverse conditions by field operators. The mission of Northrop Grumman's Integrated Family of Test Equipment (IFTE) is to support those electronics and ensure that weapon systems are combat ready when needed.

IFTE is a series of test systems used off-system for testing electronic and electro-optic weapons devices on missile systems, vehicles, aircraft and more. IFTE products have been designed to work in a lab or in a shelter and can be moved into the field. IFTE is the Army standard tester as designated by the United States Department of Defense (DoD) and will be supported by the U.S. Army for the foreseeable future.

Benefits

- VME and VXI-based configuration of IFTE
- Incorporates
 - Open architecture
 - Standard COTS instruments
 - Plug-n-play software
 - Modular, scaleable interface
- Cost effective alternative to peculiar factory tester
- Uses the same TPS hardware/software in factory, field or depot
- Enables isolating line replaceable unit (LRU) faults and screen shop replacement units (SRUs) at forward areas for quick LRU turnaround and to minimize the spares pipeline. Also enables isolating faults in SRUs at rear areas and depots
- Reconfigurable to adapt to new weapons system technology with short development time
- Reduces maintenance and logistics costs
- Standardizes maintenance training across weapon systems



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PRODUCT LINES

By using standardized components and open architecture, Northrop Grumman makes it possible to scale any IFTE product, large or small, modest or costly, to the users' needs.

Northrop Grumman's Integrated Family of Test Equipment consists of three main product lines: IFTE (V)3, Electro-Optics Test System (EOTS) (V)5, and Next Generation Automatic Test Station (NGATS).

- **IFTE (V)3** - Over 150 (V)3 systems have been produced to support various weapons systems including MLRS, Avenger, Paladin, Kiowa Warrior, and ground based sensors.
- **Electro-Optics Test Station (EOTS) (V)5** - A total of 33 EOTS have been delivered to the Army to support various weapon systems. EOTS tests and fault-isolates electro-optical and electronics LRUs in a full range of weapon systems. EOTS tests laser transmitters, receivers, spot trackers, forward-looking infrared systems (FLIRs) and TVs. The station can be housed in a standard Army shelter, forming the EOTF. It can also be floor-mounted in a free-standing version. The EO system uses the Navy-developed Electro-Optical Subsystem (EOSS+) to conform to all DoD standardization objectives.
- **Next Generation Automatic Test Station (NGATS)** - The Agile Rapid Global Combat Support (ARGCS) Advanced Concept Technology Demonstration (ACTD) is the latest Department of Defense (DoD) initiative to standardize Automated Test Equipment (ATE) throughout the military and its suppliers. NGATS architecture easily satisfies new or different weapon systems requirements by utilizing other IFTE hardware elements or commercial off-the-shelf (COTS) instruments with a subset of ARGCS' operating system. NGATS is designed to support all the weapons systems currently supported by (V)3 and (V)5 and future weapons systems to include M1A2SEP, Bradley, and Future Combat Systems.

BASE SHOP TEST FACILITY (BSTF)

BSTF refers to the test system, shelter, prime mover, and generator.

- BSTF tests and isolates faults in weapons system LRUs and SRUs. The (V)3, EOTS (V)5, and NGATS are designed to be housed in a shelter for mobility and transportability. The three systems are designed for state of the art testing of digital, hybrid, and RF electronics and electro-optical LRUs and SRUs.

IFTE LEGACY

Northrop Grumman has a strong history in designing, developing and manufacturing automatic test systems (ATS) for all branches of the Armed Services. Since the latter part of the 1960s, we have furnished to the United States government more than 800 ATE systems, the majority of which are still in use today.

At the forefront of ATS design, Northrop Grumman can list many firsts to its credit. In the 1970s, the Navy's CAT 3D was the first ATE system delivered to implement an online incremental compiler and bi-directional digital test capability. In the 1980s, the Army's IFTE system was the first ATE to incorporate instrument-on-a-card technology. And in the 1990s, the Air Force's Electronic System Test Set (ESTS) was the first ATE to incorporate a distributed interface in a VXI-based automatic system.

The NGATS also incorporates a distributed interface in a VXI-based automatic system.

IFTE has been in full-scale production by Northrop Grumman since 1992. Furthermore, Northrop Grumman's IFTE has been fielded and is now supporting weapons systems in the United States and at locations around the world.

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