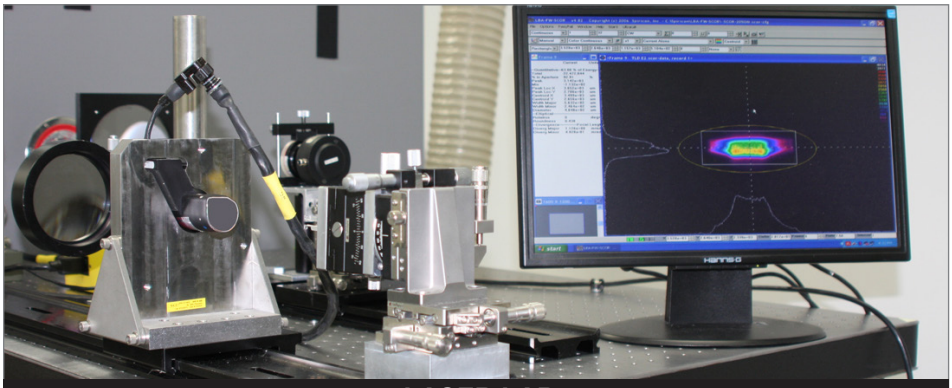
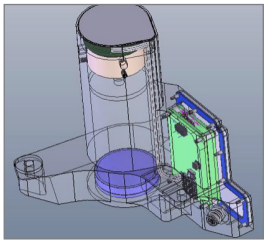
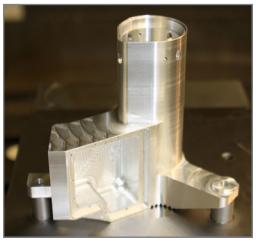
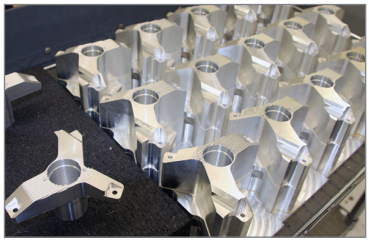


LASER LAB







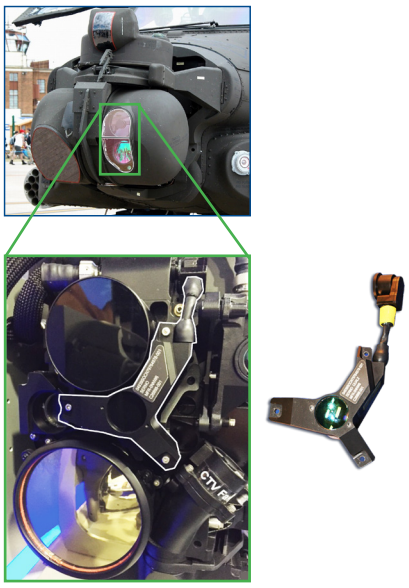
ICE Lasers are engineered with tight tolerances and application specific divergence, tested to Military Standards, and Certified for Air Worthiness Release (AWR)

TRAINING LASER DESIGNATOR (TLD)

The TLD is a self-contained subsystem consisting of a collimated Class 3R (ANSI) 904 nanometer (nm) Laser energy transmitter capable of transmitting MILES coded messages to simulate designation performed by tactical hardware. It provides control of an internal MILES Laser transmitter, and includes the optics required to direct the laser beams and the associated electronics to drive the TLD.

MILES output is enabled when firing simulated Hellfire Missiles or Rockets when Aviation TESS is installed and engaged on the aircraft. Parameters for direct fire routine are in accordance with PMT 90-S002A. MILES Player ID ranges up to 1320 unique Players and 4 ammo codes.

The TLD is manufactured by ICE and being permanently embedded within the Phase III Modernized Day Sensor Assembly (M-DSA) for the AH-64D/E M-TADS/PNVS on all new aircraft by Lockheed Martin Missiles & Fire Control (LMMFC).



Embedded TLD

FLASHWESS LASER TRANSMITTER (FLT)

The FlashWESS Laser Transmitter (FLT) employs a MILES coded Laser for weapons simulation of missiles, rockets and 30mm cannon for the UH-72A Lakota. The FLT is manufactured by ICE and embedded inside the MX-10 Surveillance Turret manufactured by L-3 WESCAM. The combined assembly is called the Articulating Sensor Package (ASP).

The ASP provides day/night video and communicates with the Weapons Processor and Hand Controller for target acquisition and designation engagements. Two color monitors provide a view from the camera angle.

Embedded FLT

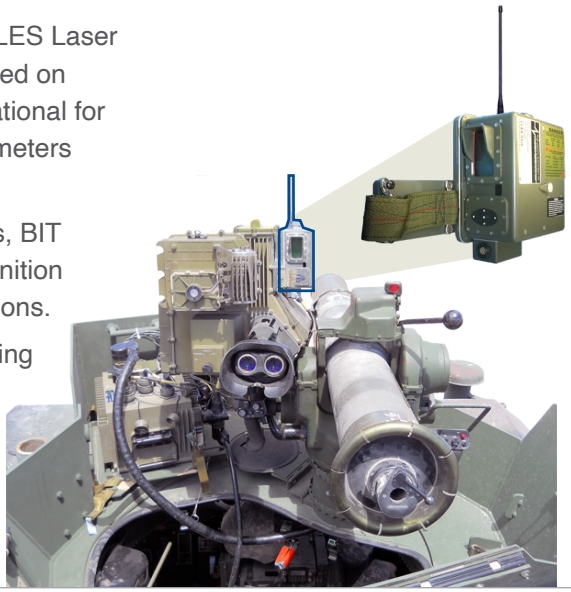
Eye-safe MILES Lasers are designed to integrate with any Weapon System to provide Long Range Target Acquisition and Designation

LASER MODULE UNIT (LMU)

The LMU is comprised of a MILES Laser and a boresight Laser. It installed on the ITAS-TESS FTS and operational for target designation up to 4500 meters using MILES sensors.

An LCD displays system status, BIT data, far target location, ammunition status, ARM and SAFE indications.

The LMU retains boresight during movement over rough terrain and is easily verifiable to line-of-sight.



The MOBILE TARGET SET is used to instrument any ground vehicle as a MILES Target and Opposing Force (OPFOR)

- Instrumentation Player Unit with Vehicle Kill Indicator
- Wireless Shoot-Back Laser
- Wireless Laser Sensors

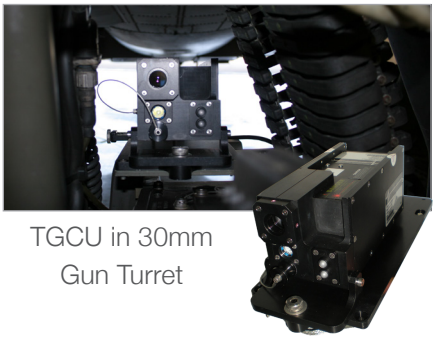
EYE-SAFE LASER RANGE FINDER/DESIGNATOR (ESLRF/D)

The ESLRF/D is installed in the AH-64D M-TADS for TESS training and is transparent to the aircrew and aircraft. The ESLRF/D provides range return data, MILES Laser target designation, and status signals. The ESLRF/D is a self-contained subsystem consisting of two co-aligned Lasers. A 904nm Laser Designator Transmitter (LDT) transmits MILES coded messages to simulate designation for SAL Hellfire and 30mm Cannon engagements. A 1540nm Laser Range Finder (LRF) module determines range to target with the necessary optics and associated electronics required to direct the Laser beam.The ESLRF/D replaces the legacy device due to obsolescence.

ESLRF/D in M-TADS

TESS GUN CONTROL UNIT (TGCU)

The TGCU is mounted within the AH-64D/E 30mm Gun Turret to perform 30mm weapon engagements and is transparent to the aircrew and aircraft. The TGCU is a self-contained subsystem consisting of a MILES coded Laser, a Flash Weapon Effects Signature Simulator (FlashWESS), RS-485 serial communications for control of the ESLRF/D, and a MIL-STD 1553 RT Bus interface that receives commands from the aircraft to control the TGCU and ESLRF/D Lasers. The TGCU replaces several legacy devices due to obsolescence.



TGCU in 30mm Gun Turret

MAST MILES TRANSMITTER

The Man-portable Aircraft System Trainer (MAST) MILES Transmitter consists of two Greenlinks CCAs that together comprise the internal Range Interface Assembly (RIA). The compact MILES Laser is triggered by the RIA - simultaneous with an Instrumented Range network message when the MAST main computer communicates a trigger pull. If the MAST is 'killed' by a MILES weapon not on the network, the MILES Detector will relay the data to the RIA, which will in turn disable the MAST system with a 'killed' message to the MAST main computer. The status of the MAST system is then broadcast on the Instrumented Range Network.

Laser testing is fully automated for MIL-STD consistency and certified by the U.S. Army Public Health Command.

ICE
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