



# MODULAR MISSILE TECHNOLOGIES

Modular Missile Technologies is a demonstration of a product line approach to missile design based on a modular open systems architecture for guided missiles.

The objectives of the MMT project are: 1) develop a new architecture for the purpose of reducing life cycle costs for guided missiles; and 2) demonstrate technologies that support a guided munition product line that addresses several Army aviation lethality gaps for manned rotary wing and unmanned aerial system platforms. Care is being taken to make the design principals broadly applicable to other guided munition development efforts regardless of diameter.

The demonstration consists of two airframe types: a canard-controlled forward firing missile and a tail-controlled drop/glide munition. Each of these airframes is composed of a common set of subsystems (seeker, payload, control actuation subsystem, and guidance electronics unit) and an additional subsystem unique to the particular variant (a rocket motor for the forward firing missile and glide kit for the drop/glide munition). The drop/glide munition (10 lbs.) is designed for use by UAS against surface targets. The forward firing missile (25 lbs.) is intended for use by manned rotary wing and UAS against surface targets.

## IMPORTANCE TO THE ARMY

The immediate impact of the MMT program on the U.S. Army is the availability of multiple technologies for small guided missiles to address several Army aviation capability gaps related to lethality. The MMT product line of missiles allows Army aviation to tailor mission loadouts for increased efficiency against broad targets. MMT incorporates advanced solutions to address the complex, multi-domain environment in which Army aviation operates.

Longer term, MMT-based missiles are designed for total life cycle cost reduction. This includes the ability to modify MMT-based missiles rapidly and at lower cost, so the Army can keep ahead of the nation's constantly-evolving adversaries.

## OUTLOOK FOR THE FUTURE

MMT is building upon the success of its ballistic flight tests and is now integrating its unique autopilot software and control actuation subsystem in preparation for control



test vehicle flights of the forward firing variant. Spinouts from MMT to other S&T programs are already occurring including the Mission Computer and the rocket motor's low cost composite case. The forward firing variant is scheduled to transition to the Joint Attack Munition Systems Project Office at the end of FY19. The drop/glide variant will follow at the end of FY20. Plans have been approved for the demonstration of a multi-role version of the forward firing variant to enable air-to-air and air-to-surface engagements with a single missile.

## FOR FURTHER INFORMATION:

U.S. ARMY COMBAT CAPABILITIES DEVELOPMENT  
COMMAND AVIATION & MISSILE CENTER:

<https://www.avmc.army.mil>

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