



# Arming Unmanned Aircraft Systems

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Joint Attack Munition Systems (JAMS)

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Distribution Statement A – Approved for public release. Distribution is unlimited.



UNCLASSIFIED



# JAMS Family Of Products



15+ Hellfire Variants

Laser HELLFIRE

Longbow HELLFIRE



Blast Frag Sleeve



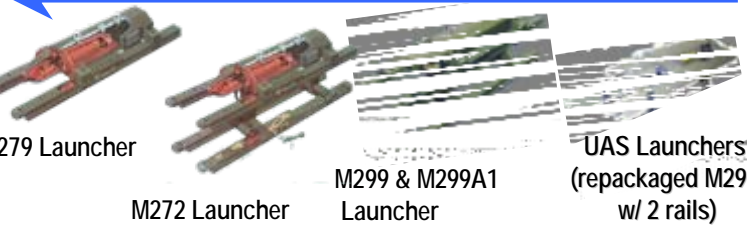
Joint Air Ground Missile

*Missiles*



2.75-inch Hydra Rocket System

*Rockets*



M279 Launcher

M272 Launcher

M299 & M299A1 Launcher

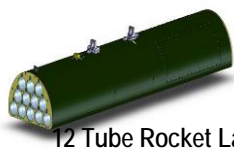
UAS Launchers (repackaged M299 w/ 2 rails)



M310 Launcher



M260/M261 Rocket Launchers



12 Tube Rocket Launcher



AN/TSM-205 Test Set



Launcher Test Station



Viper Strike



AN/AWM-101A TSGMS

*Launchers / Support Equipment/ Viper Strike*



# UAS Weaponization

## Integration of HELLFIRE on Predator

- Integration on Predator
- Providing Launchers and Missiles for use on UAS.
- Supporting platform, launcher, and missile interface modifications as necessary



## Viper Strike on Hunter

- Rapid integration and testing
- Currently supporting Strike Warfighting Capability
- Fielded FY07
- First combat use – September 2007



**JAMS Began UAS Weaponization in 2001 and continues today:**



# UAS Weaponization - Future Systems



## Weaponizing ER/MP

- Currently Working Integration
- Possible Munitions:
  - Hellfire
  - JAGM
- Modified M299 Launcher



## Fire Scout

- Viper Strike integration
- Laser Payload integration for compatibility with HELLFIRE Missile System for Remote Designation



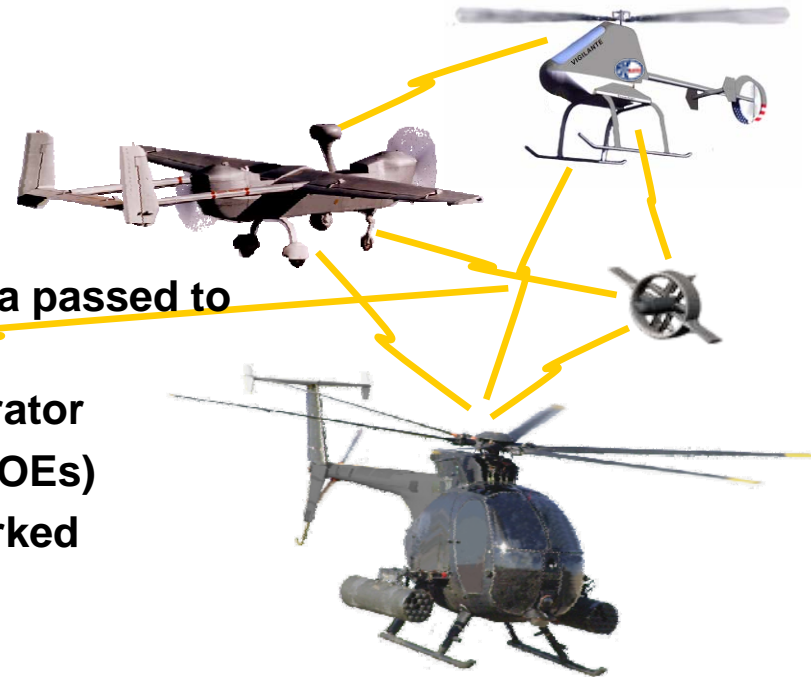
# Limitations & Desired Capabilities of Armed UAS



- **Current limitations of Armed UAS**
  - Limited payload weight and types
  - Limited engagement envelope
  - Altitude Restrictions
  - Strict Rules of Engagement (ROEs)
  - Sensors and weapons under full manual control
  - Stovepipe control
  - Limited to larger UAS

- **Desired capabilities of Armed UAS**

- Effective mix of weapon types
- Flexible engagement envelope
- Automated, fused sensors with pertinent data passed to an operator
- Final weapon release authority still with operator
- Easily implemented Rules of Engagement (ROEs)
- Integrated into MUM Teaming and the networked battlespace
- Multiple UAS classes





# JAMS Total Life Cycle Weapon Support

- **UAS Weaponization Process**
  - **Documentation of Requirements**
  - **Design of Experiment (to include ROM Cost Estimate)**
  - **Documentation of Munitions and Platform Characteristics**
  - **Identification of Required Modifications to Munitions or Platform**
  - **Design of Required Interfaces**
  - **Prototype Development**
  - **Testing**
  - **Materiel Release**
  - **Fielding / Training**
  - **Transfer / Sustainment**

**The JAMS PO is providing overall program management for weaponization of UAS armed with JAMS PO munitions and is actively working with other Joint Customers to support their weaponization needs.**



# Contact Information



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