Marvin Engineering Company
261 West Beach Avenue
Inglewood, California 90302
Tel: +1 (310) 674-5030
Fax: +1 (310) 673-9472
www.marvingroup.com
sales@marvineng.com

Flyer Defense
151 West 135th Street
Los Angeles, California 90061
Tel: +1 (310) 324-5650
Fax: +1 (310) 324-5646
www.marvingroup.com
flyer@flyerdefense.com

Marvin Test Solutions
1770 Kettering
Irvine, California 92614
Tel: +1 (949) 263-2222
Fax: +1 (949) 263-1203
www.marvintest.com
sales@marvintest.com

Marvin Land Systems
261 West Beach Avenue
Inglewood, California 90302
Tel: +1 (310) 674-5030
Fax: +1 (310) 677-6382
www.marvingroup.com
sales@marvinland.com

Airborne Solutions
The Marvin Group provides comprehensive solutions for Alternate Mission Equipment (AME) / stores carriage and release needs across multiple manned and unmanned fixed and rotary wing aircraft, including design, manufacturing, qualification testing, maintenance, and sustainment.

Established in 1963, Marvin Engineering is the flagship company of The Marvin Group and a worldwide leader in Alternate Mission, Auxiliary Aircraft and Role Equipment. We support both current in-service and emerging fixed wing platforms including the A-10, TA/FA-50, F-15, F-16, F/A-18, F-22 and F-35 as well as rotary-wing applications such as UH/ MH/SH-60, AH-1, Airbus Tiger, and AH-64. Marvin Engineering also provides stores carriage and release equipment in support of several remotely piloted/unmanned aircraft such as MQ-1 Predator, MQ-9 Reaper and MQ-1C Gray Eagle. Ground launch missile systems supported include MML, SLAMRAAM, and NASAMS. Our latest development efforts are focused on innovative stores carriage and release solutions for 5th Generation platforms and beyond.

As the original equipment manufacturer, Marvin Engineering provides life of program sustainment and support including training, spare parts, upgrade options, test equipment, and depot services.

Marvin Test Solutions has delivered innovative, feature-rich automated test solutions for Military, Aerospace and Manufacturing organizations since 1988. Our proven expertise tackling the demanding requirements of aerospace and military test systems carries through to our work in developing manufacturing applications, quickly creating and delivering test equipment that is modular, high-performance, low power and ultimately reducing maintenance and sustainment costs.

As a vertically integrated aerospace test and measurement company with a solution-centric focus, our collective expertise in hardware, software, systems and applications offers the flexibility and innovation demanded by today’s customers. By leveraging our design and test applications capabilities, we are able to translate challenging test requirements into turnkey solutions that are easy to use, simple to maintain, and result in products that enable customers to achieve high levels of mission readiness.

Inspired by the demanding and critical nature of our customers’ missions, we strive to be the world’s most innovative test solutions provider with unrivaled customer support throughout a product’s life cycle—from requirements definition to lifetime sustainment.

Marvin Test Solutions also develops, qualifies, and produces airborne electronics control units and assemblies supporting AME products and systems produced by Marvin Engineering.
Remotely Piloted/Unmanned Aircraft/
Military Trainers
MQ-1 Predator, MQ-9 Reaper, MQ-1C Gray Eagle, Hawk, TA/FA-50

Products manufactured by Marvin Engineering
- Hellfire Scalable Rail Launcher (HSRL)
- 16S210 AIM-9 Launcher
- LAU-7 AIM-9 Launcher
- LAU-7/AD A-Darter Launcher
- M299 Longbow/ M272 Hellfire Launcher
- M310 Longbow/Hellfire Launcher
- M299A1 Modernized Hellfire Launcher
- MA-4 Electro-Mechanical Ejector Rack
- MAU-12 Ejector Rack
- MAU-50 Ejector Rack
- TER-9A Triple Ejector Rack
- SUU-20 Bomb and Rocket Dispenser

Products manufactured by Marvin Test Solutions
- TS-201B Longbow/Hellfire Launcher Test Set
- AN/TSM-205B Hellfire System Test Set
- MT 1888 Laser Source Simulators
- MT3045 Advanced Hellfire Missile Simulator
- MTS-206 Maverick/Hellfire Field Test Set
- MTS-916 Modular Target Simulator
- MTS-209 Common Armament Test Set
- MTS-3060 Universal O-Level Armament Test Set

Next Generation
Advanced Capability Carriage and Release

Products manufactured by Marvin Engineering
- High Performance Bomb Rack Unit
- MM299 (Modernized M299) Longbow Launcher
- Smart Triple Advanced Rack (STAR)

- Applies MEC advanced technology for carriage and release equipment
- High energy pneumatic ejector rack family with integrated MIL-STD-1760 Electronic Control Unit
- Outperforms comparable pyrotechnic racks
- High eject velocity and pitch rate
- Extreme repeatability through life cycle
- Low reaction force
- Integral high pressure gas bottle
- Multiple features safeguard operators
- Adaptable to a wide range of mission scenarios

F-35 Lightning II - Joint Strike Fighter

Products managed and manufactured by Marvin Engineering

- Alternate Advanced Rail Launcher
- Alternate Air-to-Air Pylon
- Air-to-Ground Pylon
- GBU-32 Internal Weapons Bay Adapter
- HIB Internal Weapons Bay Adapter
- LIB Internal Weapons Bay Adapter
- SDB Internal Weapons Bay Adapter
- GBU-12 Internal Weapons Bay Adapter
- Paveway IV Internal Weapons Bay Adapter
- Aerial Refueling Probe
- Aileron / Flap Spars
- Armrest
- Canopy Hinges
- Nose Landing Gear Uplock

F-35 Test Solutions designed and produced by Marvin Test Solutions

- MTS-235 F-35 AME Test Set – Production and Depot Test Set for the Launchers, Pylons and Sub-assemblies (Ready to serve at Intermediate Level)
- MTS-3060 SmartCan™ Universal Flightline Armament Test Set for Preload Testing
- MT1888 Laser Source Simulator

- Supports pre-load and function checks of legacy and smart weapons systems
- AIM-9, AIM-120, and JDAM emulation
- Over 30 measurement channels
- Full support for F-35 Alternate Mission Equipment
- Production and Depot Level testing of launchers, pylons and subassemblies
- Full parametric test with optional diagnostics
- Can be used in forward deployed, austere environments if used at the Intermediate Level

To complete the loop of the AME Ecosystem, sustainment is achieved through either permanent or mobile repair depots at the customer site or The Marvin Group Material Fulfillment Centers located in Inglewood and Irvine, California.

In-country permanent depot experience includes the complete ground-up fabrication of the M113 Depot in Thailand for the overhaul and upgrade of M113 Armored Personnel Carriers to the dieselized M113A2 configuration and both the M109 Gun and M1A1 Turret Depots in Egypt. U.S. Navy and Air Force Depots have been operational at MEC for over twenty years.

- **Forward Deployable**
- **Optimizes Mission Readiness**
- **Reduced Logistics Footprint**
- **Streamlined Repair Process**
- **Spares Provisioning**

Self-Contained Horizontal Sustainment Solution for 4th and 5th Generation Aircraft

- Supply "one-stop" repair capability for all AME used across multiple platforms and aircraft including equipment fault isolation, repair, and repair validation.
- Support multiple airbases with fewer dedicated facilities where applicable.
- Provide mobile repair capability for all AME without the need for a permanent dedicated building.
- Shorter repair turn-around times for all AME due to reduced transportation and consolidation of repair resources.
- CARD philosophy can be utilized in support of all levels of logistics for most aircraft systems.
F-16 Fighting Falcon

Products manufactured by Marvin Engineering

• 16S210 Sidewinder Missile Launcher
• TER-9/A Triple Ejector Rack
• LAU-117 Maverick Missile Launcher
• LAU-129 AMRAAM Missile Launcher
• Captive Air Training Missile - CATM-120B & CATM-120C
• LANTIRN Targeting Pod - AN/AAQ-14 Center Section
• 370-Gallon Fuel Tank Pylon
• MAU-12D/A Ejector Rack Assembly
• SUU-20 Bomb Dispenser & Launcher
• MAU-12D/A Conversion Kit
• Pylon for AMRAAM & Sparrow
• LAU-118 HARM Launcher

Products manufactured by Marvin Test Solutions

• TS-2000 F-16 SMS Test Set
• MTS-206 Maverick/Hellfire Field Test Set
• MTS-3060 SmartCan™ Universal Flightline Armament Test Set
• MTS-209 Common Armament Test Set
• MT1888 Laser Source Simulator
• MTS-916 Modular Target Simulator
• TS-217A Universal Armament Tester

MTS-209
Common Armament Test Set
- Supports multiple platforms including F-16, F-15, TA-50, FA-50 and Hawk
- Field and Intermediate Level test capabilities

MTS-206
Maverick/Hellfire System Test Set
- Supports flightline and Intermediate Level testing of AGM-65 missiles, launchers and clusters and AGM-114 missiles
- Full parametric testing with diagnostics
- Safety certified by USAF NNMSB

MTS-3060
SmartCan™ Universal Armament Test Set

MT1888
Series Laser Source Simulator

F/A-18 Hornet/Super Hornet

Products manufactured by Marvin Engineering
- LAU-7 Sidewinder Missile Launcher
- LAU-127A/A AMRAAM Missile Launcher
- BRU-328/A Ejector Rack Assembly
- Captive Air Training Missile - CATM-120B & CATM-120C
- BRU-41/A Improved Multiple Ejector Rack
- BRU-42/A Improved Triple Ejector Rack

Products manufactured by Marvin Test Solutions
- TS-217A Universal Armament Tester
- MT1888 Series Laser Source Simulator
- MTS-206 Series Maverick/Hellfire Field Test Set
- MTS-209 Common Armament Systems Test Set
- MTS-3060 SmartCan™ Universal Flightline Armament Test Set
- MTS-916 Series Modular Target Simulator


AH-64 Apache Helicopter

Products manufactured by Marvin Engineering
- M272 Hellfire Missile Launcher
- M279 Lightweight Hellfire Launcher
- M299 Longbow Missile Launcher
- M310 Longbow Launcher
- M299A1 Modernized Longbow Missile Launcher

Products manufactured by Marvin Test Solutions
- TS-200 Apache Armament Test Set
- TS-345 TADS Lasers Test Set
- TS-201B Longbow Launcher Test Set
- AN/TSM-205B Apache Flight Line Test Set
- MT1888 Laser Source Simulator
- MT3045 Advanced Hellfire Missile Simulator
- MTS-206 Maverick/Hellfire Field Test Set
- MTS-916 Modular Target Simulator

Additional In Service Aircraft Support
F-15, F-5, A-10, B-1B, P-3

Products manufactured by Marvin Engineering
- MAU-12D Bomb Rack Assembly
- BRU-12/A Bomb Rack Assembly
- BRU-14/A Bomb Rack Assembly
- BRU-15/A Bomb Rack Assembly
- BRU-56 B-1B 30" Ejector Rack
- LGTR Ejector Rack
- MA-4B Bomb Rack

Products manufactured by Marvin Test Solutions
- PATS-70 and PATS-70A A-10C Avionics/Armament Test Sets
- MT1888 Laser Source Simulator
- MTS-206 Maverick/Hellfire Field Test Set
- MTS-209 Common Armament Test Set
- MTS-3060 SmartCan™ Universal Flightline Armament Test Set
- MTS-916 Modular Target Simulator
- TS-217A Universal Armament Tester

BRU-12/A Bomb Rack
- Designed for bomb bay mounting in the P-3 aircraft
- Capable of releasing weapons/stores weighing up to 1,450 pounds
- Accommodates weapons/stores with 14-inch suspension

BRU-14/A Bomb Rack

LGTR Ejector Rack
Laser Guided Training Round Rack

B-1B Rotary Launcher
(MEC product integrated)

Additional Legacy Rotary Wing
AH-1, UH/MH/SH-60

Products manufactured by Marvin Engineering
- M272 Hellfire Missile Launcher
- M299 Longbow Missile Launcher
- M65 TOW Missile Launcher

Products manufactured by Marvin Test Solutions
- TS-200 Apache Armament Test Set
- TS-201 Longbow Launcher Test Set
- AN/TSM-205 Apache Flight Line Test Set
- MT1888 Laser Source Simulator
- MT3045 Advanced Hellfire Missile Simulator
- MTS-206 Maverick/Hellfire Field Test Set
- MTS-916 Modular Target Simulator

M65 TOW Launcher

M299 Longbow Launcher

M272 Hellfire Launcher