

ATA



34 Years of Excellence
1975 – 2009

Applied Technology Associates

Sensing Ways To Make The World Better.™

Company Overview





- **Founded 1975 A-TECH Corporation, d.b.a. Applied Technology Associates**
- **Customers Include USAF, Sandia NL, US Army, MDA, NASA, US Navy, and Aerospace and Defense Companies**
- **Approximately 175 Employees**

- **Awards and Distinctions**

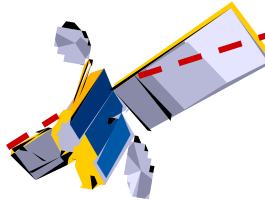
- **2008 Minority Manufacturer of the Year**
- **2004 SBA National Prime Contractor of the Year**
- **2005 NM Innovator of the Year**
- **USAF Small Business R&D Awards**
- **SBA Administrator's Award**
- **Multiple Patented Technologies**

- **Operating Sites in New Mexico**

- **ATA 1300 Britt Street, Albuquerque, NM Headquarters**
- **Kirtland AFB – AFRL and Big Crow Support Sites**
- **North Oscura Peak, WSMR AFRL Laser Test Facility**
- **Las Cruces, NM WSMR Support Site**

ATA is an Established Technology Company with a Proven Track Record.

- **ATA Applies State-of-the-Art Sensing, Measurement and Control Technologies to Ground, Air, and Space Applications**



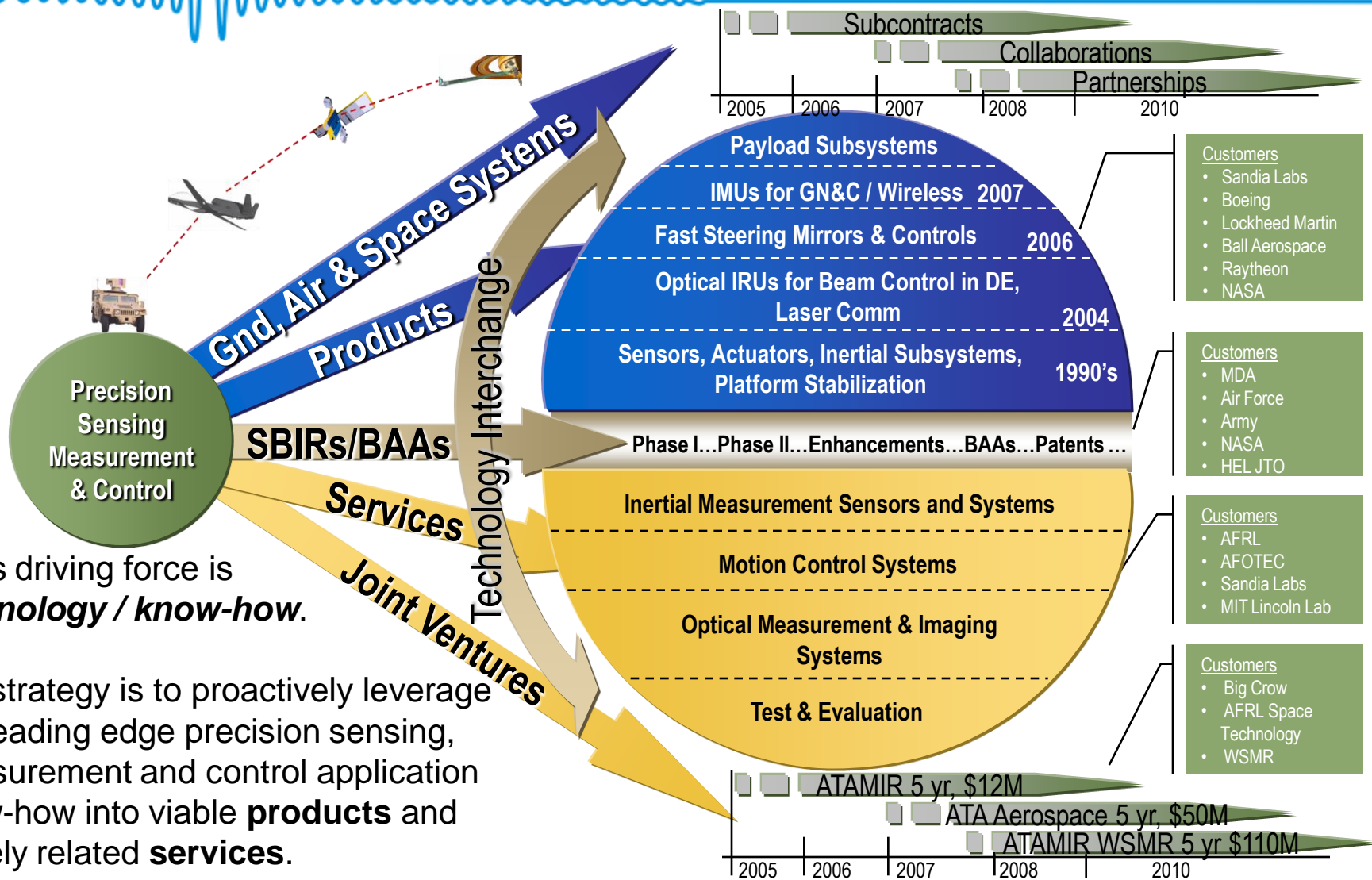
- **Optical Sensing**
- **Line-of-Sight Stabilization and Controls**
- **Inertial Measurement**
- **Laser Optics**
- **Complex Test and Analysis in the Laboratory and Field**
- **Custom Components**

- **DoD/Classified**
- **Aerospace**
- **Commercial**

- **Concept Development**
- **Modeling and Simulation**
- **Component Manufacturing**
- **Subsystems Development**
- **Integration**
- **Test/Verification**

ATA

SBIRs Have Been Used to Develop ATA

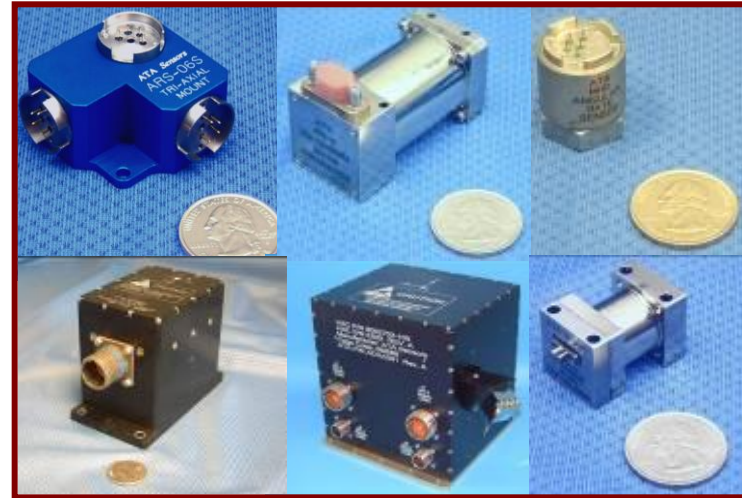


ATA's driving force is **technology / know-how.**

Our strategy is to proactively leverage our leading edge precision sensing, measurement and control application know-how into viable **products** and closely related **services.**

Features

- Scalable, High Angular Rates
- Very Low PSD Noise floors, e.g.,
 - ARS-14: 40 nanoradians 1-1000Hz+
 - ARS-15: 800 nanoradians, 1-1000Hz+
- Rugged Designs Operate to 35,000 G
- Very Low Linear and Cross-axis Sensitivity
- Tri-axial and 6-DOF Arrays
- Low Power, Very Long Operating Life
- Space Qualified and Custom Packaging Available; Custom Designs



Applications

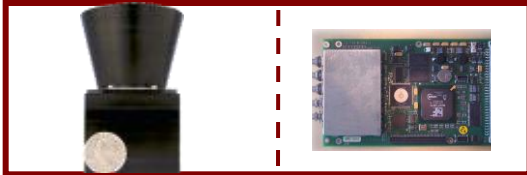
- Angular Rate Measurement
- Vibration/Jitter Measurement
- Precision Pointing and Tracking
- Inertial Reference/Inertial Measurement Units
- Satellite and Aerospace Systems Monitoring
- System Test & Evaluation

ATA's Unique Inertial Sensor Technologies Enable ATA to Design Stabilization Systems with Unparalleled Performance.

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Inertial Measurement Units (IMUs)

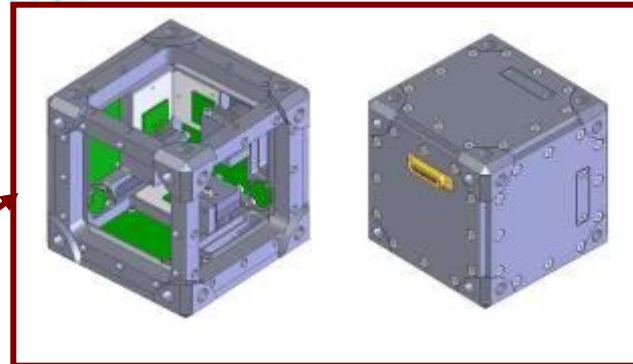
Aiding sensors



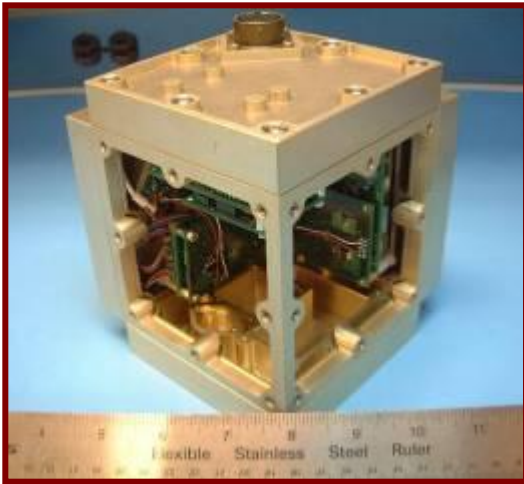
Star-Tracker

GPS-receiver

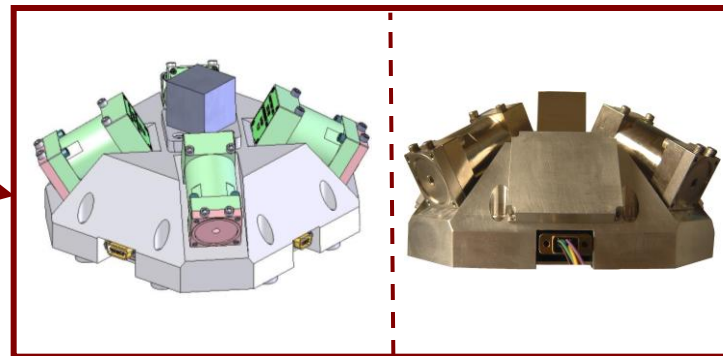
Stability Achieved Depends on the Operating Environments (e.g., Aircraft, Spacecraft, etc.)



Rad-Hard IMU (RHIMU),
NEA < 0.6 μ rad, 1-1000 Hz
300 kRad TID survivability



Auto-Correcting IMU (ACIMU),
NEA < 150 nrad, 1-1000 Hz



Strapdown Hybrid IMU, < 100 nrad, 1-1000 Hz
Strapdown Hybrid IMU (MEMS Gyro Option),
< 150 nrad, .1-1000 Hz
Both with IAK capabilities & Integrated Electronics

Production IMUs for DoD, NASA & Commercial Customers

2005

2009

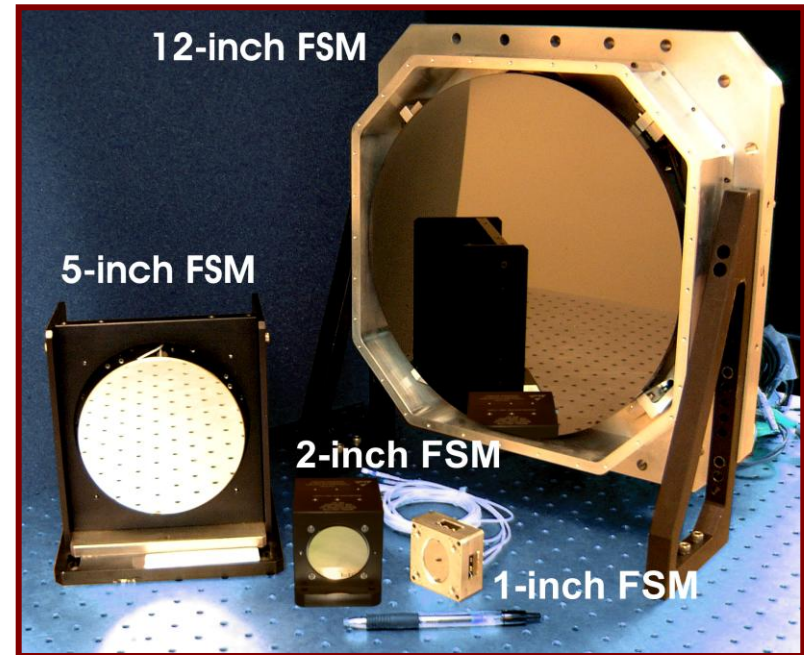
ATA is Developing a Family of IMUs for Air and Space Applications.

Features

- Stabilized Designs for Base Motion Rejection
- Reactionless Designs for Limited Torque Transfer
- Custom and Space Qualifiable Designs
- High Performance
 - 1 kHz and Higher Bandwidths
 - Microradian Class Jitter Rejection
 - Wavefront Errors to $\lambda/10$ P-V
 - Mirror Travel from mrad to Multiple Degrees
- Choice of Materials and Coatings
 - Silicon Carbide, Glass, Beryllium, Aluminum
 - Optical, IR, High-Energy Coatings

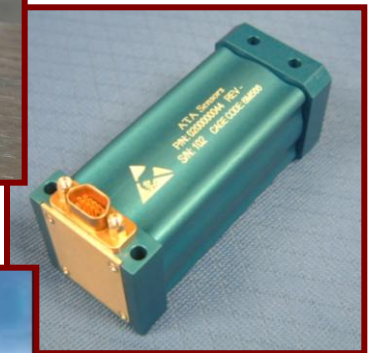
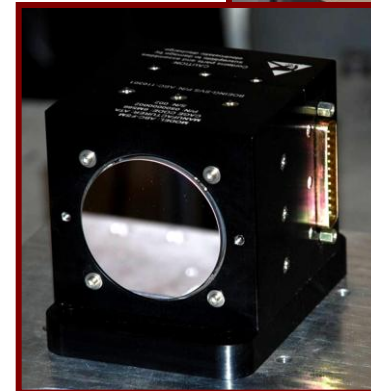
Applications

- Directed Energy Systems
 - ABL
 - ATL
 - Relay Mirror
 - HEL-TD
 - HELLADS
- Free Space Laser COMM
 - Airborne
 - Spacecraft
 - Ground based trackers
- Optical Stabilization/Vibration Mitigation/Jitter Control



- **SBIR Phase I Awards – 41**
 - **First in 1987 for Department of Transportation**
 - **Development of an Angular Accelerometer**
 - **Resulted in > \$4M in sales**
 - **Latest in 2009 for Missile Defense Agency**
 - **Space Qualified Fast Steering Mirror**
- **Phase II Awards - 15**
- **Phase II Enhancements – 2**
 - **Auto-Correcting Inertial Measurement Unit (MDA)**
 - **High Bandwidth Fast Steering Mirror (MDA)**
 - **Built and delivered 12” FSMs**
 - **Started with HEL JTO SOS-FSM**
 - **Basis for three FSM products delivered**

- **Recent Flight Hardware Deliveries**
 - 2 Large, Flight Qualified Fast Steering Mirrors
 - 2 Small Fast Steering Mirrors
 - 6 DMHD Space Flight Sensors
 - 2 ARS-14 Dynapak Space Flight Units



- **Phase I Wins**
 - **Optimum Pupil Functions**
 - Topic AF86-83
 - Contract No. F29601-88-C-0032
 - **Acquisition, Control, and Telemetry System**
 - Topic AF94-118
 - Contract No. F29601-95-C-0056
 - **MHD IRU - Laser Communications (MIRU-LC)**
 - Topic AF06-255
 - Contract No. FA9453-07-C-0038
 - **Enhanced Star Tracker (EST)**
 - Topic AF071-302
 - Contract No. FA9453-07-M-0125
- **Suggested Topics**
 - **Lightweight Beam Director for Airborne HEL Applications**
 - **Stabilized FSM for Tactical HEL Applications**
 - **Sub-microradian Stabilized Imaging Subsystem**
 - **Zero Drift, Compact Inertial Reference Unit**

- **ATA has an Outstanding History of Successful Technology and Systems Development for Government and Industry**
- **Advanced Technology On Schedule, On Budget, Meeting Spec**
- **Expertise in Precision Sensing, Measurement & Controls**
 - **Optics, Lasers and Directed Energy Subsystems**
 - **Multispectral Imaging, High Speed Image Stabilization and Processing**
 - **Optical IRUs for Optical System Stabilization and Tracking**
 - **Inertial Sensors, Custom Actuators, and IMUs**
 - **Fast Steering Mirrors 1 inch to 12 inch, 1 to 2 kHz**
 - **Test and Evaluation, Characterization; Space Qualification**
 - **Platform Stabilization, Pointing and Tracking**
 - **LaserCom Stabilization, Tracking, Acquisition**
- **ATA Develops and Manufactures High Performance Systems for DOD Agencies and Aerospace Contractors**

ATA Offers Key Technology and Expertise in Precision Sensing, Measurement & Controls.