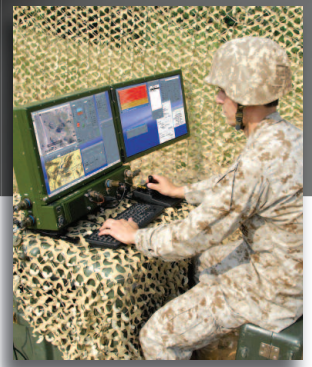# WHEN THE MISSION CHANGES– WE ADAPT

## AAI's scalable, field-proven ground control station technologies

For decades, AAI has been known as a one-stop unmanned aircraft systems provider — everything from systems to training to services. One of these areas of expertise is unmanned command and control. The proven One System® concept developed by AAI is synonymous with interoperability and reliability. Today, AAI has expanded its offering to deliver a comprehensive range of ground control stations that meet the mark — scalability, interoperability and commonality — for any unmanned system concept of operations.

**AAI®**

# IT'S ALL ABOUT OPTIONS



*AAI's Shadow® Tactical Unmanned Aircraft System*

AAI's ground control stations are designed to offer the same reliable performance and benefits in a range of configurations to accommodate any application.

Key to our approach are three primary design focuses: commonality, interoperability and scalability. These features enable AAI ground control stations to be successfully configured and deployed by all of the U.S. armed forces for various unmanned aircraft, ground vehicles and surface vessels.

### Commonality
AAI designs its ground control stations using a common architecture, including both hardware and software. In addition, warfighters benefit from the stations' identical interfaces and crew stations. Embracing all of these common elements enables AAI to deliver its ground control stations to customers as efficiently as possible, and minimizes both required training and logistics.

### Interoperability
All of AAI's ground control stations can provide simultaneous command and control for multiple, diverse unmanned aircraft, ground vehicles, surface vessels and data links.





## Universal Ground Control Station

The name says it all — our Universal Ground Control Station can control multiple unmanned systems simultaneously, and also is capable of weapons control.

AAI's Universal Ground Control Station incorporates an all-digital Tactical Common Data Link for increased bandwidth and data security. With features for joint services interoperability, operational flexibility and scalability, the Universal Ground Control Station also delivers an enhanced user experience. The system incorporates simple, Web-based interfaces and improved human machine interface software, as well as easier-to-read displays, climate control over an extended temperature range and more ergonomic crew stations.

## ER/MP Ground Control Station

The U.S. Army's Extended Range/Multi-Purpose (ER/MP) Unmanned Aircraft System, also known as Gray Eagle, uses an AAI ground control station with multiple redundant and uniform crew stations, including a position for a weapons officer.

AAI's Extended Range/Multi-Purpose Ground Control Station, a variant of the proven One System Ground Control Station, is protected in a climate-controlled S-280 Army shelter and mounted on a standard five-ton medium tactical vehicle. Its state-of-the-art operator consoles can be used for aircraft command and control, payload control and weapons launch.

*Gray Eagle Unmanned Aircraft System*


*Hunter Unmanned Aircraft System*


*AAI's Common Unmanned Surface Vessel*


*AAI's Aerosonde® Small Unmanned Aircraft System*

Our stations are designed in accordance with NATO standardization agreement 4586 Class A, B and C requirements. In addition, they hold the CTSF certification for Army interoperability and JITC certification for joint services interoperability.

### Scalability

AAI's net-centric ground control station designs enable the technology to be applied effectively in a vast array of configurations.

We offer single-position ground control stations for easy desktop or dismounted theater deployment. AAI's two- and three-station units are in use by the U.S. Army in its S-788 and S-280 shelters. The same technology can be multiplied easily for other semi-fixed sites, including tents and trailers, and for fixed sites such as buildings.

Our robust and highly adaptive command and control architecture can be deployed easily to land, sea and air applications with the same easy-to-use operator interfaces and displays that are the hallmark of our technology.







## One System Ground Control Station

The One System Ground Control Station is the command and control technology for AAI's Shadow Tactical Unmanned Aircraft Systems, which are used by the Army and Marine Corps and have made up half of the one million flight hours that Army unmanned aircraft had amassed by May 2010.

Receiving and disseminating battlefield video through its aircraft operator and mission payload operator terminals, as well as mission planning consoles, the One System Ground Control Station is based on commercial, off-the-shelf components and features a modular design with redundant hardware, a UNIX-based operating system and mature software.

## Portable Ground Control Station

AAI's Portable Ground Control Station provides all of the functionality of the original One System Ground Control Station, ruggedized for stand-alone use in austere environments.

The One System Portable Ground Control Station enables remote launch and recovery operations, freeing the main ground control station to conduct operations at tactical operations centers or forward operating bases.

## Expeditionary Ground Control Station

AAI's Expeditionary Ground Control Station delivers robust command and control capabilities in a small, modular configuration. It includes ruggedized workstations for the aircraft and payload operators, as well as a remote interface box and miniature ground data terminal.

Man-portable, net-centric, and built upon a scalable, open architecture, AAI's Expeditionary Ground Control Station allows multiple unmanned platforms, either like or different models, to be flown simultaneously. In addition, it provides on-the-move and beyond-line-of-sight command and control capabilities for mission flexibility.

# FORWARD-LOOKING TECHNOLOGIES FROM AN INDUSTRY PIONEER

AAI fielded its first unmanned aircraft system in the 1980s, and the company has since grown and matured its technologies alongside customers including the U.S. Army, Navy and Marine Corps. As their missions continue to expand and evolve, so have our command and control technologies — for world-class capabilities today, and a commanding vision for tomorrow.

Our Universal Ground Control Station is built upon a flexible crew station architecture that can be configured and housed according to mission requirements. Common hardware, software and interfaces create a seamless working environment and minimized logistics and training, no matter the physical configuration or locale of the station. AAI's Universal Ground Control Station also meets or exceeds established interoperability profiles, including NATO standardization agreement 4586, for customer confidence that system investments will remain robust and multi-platform capable for years to come.

We also have a pioneering vision for next-generation unmanned command and control. The crew station of the future must be scalable, open and interoperable. We are continuously developing and incorporating new features and capabilities in areas including service-oriented architecture, or SOA, multi-service commonality and multi-platform adaptability.

AAI has the experience and insights to deliver next-generation command and control capabilities for today's and tomorrow's requirements.
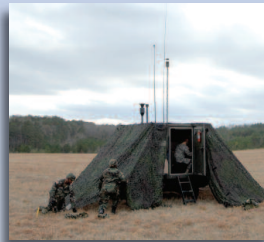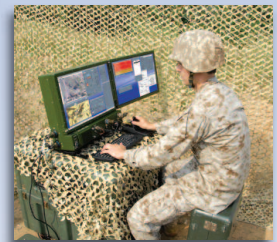
## Pick your platform

*CONEX*

*Shelters*

*Tents*

*Trailers*

*Buildings*

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