

# Rugged and Secure Connections for the Landforces

Ashbury International Group and Fischer Connectors: Partners in Innovation

**At one time surveillance meant knowing the enemy's location, number of troops, and artillery, but this has all changed with emergence of terrorism. Today's, soldiers are conducting "persistent surveillance," which is essential to defeating today's unconventional enemies. Based on watching enemies 24x7, decisions must be made and communicated to the striking force within seconds or opportunities are lost. In an increasing number of cases, Unmanned Aerial Vehicles (UAVs) are used for persistent surveillance.**

This type of life-saving, intelligent technology is made possible by a variety of companies including Fisher Connectors. This Swiss-based company provides highly reliable connectors for UAVs and other types of military equipment like the surveillance and weapon systems created by Ashbury International. Together these two innovative partners are providing soldiers with military surveillance equipment and weapon systems that stand apart from the competition.

#### Pioneering Surveillance for the Soldiers' Safety

Founded in 1995, Ashbury International Group is committed to providing state-of-the-art technical and equipment support for the US army and allied nations. As a prime contractor for the Department of Defense for laser range finders, combat equipment integration, night vision devices and other electro-optic (E/O) devices, Ashbury works diligently and proactively to deliver innovative products and services for emergency

preparedness, security, government, defense and SOF communities. Ashbury's multi-disciplined organization provides equipment engineering and design, rapid product development, small arms manufacturing, operational training, systems integration, emergency preparedness

systems and technical security services to its broad customer base.

A prime example of Ashbury's innovative products is the integration of the Vectronix VECTOR 21 for military ground target location applications. This includes the



US Marines using Ashbury's VECTOR 21/CLRF and VECTOR/DAGER with remote firing switch.

▶ VECTOR 21 binocular laser range finder, which digitally communicates with military PPS-GPS navigation sets and a wide range of battlefield computing devices to precisely locate distant targets. The VECTOR 21 is an enhanced version of the VIPER binocular laser range finder, which saw significant use by coalition forces in Operation Enduring Freedom (Afghanistan) and most recently by Special Operations Forces, U.S. Marines and the U.S. Army during Operation Iraqi Freedom.

"There are now some 12,000 VECTOR based systems on the battlefield used by Ashbury's military and government customers. The majority of these devices have Fischer's Core Series right-angled connector (WSO). This connector is very robust, weather, moisture and salt fog resistant," said Gary Vance, Manager, Engineering Services for Ashbury International Group. "It's the best connector made out there. Our customer feedback and test evaluation units help us design a better product with optimum vibration resistance that is sealed to withstand the elements. Fischer connectors are conveniently designed, compact and lightweight. The product is so easily mated that soldiers can connect and disconnect them blindfolded. Currently, we are using a Fischer WSO 12 pin connector that provides the ruggedness our product demands."

Always in pursuit of the soldiers' safety, Ashbury created the STORM, which allows a sniper to engage targets at extended ranges while staying behind the rifle with no spotter needed. And, its latest product the SABER®FORSST® rifle chassis transforms traditional sniper rifles by making them shorter, lighter, and easy to carry in a soldier's rucksack so as not to be evident to the enemy. This is a major factor when it comes to observation and surveillance and it requires companies partnering to improve soldier's safety.

**Partners in Innovation**

In order to ensure that the SABER® rifle chassis system was as light in weight as possible, highly modular, yet extremely durable, the engineers at Ashbury International Group selected Fischer Connectors for its on-board battery power configuration. "We have used Fischer connectors for our integrated laser range finder-GPS systems, illumination and in our field recharging systems," stated Vance. "We are familiar with the ruggedness and durability of their products, and their reputation for reliability among world military forces."

"Throughout the course of designing and creating systems for the Future Soldier Programs, Fischer Connectors has been a key innovation partner. So much of the equipment we work with must be integrated with a variety of battlefield platforms, either with or without



*Fischer Core Series  
Wide range of body styles and sizes.*

an observation system. Our battery technology sub-systems help us increase situational awareness for our soldiers who are counting on critical satellite to sensor connections to engage hostile threats," continues Vance.

"Our latest development is to integrate a battery power module into the SABER® chassis forend. This will provide "on-board" power for electro-optical devices in an effort to reduce weight and prolong operational use of electro-optics. We would only trust the reliability of a Fischer connector to provide a ruggedized waterproof connection between the sensor battery module and the supporting solar charging system."

"Additionally, combat in the Middle East, such as Afghanistan and Iraq, has presented some extreme conditions. Materials must be carefully chosen to be corrosion resistant. Our products must be strong, vibration resistance, sealed, lightweight, easy to disconnect and connect, and able to withstand the rigors of an over-packed 80 pound plus rucksack common among today's warfighters. Making our equipment rugged enough is our goal and working with partners whose product can stand up to our demands is essential. Our materials cannot fail, because we cannot fail our soldiers," explained Vance.

"This is true of the connectors we select for our products," affirmed Vance. "Our criteria include connector shielding materials that defy corrosion and that are easy to connect and rugged. Our products must survive jumps from planes, exits out of submarines and rolls down hills. Our evaluation program for connectors involves test groups with subject matter experts and the evaluation program normally takes three to six months by these third parties."

"As a supplier to all branches of the military and security forces throughout the world, our products are customized for each mission and each branch," stated Vance. "For example, when designing for the

Navy, we always consider the effects of corrosion, but when designing for military jumps from aircraft there are different factors to consider. In all cases, we look for mission critical equipment, like the Fischer UltiMate™ Military Connectors Line. Our evaluation of the LandForces™ Series, first product available within this line, is that it will provide everything that our products really need – light in weight, miniature in size, rugged and sealed – everything we like. Plus, the emergency connect and disconnect feature is very appealing. You don't want soldiers to get hung up in the field with too many cables that can't be quickly disconnected."

The Fischer LandForce™ Series has a secure push-pull system, and the new body style is very compact and rugged. Thanks to its new one-piece plug body design with high performing epoxy potting, Fischer has achieved a new industry benchmark. Fischer LandForce™ Series is Nuclear, Biological, Chemical, Radiological (NBCR) ready, with IP68/69K sealing level even unmated and tested according to IEC norm 60529. It is immune to even the toughest elements including fog, salt spray, sand, and moisture. Its long lifetime usage is guaranteed for 10,000 mating cycles and easy cleaning on the field is possible. It's available with Fischer complete and easy cable assembly solutions in both straight and right angle overmolding.



*Fischer LandForce™ Series.  
Compact, rugged, lightweight.*

"Frankly," asserted Vance, "The way in which Fischer Connectors' new UltiMate™ Military Connector Line is designed and manufactured, with its light weight, compactness and ruggedness, makes it ideal for a multitude of military and civil security applications."

Visit us at Eurosatory June 14<sup>th</sup> – 18<sup>th</sup>, 2010 – Hall 6, booth F331 ■