

# Soldier Portable Control Solutions

Ultra Electronics Measurement Systems Inc. (MSI) has brought its expertise in Human Machine Interface (HMI) and Human Factors Engineering to hand-held controls for the dismounted soldier. By placing highly concentrated functionality in compact, lightweight form factors in the hands of the dismounted soldier, MSI contributes to both force protection and soldier lethality through the integration of enhanced situational awareness and improved operator effectiveness.



## MSI offers three form factors with a variety of customizable functionality:

- **The FMCU™ Freedom of Movement Control Unit** - a readily available and fully ruggedized game-style controller with an available modular LCD
- **The Compact Soldier Control Unit** - network capability at the brigade level in a single handed controller providing voice and text communications
- **The Tactical Edge Controller** - the most advanced portable control system in development integrating HMI and touchscreen technologies with mission level datacom capability

With a constant focus on reducing size, weight and power as well as an innovative approach to reducing operator cognitive load through the design of intuitive controls, MSI's portable controls lighten the soldier's load both physically and cognitively. MSI also supports all industry interfaces, including USB, and will integrate with any platform operating system or system architecture.

Selecting the right control solution for the application is critical. MSI's FMCU is readily available and currently deployed on platforms including Firescout, A160 Hummingbird, Gladiator, GBOSS and Homeland Security Perimeter Protection. Our Soldier Control Unit and Tactical Edge Controller are available for custom development and prototype.

		FMCU	FMCU with LCD	Soldier Control Unit	Tactical Edge Controller
Standard Product Features	Weight	1.5 lbs	≥ 3 lbs	8 oz	≥ 3 lbs
	Integrated HMI	✓	✓	✓	✓
	Cursor control	✓	✓	✓	✓
	Trigger control	✓	✓	✓	✓
	LCD		✓		✓ (touch)
	QWERTY keypad			✓	✓ (soft)
	Text capability			✓	✓
	Integrated communications			✓	✓
	Integrated operating system				✓
	Integrated radio				✓
	Wireless			✓	✓
	Li ion battery			✓	✓
	Radio interface ready			✓	✓
	Open architecture compatible				✓
	GPS			✓	✓
	App ready				✓
Application Areas	Mobile network capable			✓	✓
	Weapon control	✓	✓	✓	✓
	Payload control	✓	✓	✓	✓
	Unmanned systems control	✓	✓	✓	✓
	Real time video/NLOS operation		✓		✓
	Local communications			✓	✓
	Multi-purpose C2				✓
C3ISR			✓	✓	



## The FMCU™

The FMCU is a fully ruggedized game-style controller that leverages the form factor most familiar to today's warfighter providing a very intuitive control solution. Highly concentrated functionality with patented trigger control makes the FMCU ideal for the control of complex systems including unmanned systems and weapons/payloads.

With an available modular LCD, the FMCU can move from a mounted application to a dismounted application without losing situational awareness.



## The Compact Soldier Control Unit

Linking soldiers together in theater is a critical mission necessity to increase situational awareness with real time connectivity and communications within the brigade. With a core focus on reduction of Size, Weight and Power, MSI developed this wearable controller that is ideal as a soldier network interface. Key features include push-to-talk interface, a micro miniature displacement joystick for cursor control, medic call, QWERTY keypad and night vision capability. The unit is fully sealed and ruggedized for operation in the harshest environments.



## The Distributed Command Tactical Edge Controller

The Tactical Edge Controller integrates a fully ruggedized, sunlight readable touch screen interface with MSI's traditional HMI, including trigger controls. With the larger form factor comes the capability to integrate an operating system, Li-ion battery, secure wireless communications, real-time video links and many other mission critical features that can be supported within the three pound, compact unit.

Current capability enables one-to-one control of multiple unmanned systems, remote weapon stations or perimeter protection systems with the ability to support any open architecture in support of commonality and joint operations. With fully networked operations, the Tactical Edge Controller not only becomes the warfighter's interface to mission situational awareness, but also maintains his control of mission critical systems regardless of his location or battlefield conditions.

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