

# MC-10

## MISSION COMPUTER

The Rugged Micro Mission Computer (MC-10) is a hardened stand-alone system that delivers powerful performance in a light-weight and miniature footprint. At less than 81in<sup>3</sup> (6.7" x 4" x 3" including connectors) and 2lbs, this micro package is today's solution for the mobile environment. Low power consumption, configuration flexibility, and cost efficiency make it an ideal solution for demanding applications in the military, industrial and commercial markets. Utilizing reliable Intel CPUs, the MC-10 has a robust I/O including digital video, (2) Gigabit Ethernet, (4) USB 2.0, (2) RS-232/RS-485, HD Audio, and GPIO. Designed with modularity in mind, the MC-10 can be customized with application specific expansion capabilities such as 1553, ARINC 429, CAN-Bus, GPS, additional comm or GPIO ports, and video frame grabbers. The MIL-Spec design ensures operability in environmental conditions as defined per MIL-Standards 461, 704, 810, 1275, and DO-160.



### STANDARD FEATURES

- (2) Gigabit Ethernet Interface
- 128GB Removable mSATA Drive
- *Optional 256GB, 512GB or 1TB Removable mSATA Drive*
- I/O Expansion Slots
- Display Port/ HDMI Video Output
- (4) USB 2.0 Ports, (2) RS-232/RS-485 Ports
- Analog Audio Input and Output
- IP67/NEMA 6 Enclosure / Fully Sealed Enclosure
- -40°C to +71°C Operating Temperature
- Windows 10/ Linux Support
- MIL-Standards 461, 810, 704, 1275, and DO-160



### PROCESSOR\* FEATURES

- Intel® Atom™ Quad Core
- 1.91GHz
- 2MB Cache
- 4GB RAM (8GB available)
- 8GB EMMC Onboard Flash
- Real Time Clock

\* Additional Processor features available upon request.

### EXPANSION SLOT OPTIONS

- |                       |                        |
|-----------------------|------------------------|
| ■ ARINC429            | ■ GPS                  |
| ■ CANBus              | ■ HD-SDI Frame Grabber |
| ■ Dual Redundant 1553 | ■ RS170 Frame Grabber  |
| ■ Gigabit Ethernet    | ■ RS-232/485           |
| ■ GPIO                | ■ USB 2.0              |



<b>PROCESSOR*</b>
Intel® Atom™ 1.91GHz, 2MB Cache, 4GB RAM (8GB available), 8GB eMMC Flash
<b>FEATURES</b>
HD Graphics Gen 8
Windows®, Windows® Embedded or Linux OS

EXPANSION SLOT OPTIONS	
ARINC429	GPS
CANBus	HD-SDI Frame Grabber
Dual Redundant 1553	RS170 Frame Grabber
Gigabit Ethernet	RS-232/485
GPIO	USB 2.0

Technical Specifications			
<b>System I/O</b>	(2) Gigabit Ethernet; (4) USB 2.0 Ports; (2) RS-232/RS-485 Ports; Analog Audio Input and Output; Display Port, HDMI or DVI-D		
<b>Storage</b>	128GB Removable mSATA Hard Drive; <i>Optional 256GB, 512GB or 1TB</i>		
<b>Housing</b>	Milled AL, Black Hard Anodized		
<b>Mount Option</b>	M4 Mount Options		
<b>Wide Range DC Power Input†</b>	28 VDC (18-33 VDC) (per MIL-STD-704, 1275)		
<b>Power Conditioning</b>	Protected against Internal Short Circuit, Load Dump, Over Voltage and Reverse Polarity		
Environmental Specifications			
<b>IP Rating</b>	IP67 (NEMA 6 Submersible)		
<b>Operating Temperature</b>	-40°C to 71°C (-40°F to 160°F)		
<b>Storage Temperature</b>	-54°C to 71°C (-65°F to 160°F)		
<b>Humidity</b>	0-100%		
<b>Altitude</b>	45,000 ft.		
Military Specifications (Tests are pending)			
<b>MIL-STD-461</b>	EMI	<b>MIL-STD-810</b>	Method 510; Blowing Sand and Dust
<b>MIL-STD-704</b>	Aircraft Power Requirements	<b>MIL-STD-810</b>	Method 511; Explosive Atmosphere
<b>MIL-STD-1275</b>	Vehicle Power Requirements	<b>MIL-STD-810</b>	Method 513; Acceleration
<b>MIL-STD-810</b>	Method 500; Altitude	<b>MIL-STD-810</b>	Method 514; Procedure I, II, V, VI; General Vibration
<b>MIL-STD-810</b>	Method 501; I & II; High Temperature	<b>MIL-STD-810</b>	Method 516; Procedure I, Functional Shock
<b>MIL-STD-810</b>	Method 502; I & II; Low Temperature	<b>MIL-STD-810</b>	Method 520; Temp, Humidity, Vibe and Altitude
<b>MIL-STD-810</b>	Method 503; Temperature Shock	<b>MIL-PRF-22750</b>	Optional Painted Finish - Min. Qty Required
<b>MIL-STD-810</b>	Method 506; Rain	<b>MIL-STD-1472</b>	Thermal Contact Hazard
<b>MIL-STD-810</b>	Method 507; Humidity	<b>MIL-A-8625</b>	Standard Finish, Type III (Class 1 & 2)
<b>MIL-STD-810</b>	Method 508; Fungus	<b>DO-160</b>	Section 17 Voltage Spike; Section 22 Lightning Transient; Section 25, Electrostatic Discharge
<b>MIL-STD-810</b>	Method 509; Salt/Fog		

\* - Additional Processor selections and features are available upon request.

† - The power range specified covers momentary environmental fluctuations generally found in a mobile environment while display is operating. For power initialization and continual operation, nominal voltages are required.

ON-GOING PRODUCT DEVELOPMENT MAY NECESSITATE DESIGN AND SPECIFICATION CHANGES WITHOUT NOTICE.