The XMCF01 is a rugged flash solution for integrating storage requirements into a single board computing system. An integrated flash module design implemented on a single XMC card, the XMCF01 provides high performance and high density storage capacity to any host card with an XMC site.

Using Single-Level Cell (SLC) Flash Technology modules, the XMCF01 offers up to 256 GB of storage capability, and its performance reaches up to 180 MB/Sec for sequential read and 114 MB/Sec for sequential write.

To achieve maximum benefit for the military and aerospace market, the XMCF01 is also equipped with security features such as 128-bit AES Encryption, military purge algorithms and hardware write protection capability.

Additionally, the reliability of the XMCF01 is further improved with features such as wear-leveling, which ensures erasures and re-writes are distributed evenly across the medium, and bad block management, which prevents accidental erasure of a device’s bad block status.

Designed specifically for harsh environments, the XMCF01 is ideal for Mil/Aero applications where high reliability and survivability are a must. Available in five air- and conduction-cooled ruggedization levels, the XMCF01 offers a full-featured, high performance and high reliability storage add-on solution to a single board computing system.

COTS software support includes OS support for Wind River’s VxWorks, Windows and Open Linux.
XMCF01 Add-on Solid State Memory Mezzanine Card

Specifications

XMC Interface
• x1 PCIe

Disk Interface
• Serial ATA II (SATA 3 Gbit/s)

Technology
• SLC Solid State Flash modules

Capacity
• Up to 256 GB

Performance
• 114 MB/s write @ 128 kb blocks with encryption
• 180 MB/s read @ 128 kb blocks with encryption
• Access time: 0.3 ms

Security
• 8 Military Purge Algorithms (NSA/CSS 9-12 default)
• AES-128 bit encryption
• Hardware-enabled write protection

Power Consumption
• Less than 4W read/write with encryption

Operating Temperature
• -40°C to +85°C

Software
• COTS software support for WindRiver’s VxWorks, Windows and Open Linux
• Built-in Test firmware

Ordering Information

XMCF01 – ABCDE

<table>
<thead>
<tr>
<th>A</th>
<th>Build Level 1-5</th>
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</thead>
<tbody>
<tr>
<td>BCD</td>
<td>Capacity in Gigabyte</td>
</tr>
<tr>
<td></td>
<td>064 = 64 GB</td>
</tr>
<tr>
<td></td>
<td>256 = 256 GB</td>
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<tr>
<td>E</td>
<td>Flash Technology</td>
</tr>
<tr>
<td></td>
<td>S = Single-level Cells (SLC)</td>
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Environmental

<table>
<thead>
<tr>
<th></th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Level 5</th>
</tr>
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<tbody>
<tr>
<td>Cooling Method</td>
<td>Convection</td>
<td>Convection</td>
<td>Convection</td>
<td>Conduction</td>
<td>Conduction</td>
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<tr>
<td>Conformal Coating</td>
<td>Optional</td>
<td>Standard</td>
<td>Standard</td>
<td>Standard</td>
<td>Standard</td>
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<tr>
<td>High/Low Temp</td>
<td>0 to +55°C</td>
<td>-20 to +65°C</td>
<td>-40 to +75°C</td>
<td>-40 to +75°C</td>
<td>-40 to +85°C</td>
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<tr>
<td>Operational</td>
<td>(300 ft/m)</td>
<td>(300 ft/m)</td>
<td>(600 ft/m)</td>
<td>At cold wall</td>
<td>At cold wall</td>
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<tr>
<td>Random Vibration</td>
<td>0.002g²/Hz*</td>
<td>0.002g²/Hz*</td>
<td>0.04g²/Hz**</td>
<td>0.1g²/Hz**</td>
<td>0.1g²/Hz**</td>
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<tr>
<td>Shock</td>
<td>20g***</td>
<td>20g***</td>
<td>20g***</td>
<td>40g***</td>
<td>40g***</td>
</tr>
</tbody>
</table>

* With a flat response to 1000 Hz, 6 dB/Oct roll-off from 1000 to 2000 Hz
** From 10 to 1000 Hz
*** Peak sawtooth 11 ms duration

About GE Intelligent Platforms
GE Intelligent Platforms, a General Electric Company (NYSE: GE), is an experienced high-performance technology company and a global provider of hardware, software, services, and expertise in automation and embedded computing. We offer a unique foundation of agile, advanced and ultra-reliable technology that provides customers a sustainable advantage in the industries they serve, including energy, water, consumer packaged goods, government and defense, and telecommunications. GE Intelligent Platforms is a worldwide company headquartered in Charlottesville, VA and is part of GE Home and Business Solutions. For more information, visit defense.ge-ip.com.

GE Intelligent Platforms Contact Information
Americas: 1 800 433 2682 or 1 434 978 5100
Global regional phone numbers are listed by location on our web site at defense.ge-ip.com/contact.

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