**Field tested, fail-safe and long-life performance in extreme conditions.** Feature-rich Crystal Group embedded computer systems are powerful, compact, and rugged. Designed to deliver high power with ultra-quiet computing capabilities in a small footprint, the RE3101 is ideal for running geospatial mapping and airborne applications.

Easily configurable to meet specific customer needs, the embedded product line boasts advanced thermal management and a carbon fiber chassis field-tested to withstand shock and vibration, extended temperature ranges, harsh elements, and harsh environments. Our embedded computer systems follow the Intel® road map to ensure access to the latest, most powerful Intel chipsets and processors.

**Innovative solutions.** Crystal Group's portfolio of rugged and industrial computing products are engineered and tested to withstand challenging environments, meet or exceed military and industrial standards, and provide the latest COTS technologies to best manage cost, availability, scalability, and flexibility.

**Dependable services.** When a computing application requires a custom solution, we deliver with vertically integrated services, including product design and development, testing, systems engineering and integration, mechanical and electrical engineering, configuration management, and product life-cycle planning.

**Dedicated support.** Our expert staff and global network provide fast and effective product support when and where it is needed. Count on Crystal Group for prompt response times, quick turnarounds, 5+ year warranties, and quality service around the clock and around the globe.

## FEATURES

- Lightweight construction – 4.8 lbs. (2.2 kg)
- Flight deck mounted
- Quiet operation and optimal thermal performance
- MIL-CIRC I/O
- One mini PCIe expansion port
- Replaceable CMOS battery
- Front-mounted indicator lights
- Less than 13" (33 cm) deep for compact environments
- One removable SATA SSD

*A clear advantage.*

## Specifications

### Mechanical (Rack or Panel Mount)

| |
|---|
| Height: 2.4" (6.1 cm) |
| Width: 5.7" (14.5 cm) with mounting |
| Depth: 12.6" (32.0 cm) excluding connectors, ground stud, or drive carrier protrusions |
| Weight: 4.8 lbs. (2.2 kg) |

### Storage

| |
|---|
| One removable 2.5'' SATA drive |

### Mounting

| |
|---|
| Dzus rail mounted |

### Power Supply

| |
|---|
| 18-36VDC (90W) with MIL-STD-461 filter, MIL-STD-704 |

### Cooling

| |
|---|
| Modulated speed, high-volume, long-life thermostatically controlled fans use a no-air-over-component design |

### Software Compatibility

| |
|---|
| Windows 10®, Windows 11®, Redhat® 7 or 8, Linux |

### System Board

| |
|---|
| Com Express Type 6-i71185G7E, 16GB DDR4, TPM |

### Environmental Standards

| |
|---|
| MIL-STD-810, Operational Temperature:  0°C to +55°C, with solid state drives[1] |
| MIL-STD-810, Storage, Method 501, Procedure I/II:  -55°C to +85°C[1] |
| MIL-STD-810, Humidity, Method 507, Procedure II:  240 hours with humidity kit[1] |
| MIL-STD-810, Altitude, Method 500:  10,000ft operation |
| MIL-STD-810, Vibration, Method 514, Procedure I:  7.18GRMS x- and y-axis, 4.63GRMS z-axis, 5-2000Hz, 60 min/axis[1] |
| MIL-STD-810, Shock, Method 516, Procedures I/V:  20g, 11msec functional shock; 40g, 11msec crash hazard shock[1] |

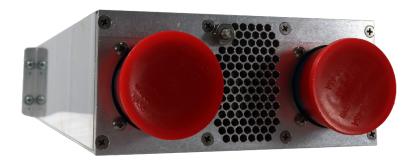### Electromagnetic Compatibility Standards

| |
|---|
| MIL-STD-461<br>• CE102 (conducted emissions)<br>• CS101 (conducted susceptibility)<br>• CS114 (conducted susceptibility)<br>• CS115 (conducted susceptibility)<br>• CS116 (conducted susceptibility)<br>• RE102 (radiated emissions)<br>• RE103 (radiated susceptibility) |
| Tested with solid state drives |

### Mil-Circ I/O

| |
|---|
| 1x VGA, 6x USB 2.0, 2x 1G Ethernet, 2x RS-232 Serial, 1553 A/B, 8x GPIO, Audio I/O, Composite Video |

## Other compute modules available

Contact us to determine the best motherboard solution for the RE3101 to achieve your airborne computing objectives.

1 - Designed to meet standard

AS9100D CERTIFIED ISO 9001