Designed for ISR ingestion of camera data in a long-range, medium-altitude drone, the RS304FM is ideally suited for high-performance computing that requires networking, data manipulation, and fast storage. This 3U rugged server with 12 removable SATA drives offers multiple hardware RAID options for data storage capacity and versatile redundancy. Equipped with four 10GbE ports, the system provides low latency video capture and processing. An integrated elapsed-time indicator monitors logistics and operational needs while a patented DIMM retention method ensures reliable performance in unstable air and landing regimes. Optional TPM and DAR features create high-side security options in the event of unexpected interruptions in flight. The RS304FM uses military circular connections for power and data, and includes a 50 ms power holdup capability required for airborne platform performance.

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

Dependable services. When a compute application requires a custom solution, Crystal Group delivers 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

- Rugged 3U, rack-mounted 20" depth
- Lightweight aluminum construction – 35-38 lbs.
- Easily mounted on Delrin glides, fixed mount, or Jonathan® rails
- Up to 1 TB of DDR4 memory

- Intel® Xeon® Scalable processors
- Up to 12 removable 2.5" SATA, SAS, or NVMe drive carriers
- Expandable with up to seven PCIe expansion slots
- Modular MIL-CIRC panels

A clear advantage.

Specifications

Mechanical 3U

Height: 5.25" (13.34 cm)
Width: 17.5" (44.45 cm) EIA-310 rack compliant
Depth: 20" (50.8 cm)
Weight: 35-40 lbs. (15.87-18.14 kg); content dependent

CPU

Intel® CPU architecture options from Intel embedded long-life roadmap
Intel® Xeon® Scalable processors
Up to 28 core options per socket (dependent on motherboard)

Expansion

Up to seven full-height slots; combination is configuration dependent
Two front MIL-CIRC
One front MIL-CIRC power
Expandable rear MIL-CIRC, three modular panels

External Bay

Option 1: Up to 12 removable SATA SSD or HDD (7mm thickness)
Option 2: Replaces two drive bays: One CD/DVD/BD (R/W)

Memory

32GB-1TB DDR4

Mounting

Option 1: Mounted on Delrin glides
Option 2: Fixed mount, front and rear
Option 3: Jonathan rails

Environmental Standards

MIL-STD-810, Operational Temperature, Method 501, Procedure I/II: -40°C to +55°C[2]
MIL-STD-810, Storage, Method 501, Procedure I/II: -55°C to +85°C[2]
MIL-STD-810, Humidity, Method 507, Procedure II: 240 hours (with optional humidity kit)[1]
MIL-STD-810, Altitude, Method 500: 12,500ft operation, 40,000ft transport[2]
MIL-STD-810, Vibration, Method 514, Procedure I: 4.63 GRMS, 5-2,000Hz, 60 min/axis with solid state drives + vibration kits[2]
MIL-STD-810, Shock, Method 516.6, 40g, 11ms, operational[2]
MIL-S-901, Grade A: With solid state drives + shock kits[2]
MIL-S-901, Grade B[2]

Electromagnetic Compatibility Standards

Some standards may require an internal kit
AC, FCC Compliant[2]
AC, MIL-STD-461, RE102, CE102 compliant[2]
DC, MIL-STD-461, RE102, CE102 compliant[1]

Cooling

Reverse airflow

Power Supply

505W 18-36VDC; AC and higher power option available

System Board

X11DPI-NT

Software Compatibility

Supports Windows 10®, Windows Server®, VMware®, or Linux®

1 - Test report available
2 - Testing in progress

Also known as RS374FM; all servers are individually configured.

AS9100D CERTIFIED
ISO 9001