# **Crystal Group ES373S17 Rugged Substation Server**



## Smarter with Intel<sup>®</sup>. Stronger with Crystal Group.

Energy is essential to modern day living and homeland security, which is why power companies are undergoing a major transformation to protect energy resources now and for years to come. The Crystal Group Energy Series<sup>™</sup> (ES) delivers optimized solutions—powered by Intel—to ensure long-lasting, high-performance computing in unpredictable conditions.

The ES373S17 substation solution delivers reliable power and performance in a rugged chassis that can withstand the intense conditions of remote locations, such as extreme climates, weather conditions, temperatures, moisture, and dust. Enabling critical power grid capabilities like constant monitoring, real-time alerts, automation, and remote management allows power generation, transmission and distribution to flow smoothly while being protected from both physical and cyber threats.

## **Solution Benefits**

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**Proven performance.** Our designs incorporate exceptional thermal protection that is crucial for seamless compute operation in the most remote and unpredictable environments. In addition, all Crystal Group products are field-tested and proven to meet strict military and industrial standards.

**Flexible, reliable and protected.** With exceptional processing power in a flexible, scalable system, the ES373S17 is easily integrated, upgraded, and interoperable with legacy equipment. Real-time remote management means system updates and adjustments can be made as needed to one or more substations with the push of a button.

**Customized for you.** We use leading-edge commercial-off-the-shelf technologies and open architecture solutions to deliver high-performance systems tailored to your specific compute needs.

**Cost effective.** Designed to protect your investment, this rugged server delivers reliable, long-life performance, limits maintenance demands, and maximizes system uptime for a low total cost of ownership.

#### FEATURES

- Lightweight aluminum construction, 35 40 lbs.
- 17" server easily mounted using Delrin glides
- Up to 768 GB of memory
- Supports up to 9 SSDs
- Intel<sup>®</sup> Cascade Lake CPU support
- Expandable with seven slots
- Modular I/O
- Five-year warranty

A clear advantage.



## **Specifications**

#### Mechanical 3U

Height: 5.25" (13.34 cm)

Width: 17.5" (44.45 cm) EIA-310 rack compliant Depth: 17" (43.2 cm)

Weight: 35-40 lbs. (15.87-18.14 kg) [content dependent]

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#### CPU

Intel® CPU architecture options from Intel embedded long-life roadmap Single or dual socket Cascade Lake, Intel Xeon® Scalable processor; up to 28 cores

#### Expansion

Seven PCI-e

## External Bay

Up to nine 2.5" SATA or six NVMe SSDs

#### Memory

16 - 768 GB ECC DDR4

#### Mounting

Mounted on Delrin glides

#### **Environmental Standards**

Operational temperature: -40°C to +55°C

Storage temperature: -40°C to +85°C<sup>1</sup>

Humidity: 95% non-condensing with humidity kit<sup>1</sup> Altitude: 12,500ft operation, 40,000ft transport<sup>1</sup>

## **Electromagnetic Compatibility Standards**

Emissions: Radiated FCC Part 15. 109, Class A; conducted FCC Part 15. 107, Class A<sup>1</sup>

IEC 61850-3: International Standard Communication Networks and Systems for Power Utility Automation (covers environment and EMC concerns)<sup>1</sup>

IEEE 1613: Standard Environmental and Testing Requirements for Communications Networking Devices in Electric Power Substations<sup>1</sup>

## Cooling

Six high-speed, high-volume fans; CPU temperature controlled

## Customization

Customization of all components and integration services are available

## Software Compatability

Accepts Windows 10<sup>®</sup>, Windows Server 2019<sup>®</sup>, VMware<sup>®</sup>, or Linux<sup>®</sup>

## **Power Supply**

Option 1: 400W, 88-132VDC Option 2: 460W, 110/220VAC





#### 1 - Designed to meet standard

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