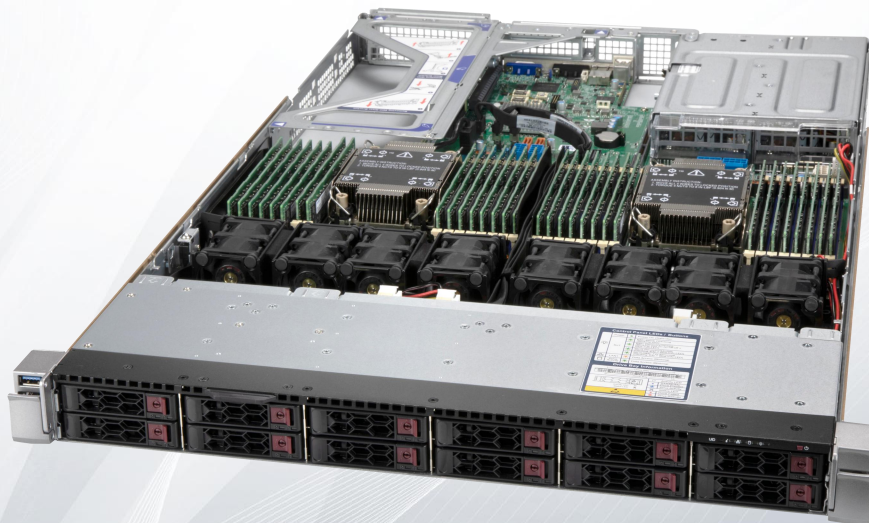**FS**

RS6140-V2 RACK SERVER

HIGH CONFIGURATION AND WIDE RANGE OF APPLICATIONGS

The server can be easily reconfigured for multiple Enterprise and Data Center applications in Virtualization, Big Data, Analytics and Cloud Computing.

Overview

RS6140-V2 rack server is a slim 1U dual-socket server designed for virtualization, high-performance computing, and cloud computing. With support for Intel's Xeon Scalable processors from the 3rd generation line of processors, the high-end server supports up to 8TB of memory. On the front of the system there are 12x 2.5" drive bays with support for NVMe, SATA, and SAS storage devices.

Benefits

• Dual Socket P+ (LGA-4189) 3rd Gen Intel®

Xeon® Scalable Processors

• Intel® C621A Chipset

• 32 DIMM Slots, Up to 8TB DRAM

• Flexible networking options

• 12x2.5" hot-swap hybrid NVMe/SATA/SAS drive

bays

• 8 heavy duty fans with optimal fan speed

control

Product Characteristics

Performance

The FS rack server RS6140-V2 provides the highest performance and flexibility for enterprise applications and supports the latest 3rd Gen Intel Xeon Scalable processors. The dual CPUs support up to 40 cores and 80 threads with a thermal design point (TDP) of 270W. Each processor also supports 8x memory channels with 16x memory module slots for a total of 32x DIMMs. In addition to high-performance computing applications, this platform is also a great choice for software defined storage and 5G/Telco applications.

Memory

16x memory module slots are assigned to each processor for a total of 32x DIMMs. The memory slots support up to 8TB of ECC DDR4 registered (RDIMM), load-reduced (LRDIMM), non-volatile (NVDIMM), and 3DS RDIMM/3DS LRDIMM memory modules. Memory speeds can reach up to 3200MHz. Intel Optane PMem 200 series memory modules can also be installed, which will support up to 12TB when mixed with DDR4 memory

Storage

The system comes with 12x tool-less 2.5-inch hot-swap storage drives with a hybrid backplane on the front of the chassis. These drive carriers simplify installation and removal, but also help promote proper airflow. The RS6140-V2 server supports SATA by default, but can be optimized to deliver the highest performance and flexibility with optional NVMe and SAS. However, additional parts are required to support SAS and NVMe storage devices.

Expansion

This system includes riser cards that allow for expansion cards. All four PCIe slots on the FS rack server RS6140-V2 platform are Gen 4.0 x16. Two are full-height while one is a low-profile slot. In addition, a pre-installed riser card that provides LAN ports also offers another internal low-profile card slot for a SAS HD controller. Eight 8-pin power connectors located on the motherboard supply power to onboard devices. Four are used for GPUs, while the other four are used for backplane devices.

Management

Management of the system is through the Intelligent Platform Management Interface (IPMI), which can help to manage the system both at-chassis and remotely. FS offers several different management tools available for all models in the rack servers. Management programs include Redfish API, IPMI 2.0, Watch Dog, Intel Node Manager, etc. IPMI2.0 monitors the chassis' health information like CPU temperature, system power consumption, and fan speed. Most recently, FS also supports API Redfish, which is a different variation of the Intelligent Platform Management Interface (IPMI), but without the hassle. Redfish allows users to program maintenance tasks and simple configurations that have been too complex and time-consuming in the past.
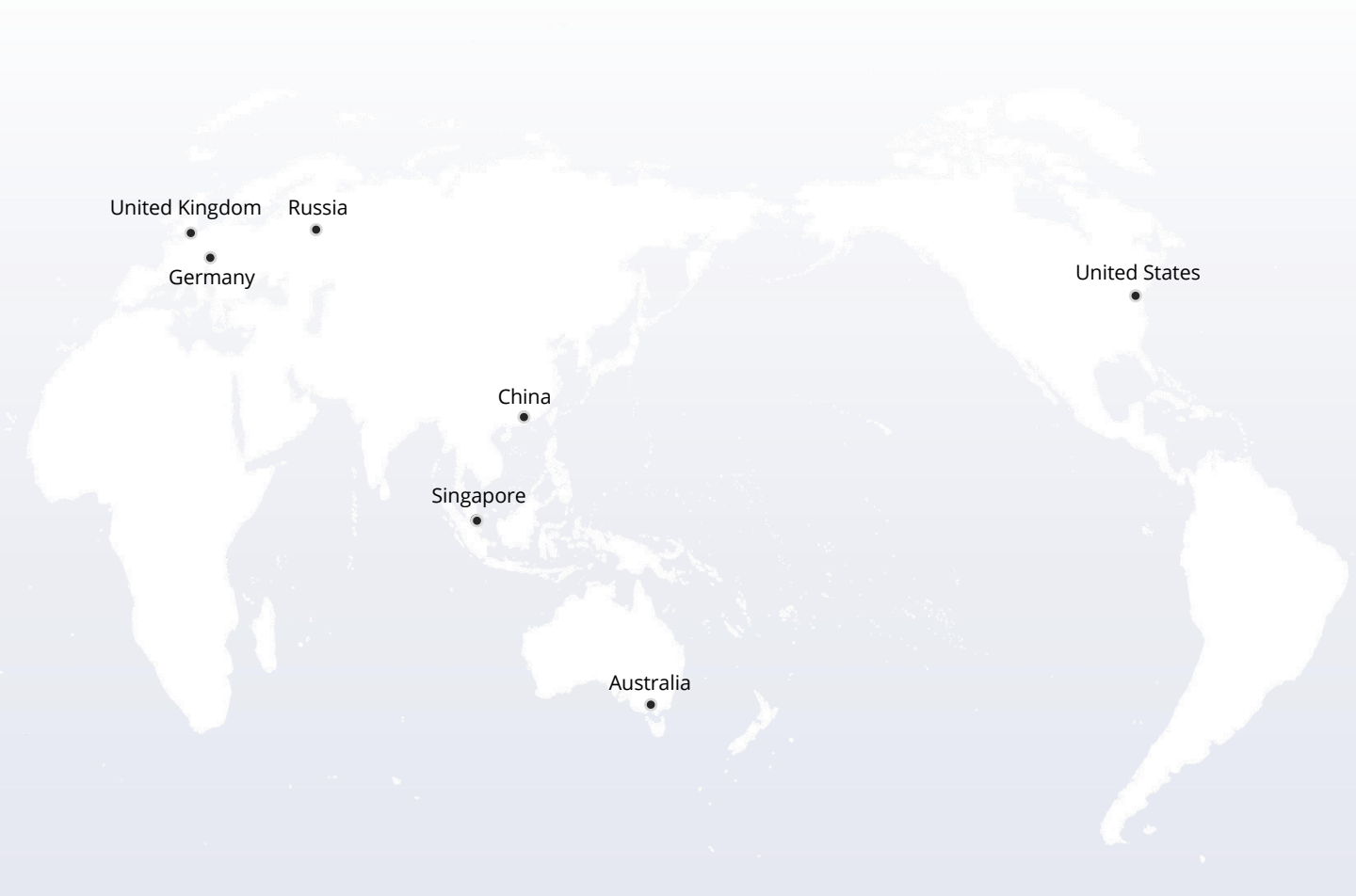
Product Parameters

Processor	
CPU	Dual Socket P+ (LGA-4189) 3rd Gen Intel® Xeon® Scalable processors Support CPU TDP 270W *
Cores	Up to 40C/80T; Up to 60MB Cache
Note	*Certain CPUs with high TDP may be supported only under specific conditions. Please contact FS Technical Support for additional information about specialized system optimization

System Memory	
Memory	Memory Capacity: 32 DIMM slots Up to 8TB: 32x 256 GB DRAM Up to 12TB: 16x 512 GB PMem and 16x 256 GB DRAM Memory Type: 3200/2933/2666MHz ECC DDR4 RDIMM; LRDIMM Intel® Optane™ persistent memory 200 series
Memory Voltage	1.2V
Error Detection	ECC

On-Board Devices	
SATA	SATA3 (6Gbps) via Intel® PCH 621A; RAID 0/1/5/6/10/50/60 support
NVMe	NVMe (16GT/s); RAID 0/1/5/6/10/50/60 support
Chipset	Intel® C621A
Network Connectivity	2x10GbE BaseT with Intel® X710-AT2 (optional) OR 2x10GbE BaseT and 2x10GbE SFP+ with Intel® X710-TM4 (optional) No NIC option supported
IPMI	Support for Intelligent Platform Management Interface v.2.0 IPMI 2.0 with virtual media over LAN and KVM-over-LAN support

Input / Output	
LAN	1 RJ45 Dedicated BMC LAN port
USB	3 USB 3.0 port(s) (1 front; 2 rear)
Video	1 VGA port(s)
Serial Port	1 COM Port(s) (1 rear)

Management	
Software	Redfish API IPMI 2.0 Intel® Node Manager KVM with dedicated LAN NMI Watch Dog

FS

Product Parameters

Management	
Power Configurations	ACPI Power Management Power-on mode for AC power recovery

PC Health Monitoring	
CPU	7 +1 Phase-switching voltage regulator Monitors for CPU Cores, Chipset Voltages, Memory
FAN	Fans with tachometer monitoring Pulse Width Modulated (PWM) fan connectors Status monitor for speed control
Temperature	Monitoring for CPU and chassis environment Thermal Control for fan connectors

System BIOS	
BIOS Type	AMI 32MB SPI Flash EEPROM

Dimensions and Weight	
Height	1.7" (43mm)
Width	17.2" (437mm)
Depth	29.1" (739mm)
Package	7.99" (H) x 23.81" (W) x 37.4" (D)
Weight	Net Weight: 26.5 lbs (12.2 kg) Gross Weight: 41 lbs (18.6 kg)
Available Color	Black Front & Silver Body

Chassis	
Form Factor	1U Rackmount

Front Panel	
Buttons	Power On/Off UID button
LEDs	HDD activity LAN1 activity Power status System information (overheat/UID)

Expansion Slots	
PCI-Express (PCI-E)	Slot 1: PCI-E 4.0 x16 Internal LP Slot 2: PCI-E 4.0 x16 LP Slot 3: PCI-E 4.0 x16 FH, 10.5"L Slot 4: PCI-E 4.0 x16 FH, 10.5"L

Product Parameters

Drive Bays / Storage	
Hot-swap	12x 2.5" hot-swap NVMe/SATA/SAS drive bays (12x 2.5" NVMe hybrid) (SAS/NVMe support requires additional parts.)

System Cooling	
Fans	8x 4cm heavy duty fans with optimal fan speed control
Air Shroud	2 Air Shroud(s)

Power Supply	
Dimension(W x H x L)	73.5 x 40 x 203 mm
AC Input	800W: 100-127Vac / 50-60Hz 1200W: 200-240Vac / 50-60Hz 1200W: 200-240Vdc (For CCC Only)
+12V	Max: 66.7A / Min: 0A (100Vac-127Vac) Max: 100A / Min: 0A (200Vac-240Vac) Max: 100A / Min: 0A (200Vdc-240Vdc) (For CCC Only)
12V SB	Max: 2.1A / Min: 0A
Output Type	AC-Input

Operating Environment	
Environmental Spec.	Operating Temperature: 10℃ ~ 35℃ (50°F ~ 95°F) Non-operating Temperature: -40℃ ~ 60℃ (-40°F ~ 140°F) Operating Relative Humidity: 8% to 90% (non-condensing) Non-operating Relative Humidity: 5% to 95% (non-condensing)

Warranty	
Warranty	3 years labor, 3 years parts

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United Kingdom
Russia
Germany
United States
China
Singapore
Australia

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