

HRW TEMPEST Compute Node

Half Rack Width TEMPEST Compute Node

Sub U Systems has been designing and producing custom rugged small form factor, low power, high performance IP router, Ethernet switch, and compute products for over a decade. The design and production of the Half Rack Width (HRW) TEMPEST Compute Node embodies our engineering expertise and yields a first of its kind TEMPEST server appliance. Within the TEMPEST Compute Node's Half Rack Width form factor (1.7" tall by 8.4" wide by 13" deep) machined aluminum enclosure the TEMPEST Compute Node offers Intel® Xeon D-2100 series enterprise



grade processors. Both Xeon D 2100 IT and NT variants are available with up to 16 cores/32 threads, up to 512GB of RAM, up to 8 TB of high speed NVME storage, and 32TB of SSD SATAIII storage. The TEMPEST Compute Node offers 2 SFP+ 10G and 1 SFP gigabit IPMI network interfaces. There are also VGA, USB and serial interfaces available within the single high density front mounted connector. The TEMPEST Compute Node offers an innovative removable toolless SSD drive cartridge that allows for its 4 2.5" SSD drives to be removed all at once within seconds.



The HRW TEMPEST Compute Node was designed from the PCB up, packaged within an EMI robust enclosure, and with a filtered and isolated power system, designed to meet TEMPEST Level 1 requirements. Its Half Rack Width form factor supports applications that call for very high-density compute, based on being able to place two HRW appliances side by side in a standard IT rack, but also allowing for truly portable high-density compute for use cases that require TEMPEST compliant solutions. In a standard 3RU space, the use of 6 HRW TEMPEST compute nodes yield 6 Xeon D 2100 processors with 96 cores and 192 threads, over 3TB of RAM, 192Tb of SSD storage in 6 easy to remove SSD cartridges, and 48 TB of high speed NVME storage, while only needing 13" of depth, making them able to be used in portable applications.

Applications

- ◀ Airborne, Maritime, Land/Mobile signal and data processing applications
- ◀ OCONUS TS network server compute resources
- ◀ OCONUS TS workstation compute resources

Features

- ◀ Isolated and filtered power
- ◀ Robust cooling built in, 0 to 55c operational
- ◀ Removable toolless 2.5" SSD/HD drive cartridge

Specifications

- ◀ Intel Xeon D2100 server processors (both IT and NT SKUs available)
- ◀ 2 10G SFP+ interfaces
- ◀ 1 Gigabit SFP IPMI interface
- ◀ VGA/USB/Console interfaces on single management connector



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Removable Storage

HRW Tempest Compute Nodes offer a removable disk drive cartridge that holds up to four 2.5" spindle or SSD drives. The cartridge feature allows a user to remove all drives in a single module quickly and easily without tools, simplifying the transportation of compute modules used on classified networks, as all non-volatile memory is removed.

Processor	Cores	Threads	Max RAM	CPU Power Usage	NVMe
XEON D-2177NT	14	28	512GB	105 Watts	Yes

Applications/Benefits

- ◀ Signal and image data processing and storage
- ◀ Virtual Desktop Infrastructure (VDI) solutions
- ◀ Modular Mobile Solutions
- ◀ Rapid, scalable, enterprise IT deployment
- ◀ Supports tactical use cases

Specifications

- ◀ D-2100 series - 8.3 x 1.6 x 12 inches (WxHxD)
- ◀ Operating Temperature: 0°C ~ +60°C
- ◀ Wide Range Dirty DC Input: 9 ~ 36 VDC
- ◀ Weight: 4.2 lbs.

Other Half Rack Width Appliances and Related Products

Software Definable Network-Appliances™

- ◀ HRW SDN-A™ BaNks
- ◀ HRW SDN-A™ Xeon® D-2100NT w/Intel QAT
- ◀ HRW SDN-A™ C3000 w/Intel QAT
- ◀ HRW SDN-A™ MICRO

Compute Nodes

- ◀ HRW Intel® Xeon® D-1500 (8c/16t, 12c/24t, and 16core/32thread variants)
- ◀ HRW Intel® Xeon® D-2100IT (8c/16t, 12c/24t, and 16core/32thread variants)
- ◀ HRW Intel® Xeon® D-2100IT TEMPEST Level 1

Ethernet Switches

- ◀ HRW Cisco ESS3300 - (26) RJ45 1G ports, (2) 10G, (10) 802.3at PoE ports
- ◀ HRW Netgear M4300 - 8 10G RJ45 & 8 10G SFP+
- ◀ HRW Netgear M4300 - 12 10G RJ45 & 12 10G SFP+
- ◀ HRW Netgear M4300 - 24 10G RJ4



TFO-MINI VIP Case

Miscellaneous

- ◀ HRW Haivision Kraken Video Transcoder
- ◀ HRW AC input - (8) 150watt 24VDC output PSU
- ◀ HRW AJ Power Source AC & DC input - 400 watt PSU with scalabe UPS battery (8 output)
- ◀ HRW JPS Interoperability RoIP appliance (8 input w/radio control)

