

NEXT GENERATION HIGH PERFORMANCE  
COMPUTING PLATFORM / MODULAR /  
FLEXIBLE / PCIe ENABLED



# Tracewell T-C6400/4U

**BASED ON:** The Dell EMC PowerEdge C Series portfolio. Designed to deliver high performance computing and a modular design to support hyperscale workloads with maximum density, scalability and efficiency.

**USE CASE:** Ideal for customers that require a compute dense, flexible platform to support enterprise class applications and workloads at the edge in space constrained, forward deployed and tactical environments.

## Benefits

### DELL TECHNOLOGIES

Modular server (Intel® or AMD®) maximizes performance, density, scalability and efficiency for scale out environments. Features intuitive system management with intelligent automation and a powerful cyber resilient architecture.

### TRACEWELL PLATFORMS

Features all of the benefits of the standard Dell PowerEdge C Series in a shorter depth form factor – the Tracewell product is only 24" deep, compared to 31" deep for a standard Dell product – with the flexibility to add additional storage and PCIe capability.

### DELL+ TRACEWELL

Electrically identical to standard Dell products. "Plug and Play components between Dell EMC products and Tracewell platforms. Order through Dell (Dell part number) and eligible for Dell warranty, service, support and secure supply chain.



**SYSTEM:**  
24"D x 19" W x 6.95"H

### FORM FACTOR HIGHLIGHTS

Representing the next generation of high-performance computing making it the ideal platform for compute dense, hyper-scale workloads at the edge.

Modular architecture makes it possible to configure a compute dense system or add high-capacity storage or GPU options into a powerful, flexible edge platform. Platform available with Intel® or AMD® processors.

### MAXIMUM CONFIGURATION

Processors: 512 cores  
Memory: 8TB  
Storage: Up to 24 SAS/SATA drives (NVMe also available)  
PCIe slots: (featuring the Tracewell Expanded PCIe nodes): 2 full-height, full-length, double-wide PCIe (with up to 300W each)

# The Tracewell T-C6400/4U Specifications Summary

The Tracewell T-C6400 / 4U accepts standard Dell hardware configurations.

## STANDARD DELL EMC PRODUCT CONFIGURATIONS

<b>PROCESSOR TYPE</b>	<b>Dell EMC PowerEdge C6520:</b> 3rd Generation Intel® Xeon® Scalable processors with up to 40 cores (up to 2 processors). <b>Dell EMC PowerEdge C6525:</b> 2nd and 3rd Generation AMD® EPYC™ processor SP3, up to 64 cores (up to 2 processors). <b>Dell EMC PowerEdge C6420:</b> 2nd Generation Intel® Xeon® Scalable processor, up to 28 cores (up to 2 processors).
<b>MEMORY ARCHITECTURE</b>	<b>Dell EMC PowerEdge C6520 / C6525:</b> 16 DIMM slots, up to 3200 MT/s, 1TB RDIMM, 2TB LRDIMM Max, DDR4. <b>Dell EMC PowerEdge C6420:</b> 16 DIMM slots, up to 2933 MT/s, 1TB RDIMM, 2TB LRDIMM Max, DDR4. <b>Dell EMC PowerEdge C6520 / C6525:</b> 16 DIMM slots, up to 3200 MT/s, 1TB RDIMM, 2TB LRDIMM Max, DDR4.
<b>STORAGE</b>	<b>SAS/SATA BP:</b> Up to 24 SAS/SATA drives (up to 6 SAS/SATA drives per node). <b>Hybrid SAS/SATA/NVMe BP:</b> Up to 24 drives (up to 2 NVMe and 4 SAS/SATA drives or 6 SAS/SATA per node). <b>All NVMe BP:</b> Up to 24 NVMe only drives (up to 6 NVMe drives per node; C6520 only).
<b>RAID CONTROLLER</b>	<b>C6525 / C6520:</b> HW RAID PERC H745, H345, HBA345 and SW RAID S150. Chipset SATA / SW. <b>C6520:</b> HW RAID PERC H750, HBA355i, H350. <b>C6420:</b> HW RAID PERC H330, H730P, HBA330 and SW RAID S140. RAID: 0, 1, 5, 6, 10, 50, 60. <b>C6525 / C6520 / C6420:</b> Internal BOSS. HW RAID 1 option with 2 x M.2 SSDs.
<b>VIDEO</b>	Mini Display Port. Supports Ultra High Definition (HD) 4K x 2K video resolutions, up to 4096 x 2160 @ 60Hz, including 1080p. Matrox G200 graphics controller with 16 MB of video frame buffer.
<b>PCIe SLOTS</b>	<b>Standard Nodes:</b> Dell EMC PowerEdge C6520 / C6525: Supports up to 2 Low-Profile PCIe x16 Gen4 and 1 OCP 3.0 PCIe x16 Gen4 (per node). <b>Dell EMC PowerEdge C6420:</b> Supports 1 Low-Profile PCIe x16 Gen3, 1x PCIe x16 Gen3 OCP 2.0 Mezzanine (per node). <b>Expanded PCIe Nodes:</b> Dell EMC PowerEdge C6520 / C6525 (only): Supports up to 2 full-height, full-length, double-wide PCIe x16 Gen4 (up to 300W each) and 1 OCP 3.0 PCIe x16 Gen4 (per node).
<b>SYSTEM MANAGEMENT</b>	Per node. Integrated Dell Remote Access Controller (iDRAC9) with Dell Lifecycle Controller. One RJ45 iDRAC9 dedicated port, and one Micro USB 2.0-compliant-port for iDRAC direct.
<b>FRONT AND REAR ACCESSIBLE I/O</b>	<b>Rear:</b> One nine-pin USB 3.0 port (2x per C6420) to connect USB devices. One iDRAC or NIC port to remotely access iDRAC. One mini display port to connect a display device. One iDRAC Direct micro-USB port to enable connection to a portable device or sled. Power On Buttons, one for each node. <b>Front:</b> Power On indicators, system indicators for each node; left control panel node 1 and 2, right control panel node 3 and 4.
<b>POWER SUPPLY</b>	Two power supplies supported. Available in 2600W (C6520 only), 2400W, 2000W or 1600W (C6420 / C6520 only). High-line operation with redundancy up to 2400W or 2600W. Low-line operation without redundancy up to 4800W or 2800W. Input voltage: 90-264 VAC. Maximum inrush current: 25 A (35A; 2600W and 2400W).
<b>COOLING</b>	Six high-performance fans.
<b>ENVIRONMENTAL</b>	<b>Normal operating temp:</b> 10°C to 35°C (50°F to 95°F). <b>Expanded operating temp:</b> 5°C to 40°C (41°F to 104°F) with some restrictions. <b>Storage temp:</b> -40°C to 65°C (-40°F to 149°F).

# The Tracewell T-C6400/4U Specifications Summary

The Tracewell T-C6400 / 4U accepts standard Dell hardware configurations.

## TRACEWELL SYSTEMS PRODUCT CONFIGURATIONS

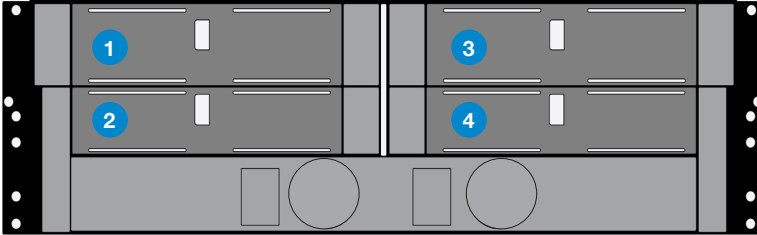
---

<b>CHASSIS / CONSTRUCTION</b>	Bonded aluminum low-mass chassis for rigidity with minimum weight.
<b>CHASSIS OPTIONS</b>	<p><b>Option 1:</b> 4-Bay chassis supports up to 4 standard nodes.</p> <p><b>Option 2:</b> 3-Bay chassis supports up to 2 standard nodes and 1 Expanded PCIe node.</p> <p><b>Option 3:</b> 2-Bay chassis supports up to 2 Expanded PCIe nodes.</p> <p>Note: Expanded PCIe nodes include an additional PCIe expansion bay and are 2U height. Chassis bays are customer reconfigurable, using field upgrade kits.</p>
<b>DIMENSIONS</b>	24"D x 19"W x 6.95"H (4U)
<b>INSTALLATION &amp; OPTIONS</b>	Standard 19" rack mount use with two rack slide options. Optional Tactical Transit case integration available.

---

For more information, see the Tracewell T-C6400 / 4U Data Sheet.

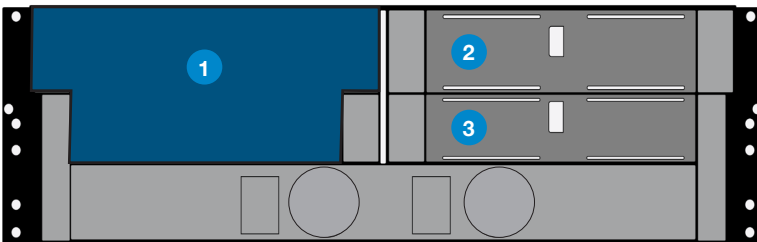
# The Tracewell T-C6400/4U Configuration Options



## OPTION 1 / 4 BAY

Supports up to 4 standard Dell EMC C-series nodes

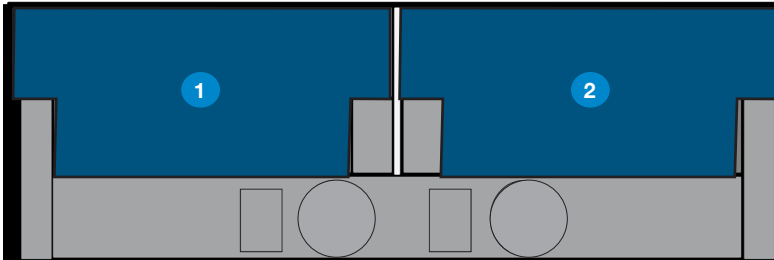
- 1 . Compute Node
- 2 . Compute Node
- 3 . Compute Node
- 4 . Compute Node



## OPTION 2 / 3 BAY

Supports up to 2 standard Dell EMC C-series nodes and 1 expansion PCIe node (with accompanying Dell EMC C-series node).

- 1 . Expanded PCIe module and compute node
- 2 . Compute Node
- 3 . Compute Node



## OPTION 3 / 2 BAY

Supports 2 expanded PCIe nodes (with accompanying Dell EMC C-series nodes).

- 1 . Expanded PCIe module and compute node
- 2 . Expanded PCIe module and compute node

## ABOUT TRACEWELL SYSTEMS

For more than 40 years Tracewell has enabled the nation's largest military and commercial organizations to deliver powerful and reliable computing solutions in environments where size, weight, power and other constraints present challenges that cannot be met by standard computing systems. Tracewell Systems have been recognized by the top names in the defense and technology sectors for their commitment to Trusted Innovation – a process where the company solves previously impossible, sensitive, mission-critical platform challenges through customer solution design, engineering and manufacturing, all under one roof. More information: [www.tracewell.com](http://www.tracewell.com).

©2022 Tracewell Systems, Inc.

Tracewell Systems, Inc. reserves the right to make changes without notice. All brand or product names may be trademarks or registered trademarks of their respective holders.

September 2022 | Version 1.0 Tracewell T-C6400/3U At A Glance