



Tracewell T-FX2e

A high-performance, hyper-converged platform engineered to deliver the benefits of software-defined infrastructure.

Businesses, OEMs and government agencies are under pressure to adapt to a new era in computing as traditional IT infrastructures give way to the next generation of hyper-converged computing. With its integrated design – featuring servers, networking and storage in one flexible, easy-to-manage system – Dell’s PowerEdge FX has been hailed by Forrester Research as “a bold new computing architecture” based on its ability to deliver a powerful, flexible, cost-effective hyper-converged computing platform.

The Tracewell Systems T-FX2e is part of a family of products that extend the capabilities of the Dell EMC architecture. The T-FX2e adds significant storage capacity to the Dell EMC FX platform making it possible to deploy hyper-converged computing “beyond the back office” where standard computing systems were not engineered to operate – places with significant space constraints or unique computing challenges, such as in the air, at sea or on the ground, in a variety of fixed and mobile installations.

The hallmark of the T-FX2e is the ability to add an additional 8 drives per Dell EMC PowerEdge FC630 (half-width) server block – offering greater storage density for hyper-converged solutions than traditional rack-and-stack systems.

Engineered from the ground up in partnership with Dell EMC, the T-FX2e is electrically identical to and fully compatible with Dell’s FX architecture and can easily integrate the latest compute, networking and storage technologies as they become available. The T-FX2 family of products features a long-term product roadmap based on Dell EMC’s best-of-breed technology portfolio, and the platforms can easily be adapted or customized to meet a variety of field program requirements.

T-FX2e AT-A-GLANCE

Engineered for users that need greater storage capacity to support their hyper-converged applications or the ability to deliver hyper-converged platforms for “beyond the back office” computing needs.

Adds an additional 8 drives per Dell EMC FC630 (half-width) server – offering storage density on par or greater than traditional rack and stack systems. 4U.

Fully configured system supports a maximum capacity up to 176 processor cores (352 hyper thread), 154TB of raw storage, hybrid SSD/HDD for maximum performance at a lower cost, over 6TB of DDR4 RAM and redundant L2/L3 internal 10GbE switch modules.

Short-depth form factor (23.7 inches from front to rear) optimized for “beyond the back office” and space-constrained environments.

Based on and fully compatible with the Dell EMC FX architecture – featuring identical compute, networking and storage nodes.

Can easily be adapted to meet specific field mission and program requirements.

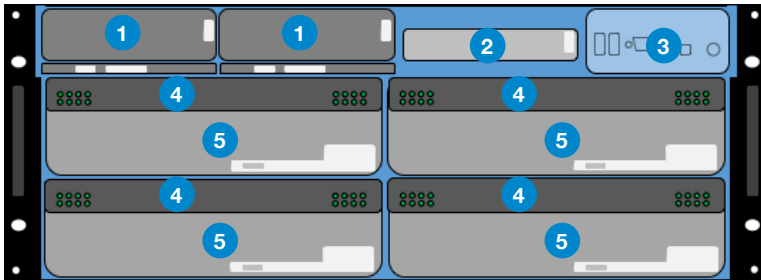
Complies with secure supply chain and TAA requirements.

The Tracewell T-FX2e Specifications

USE CASE	For demanding solutions that require significantly greater storage density to support hyper-converged applications in a data center environment or “beyond the back office” location. Features the ability to deliver hyper-converged platforms in space-constrained environments, such as aircraft, ships, mobile ground vehicles and transit case systems. Engineered to meet size, weight and power requirements for mission critical computing.
PROCESSOR TYPE	Intel ® Xeon ® E5-2600 v3 and v4 family of processors, each with 4 to 22 cores (1 or 2 processors).
CHASSIS CONSTRUCTION	Bonded aluminum low-mass chassis for rigidity with minimum weight.
MEMORY ARCHITECTURE	Up to 2400MT/s, DDR4, LRDIMM and RDIMM. Number of sockets: Up to 24. Maximum RAM: 1536GB.
RAID CONTROLLER	Hardware RAID, Levels 0, 1, 5, 10 or pass through.
STORAGE	Processing Sleds: Up to ten 2.5” drives. SAS/SATA. SSD/HDD. Standard Dell EMC PE FC630 with on board SATA to PCIe (1 or 2 drives). Optional Extended Storage Module (ESM) with PERC RAID controller (up to 8 drives). Internal SD vFlash site. Optional internal USB and dual SD sites (hypervisor). Note: Each FC630 can be equipped with 1 ESM or an ESM filler panel.
VIDEO	G200 (integrated with iDRAC8). 16MB video memory shared with iDRAC8 application memory.
SLED SLOTS	Includes 2U sled bay, scalable to include up to 4 half-width (HW) processing sleds. Accepts standard FC630 processing sled.
I/O MODULES	Ethernet: supports up to 2 I/O aggregator modules. Modules are available in pass-through and switching configurations.
CHASSIS MANAGEMENT CONTROLLER	Single, dual-port chassis management module. Two dedicated 10/100/1000Mb RJ45 ports, one for external management network, one for daisy chaining or NIC failover; Serial 9-pin, DTE, 16550 compatible.
FRONT ACCESSIBLE I/O	One USB 2.0 connector for keyboard and mouse support. One additional USB connector. One 15-pin VGA video connector. KVM selector switch. On / standby switch.
POWER SUPPLY	Up to four power supplies supported. Available in 1600W or 2000W output (per PS). N+1 capable. High-line operation up to 4000W, or 2000W with N+1 redundancy. Low-line operation up to 2000W, or 1000W N+1 redundancy. Input voltage: 90-264 VAC. Maximum inrush current: 25 A (per PS).
COOLING	Rear removable fan module with high-pressure fans.
ENVIRONMENTAL	Normal operating temp: 10°C to 35°C (50°F to 95°F). Expanded operating tem: -5°C to 45°C (23°F to 113°F) with some restrictions. Storage temp: -40°C to 65°C (-40°F to 149°F). EMC: enterprise class FCC emissions. Optional EMC shielding and D38999 connectors for MIL-STD-461 (adds 1U).
RACK INSTALLATION & OPTIONS	19” rack mount per EIA specification; front and rear mounting points to allow hard mounting into racks; rear pin option to allow blind mating into racks; additional mounting locations for sled lock bars; front handles. Optional: rack mount slides; removable front guard with particle filter; line cord retainer kit.

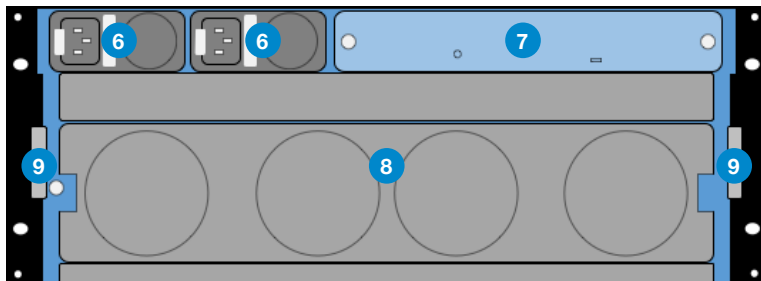
Above specifications are derived from the standard Dell EMC PowerEdge FX2 product.

The Tracewell T-FX2e Configuration



FRONT VIEW

- 1 . I/O module
- 2 . CMC slot
- 3 . KVM interface / control
- 4 . Extended Storage Module (ESM)
- 5 . Half width slot



REAR VIEW

- 6 . PS module
- 7 . Fan controller module
- 8 . System fan module
- 9 . Sliding rails



ACCOMODATES SLED TYPES

- 10 . Dell EMC PE FC630



EXTENDED STORAGE MODULE (ESM)

- 11 . Extended Storage Module (ESM)

STANDARD SLOT CONFIGURATIONS:

Half-width slots (up to 3)
Dell EMC PE FC630 dual-socket server sleds

**I/O SLOTS SUPPORT AGGREGATORS
OR PASS-THRU MODULES (UP TO 2)**

Type 100Mb/1/10GbE, FCoE options

CHASSIS MANAGEMENT MODULE (CMM)

Advanced management and remote access

DUAL POWER SUPPLIES

1600W or 2000W options
Redundant or current share
Up to 2000W high line with redundancy

REMOVABLE FAN MODULES

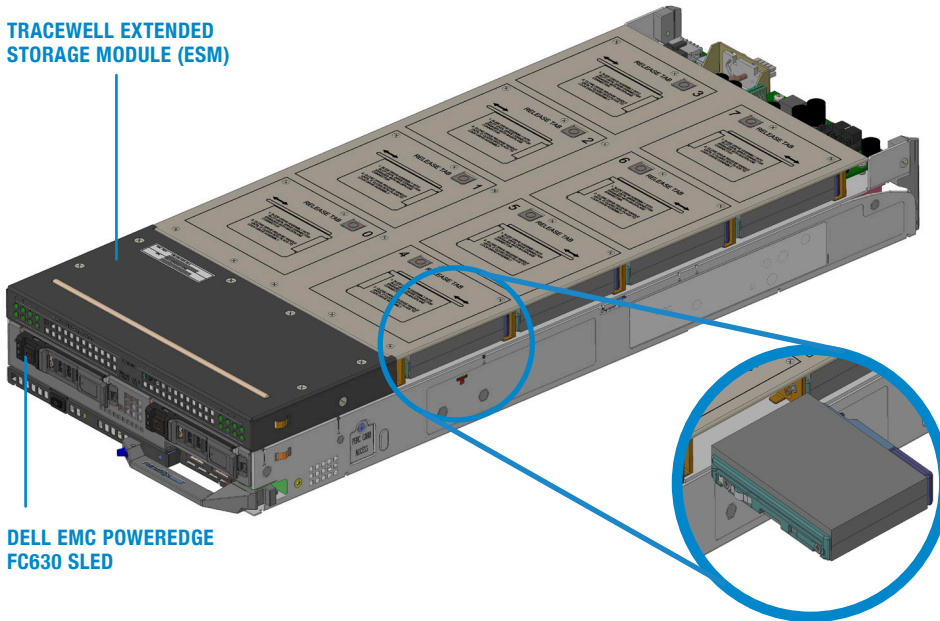
Redundant high capacity dual-motor fans

DIMENSIONS:

17.5"W X 6.9"H (4U) X 23.7"D

Tracewell Extended Storage Module (ESM)

TRACEWELL EXTENDED
STORAGE MODULE (ESM)



DELL EMC POWEREDGE
FC630 SLED

DRIVE MODULE REMOVAL
FROM TRACEWELL ESM

TRACEWELL EXTENDED STORAGE MODULE (ESM) HIGHLIGHTS:

1. Directly attaches to a standard Dell EMC PE FC630 sled.
2. The Tracewell T-FX2e supports up to (4) ESMs per system.
3. Supports H330, H730 or H730P PERC; RAID or HBA mode.
4. Supports any Dell EMC PE FD332 drive option.
5. Has the capacity to add 32 total 2.5" drives to a T-FX2e platform.

Dell EMC FC630 with Tracewell Extended Storage Module (ESM)

Tracewell's unique Extended Storage Module (ESM) enables businesses, federal agencies and OEMs to support their hyper-converged solutions by adding up to (8) 2.5" drives per ESM – making it possible to add an additional 32 total drives to their complete T-FX2e system.

ABOUT TRACEWELL SYSTEMS

Tracewell's T-FX, based on Dell EMC PowerEdge FX, represents the company's fourth generation blade-based system engineered to deliver high-performance computing in a form factor designed for forward deployment in space constrained environments, in the air, at sea or on land in unique fixed or mobile installations. The company has a 40 year history of enabling 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 become 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 custom solution design, engineering and manufacturing, all under one roof. More information: www.tracewell.com.