



Configuration guide for PowerEdge T350

A quick how-to document for configuring the PowerEdge T350 platform.

October 2021



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1 Document scope

What this document is:

This guide is intended to be a primary reference to address Sales Teams' common configuration questions, regarding Platform specific configuration notes, and potential validation hurdles to be aware of.

Additional benefits of this document include:

- Reduced escalations to Presales and Offer Managers
- Avoid incompatible selections which could lead to an invalid configuration
- Reduce potential frustration for Sales Teams as they make selections which affect validation
- Serve as a guide to streamlined configuration process
- Arrive at a valid configuration quickly and with ease

What this document is not:

This document is not meant to cover the entire ordering process from start to finish. This document is also not intended to be used as a training Module on how to use ordering tools for saving a quote, or placing orders, merely to highlight situations a user will encounter while configuring this particular platform.

This document is not a reference for systems specifications and value propositions. This will also not contain any marketing content. For this type of information, please refer to the platform specific source book / technical guide*.

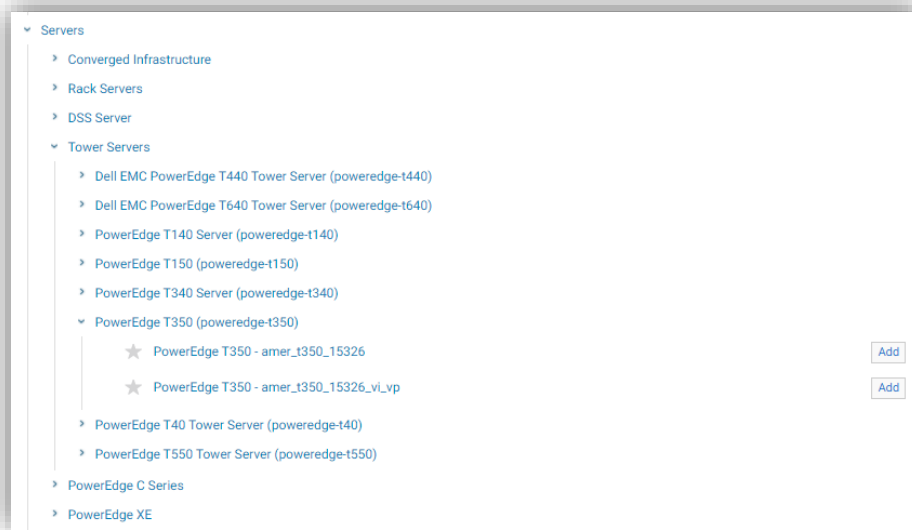
**For links to these resources and additional useful documentation, please refer to the [Additional Resources](#) section later in this document.*



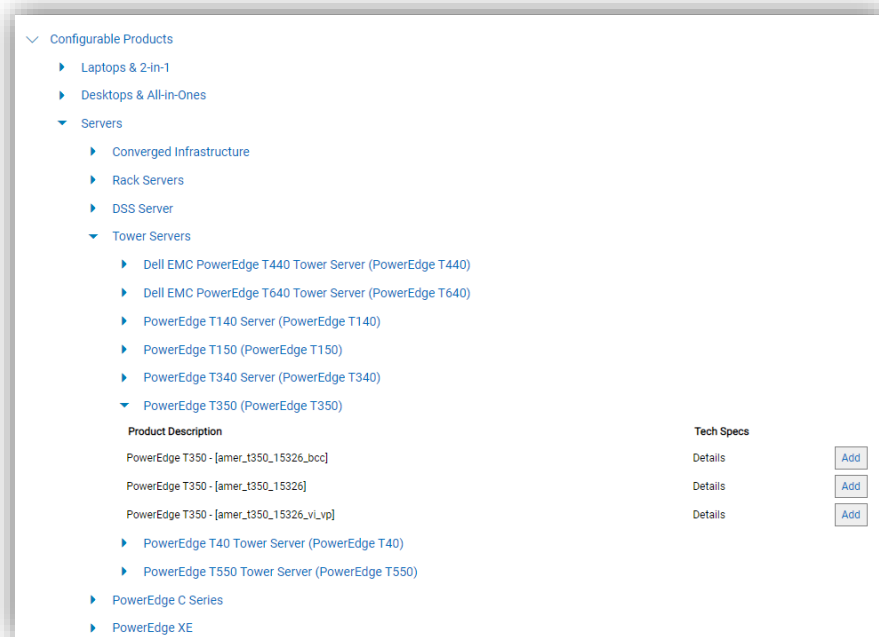
2 Steps to configure PowerEdge T350

2.1 How to navigate to your product

DSA: Configurable Products → Servers → Tower Servers → **PowerEdge T350**

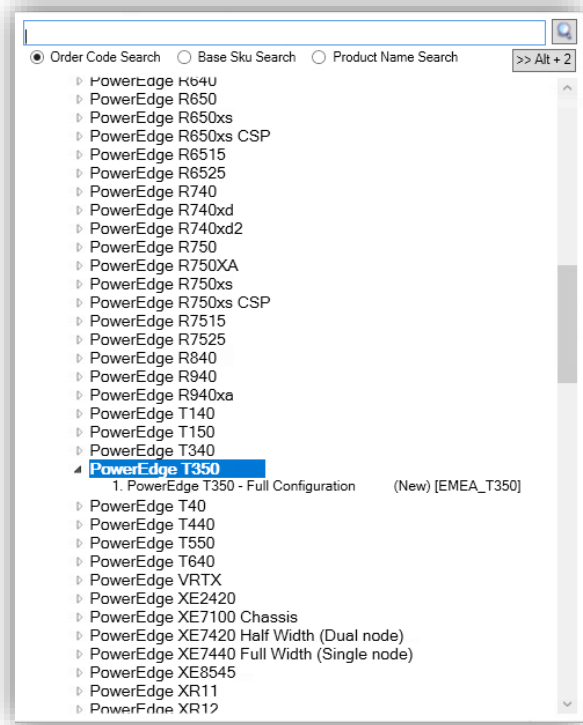


OSC AMER: Configurable Products → Servers → Tower Servers → **PowerEdge T350**



Gii EMEA:

In Product Catalogue select Catalogue → Server&Storage → Dell PowerEdge → **PowerEdge T350**



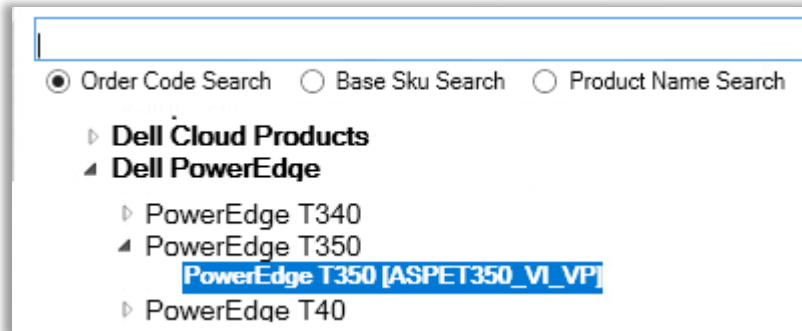
OSC EMEA: Configurable Products → Server - Tower → PowerEdge T350

| SERVER - TOWER | Product Description | Tech Specs |
|----------------|--|-----------------------------|
| | Dell PowerEdge T150 - [EMEA_T150] | Details Add |
| | Dell PowerEdge T350 - [EMEA_T350] | Details Add |
| | PowerEdge T140 - Full Configuration - [EMEA_T140_VI_VP] | Details Add |
| | PowerEdge T340 - Full Configuration - [EMEA_T340_VI_VP] | Details Add |
| | PowerEdge T40 Server - Full Configuration - [EMEA_T40_BTS] | Details Add |
| | PowerEdge T440 - Full Configuration - [EMEA_T440_VI_VP] | Details Add |
| | PowerEdge T550 - Full Configuration - [EMEA_T550] | Details Add |
| | PowerEdge T640 - Full Configuration - [EMEA_T640_VI_VP] | Details Add |
| | Smart Value PowerEdge T140 My First Server. - [pet1409b] | Details Add |
| | Smart Value PowerEdge T140 Server Basic. - [pet1401b] | Details Add |



Gii APAC:

In Product Catalogue select Catalogue → Server&Storage → Dell PowerEdge → **PowerEdge T350**



OSC APAC: Configurable Products → Server - Tower → **PowerEdge T350**

The screenshot shows a table of server products under the "SERVER - TOWER" category. The table has two columns: "Product Description" and "Tech Specs". The "PowerEdge T350 - [ASPET350_VI_VP]" row is highlighted in blue. Each row has a "Details" link and an "Add" button.

| Product Description | Tech Specs |
|---|------------------------------------|
| Dell PowerEdge T140 Server - [ASPET140_VI_VP] | Details Add |
| Dell PowerEdge T340 Server - [ASPET340_VI_VP] | Details Add |
| Dell(TM) PowerEdge(TM) T440 Server - [ASPET440_VI_VP] | Details Add |
| Dell(TM) PowerEdge(TM) T640 Server - [ASPET640_VI_VP] | Details Add |
| PowerEdge T150 - [ASPET150_VI_VP] | Details Add |
| PowerEdge T350 - [ASPET350_VI_VP] | Details Add |
| PowerEdge T40 Tower Server - [ASPET40_VI_VP] | Details Add |
| PowerEdge T550 - [ASPET550_VI_VP] | Details Add |



2.2 Configuration recommendations and restrictions

Important Notes:

1. Not all Modules are covered in this document. Modules with reference to Services, for instance, are not covered.
2. ErP LOT9 regulation - European Parliament has issued new Energy-Related Product (ErP) requirements that enterprise servers and data equipment must meet. Pls.refer to [ERP LOT9 regulation Configuration Guide](#) for any related queries. (Module 1507 – Regulatory and 1533 – BIOS and Advanced System Configuration settings)

Configuration Notes:

The Dell™ PowerEdge™ T350 is Dell's latest single-socket, entry-level 4.5U scalable tower server that is purposely designed to serve general-purpose business applications for both Small and Medium Businesses (SMB) and Remote Office / Branch Office (ROBO).

The system features:

- Up to one 3rd Generation Intel® Xeon® E-2300 series processor
- Four DDR4 DIMM slots, supports UDIMM 128 GB max, speeds up to 3200 MT/s
- Up to eight SAS/SATA hot-plug drives
- Front access hot-plug BOSS 2.0 (2 x M.2)
- Internal Boot: iDSDM
- RAID: PERC 10.5 and PERC 11 SW and HW RAID
- Network interface technologies to cover Network Interface Card (NIC)
- PCI Express® (PCIe) 4.0 enabled expansion slots
- iDRAC9 with Lifecycle controller; Express, Enterprise, Datacenter, and OME advanced features
- Hot-plug or cabled AC power supply units

2.3 Enterprise Infrastructure Planning Tool

The Dell Enterprise Infrastructure Planning Tool ([EIPT](#)) helps IT professionals plan and tune their computer and infrastructure equipment for maximum efficiency. Offering a wide range of configuration flexibility and environmental inputs, this can help right size your IT environment.

EIPT is a model driven tool supporting a large number of products and configurations for infrastructure sizing purposes. EIPT models are based on hardware measurements with operating conditions representative of typical use cases. Workloads can impact the power consumption greatly, meaning the same percent CPU utilization and different workloads can lead to widely different power consumption. It is not possible to cover all the workload, environmental, and customer data center factors in a model & provide percent accuracy figures with any degree of confidence. With that said, Dell would anticipate (NOT guarantee or claim) a potential for some variation. Customers are always advised to confirm EIPT estimates with actual measurements under their own, actual workloads.

[EIPT User Guide](#)



2.4 How to build a quote in DSA/Gii/OSC

2.4.1 TPM

Module 1574 – Trusted Platform Module (TPM) *

Trusted Platform Module (TPM) is both the name of a published specification detailing a secure cryptoprocessor that can store cryptographic keys that protect information, as well as the general name of implementations of that specification, often called the TPM chip or TPM Security Device. Depending on OS vendor implementation of TPM 2.0, the system may require UEFI boot mode to fully enable all TPM 2.0 features. To get support for future releases of Windows server OS (after MSWS 2019), you will require TPM 2.0. TPM 1.2 or no TPM will not support future releases of Windows Server (after 2019 version)

Offered are:

- TPM 2.0
- TPM 1.2
- No TPM

2.4.2 Chassis configuration

Module 1530 – Chassis Configuration *

- 3.5" Chassis with up to 4 Hot Plug Hard Drives and Embedded SATA, cable PSU
- 3.5" Chassis with up to 4 Hot Plug Hard Drives and Embedded SATA, hot-plug PSU
- 3.5" Chassis with up to 8 Hot Plug Hard Drives and AIC PERC, cable PSU
- 3.5" Chassis with up to 8 Hot Plug Hard Drives and AIC PERC, hot-plug PSU

Selection in this module triggers selection made in modules 1540 – RAID Configuration, 1541 – RAID Controller and 1620 – PowerSupply.

| RAID Configurations | C0 Diskless | C1 NR | C2 R0 | C3 R1 | C4 R5 | C5 R10 | C7 <u>Unconfig</u> | C9 R6 | C20 NR | C21 R0 | C22 R1 | C23 R5 | C24 R10 |
|--|----------------|----------|----------|----------|----------|-----------------------|-----------------------|----------|-----------|-------------------|-------------------|-------------------|-------------------|
| Min / Max Drives | | | | | | | | | | | | | |
| 8 drive Hot Plug | N/A | 1/8 | 1/8 | 2/2 | 3/8 | 4/8 multiples of 2 | 1/8 | 4/8 | 1/4 | N/A | N/A | N/A | N/A |
| 4 drive Hot Plug *x4HDD blank required | 0/0 | N/A | N/A | N/A | N/A | N/A | N/A | N/A | 1/4 | 2/4 \$150 only | 2/2 \$150 only | 3/4 \$150 only | 4/4 \$150 only |

2.4.3 Processor

T350 will operate in single processor only. Memory controller is embedded in the processor.

Module 1550 – Processor *

Some CPUs are offered only for 1CPU configuration and do not support 2CPU configuration.



2.4.4 Memory, type, speed and capacity

Module 1562 – Memory Configuration Type *

Module 1561 – Memory DIMM Type and Speed *

Module 1560 – Memory Capacity *

The PowerEdge T350 system supports DDR4 unregistered DIMMs (UDIMMs). System memory holds the instructions that are run by the processor.

Your system contains four memory sockets. Two memory channels are allocated to the processor.

2.4.5 RAID configurations and Controller

Module 1540 – RAID Configuration *

RAID technology combines multiple physical disk drives to support data redundancy, performance improvement, or both.

If you don't see the RAID Configuration Options your customer is interested in, please ensure the RAID Controller you have selected in Module 1541 supports the type of RAID required.

For more information about RAID configuration, refer to the [Additional Resources](#) section of this document.

Module 1541 – RAID Internal Storage Controllers *

Select the RAID Controller or On-Board SATA controller that will suit your customers' needs.

NOTE: The Controller Options available in this Module will depend on the RAID Configuration Option selected in Module 1540 and on the selected chassis configuration selected in Modules 1530.

For more information about RAID Controllers, refer to the [Additional Resources](#) section of this document.

| | Description | Rules | MOD | S150 | H345 | HBA355i | H755 |
|-----|----------------------------------|---|-------|------|------|---------|------|
| C0 | No Controller / No hard drive | No Controller / No hard drive – Diskless config | 7GDXM | | | | |
| C1 | Passthrough all drives | Mixed drive types are allowed | 84M3T | | V | V | |
| C2 | RAID 0 | Drives must match in type, speed, and capacity | 1D47H | | V | | V |
| C3 | RAID 1 | Drives must match in type, speed, and capacity | 5GGWG | | V | | V |
| C4 | RAID 5 | Drives must match in type, speed, and capacity | 8C7V4 | | | | V |
| C5 | RAID 10 | Drives must match in type, speed, and capacity | H4WR4 | | V | | V |
| C7 | SAS/SATA Unconfigured | Mixed drive types are allowed | XTV9H | | | | V |
| C9 | RAID 6 | Drives must match in type, speed, and capacity | Y4H17 | | | | V |
| C20 | Chipset SATA No RAID (AHCI mode) | SATA only, Mixed drive types are allowed | Y4W6F | | | | |
| C21 | Chipset SATA RAID 0 | Drives must match in type, speed, and capacity. S150 only | P4M4R | V | | | |
| C22 | Chipset SATA RAID 1 | Drives must match in type, speed, and capacity. S150 only | R4JK7 | V | | | |
| C23 | Chipset SATA RAID 5 | Drives must match in type, speed, and capacity. S150 only | 4NKGf | V | | | |
| C24 | Chipset SATA RAID 10 | Drives must match in type, speed, and capacity. S150 only | 44RG3 | V | | | |
| C50 | SAS/SATA RAID 50 | Drives must match in type, speed, and capacity | H2RP6 | | | | V |
| C51 | SAS/SATA, RAID1+RAID1 | First RAID1 set: Exactly 2 identical drives required. Second RAID1 set: Exactly 2 identical drives required. Smaller drive capacity goes to first RAID1 set. All drives in these two RAID sets must be same <u>type</u> , but need not match in the speed and capacity. | RKV0J | | V | | V |
| C52 | Mix SATA+SAS, RAID1+RAID1 | First RAID1 set: Exactly 2 identical SATA HDD required. Second RAID1 set: Exactly 2 identical SAS HDD required. | FJRX | | V | | V |
| C54 | SAS/SATA, RAID1+RAID10 | First RAID1 set: Exactly 2 identical drives required. Second RAID10 set: Minimum 4 and maximum 6 identical drives required. All drives in these two RAID sets must be same <u>type</u> , but need not match the speed and capacity. | YF6NM | | V | | V |



2.4.6 Storage

Module 1570 *, 1571 – Hard Drives

The T350 supports up to eight 3.5" SATA/SAS or eight 2.5" with adapter SATA/SAS Hot-plug drives.

Module 1533 & 1534 – BIOS and Advance System Configuration

This Module contains Options for BIOS Settings to be pre-selected at the factory. Please make your selection based upon whether your customer requires Energy Star logo enabled, Enhanced Acoustic, HPC BIOS Settings, or UEFI BIOS Settings.

Hard Drive capacities exceeding 2TB will require UEFI, or BIOS with GPT-enabled. BIOS with MBR partition or MAX OS partition (GPT-enabled) are also available.

To be CE compliant and to meet new ERP Lot9 regulation criteria, you need to EU countries and territories PowerSaving BIOS.

For details about how Advanced BIOS Settings affect the behavior of the system, please refer to the Technical Guide / Sourcebook in the [Additional Resources](#) section.

Module 1696 – Boot Optimized Storage Cards

Boot Optimized Storage Solution (BOSS) is a RAID solution that is designed for boot optimization and provides a separate RAID/SSD solution allowing customers to maximize server disk slots for data.

Dell provides the following BOSS card for this platform:

- BOSS S2

The HW RAID BOSS-S2 card is a RAID controller with a limited feature set that presents M.2 SATA-only SSDs as either Non-RAID disks or a single RAID1 volume. BOSS enables support for 240 GB and 480 GB disks from factory installation.

NOTE: For the latest list of supported operating systems and driver installation instructions, see the system documentation at <http://www.dell.com/operatingsystemmanuals>



2.4.7 System Management

Module 1520 – Embedded Systems Management *

The integrated Dell Remote Access Controller 9 (iDRAC9) with Lifecycle Controller is embedded within every Dell EMC PowerEdge server and provides functionality that helps IT administrators deploy, update, monitor, and maintain servers with no need for any additional software to be installed. iDRAC functions regardless of operating system or hypervisor presence because from a pre-OS or bare-metal state, iDRAC is ready to work because it is embedded within each server from the factory.

For more information about Embedded Systems Management, refer to the [Additional Resources](#) section of this document.

Module 1692 – Group Manager *

Group Manager is a self-contained code in iDRAC that provides customers a quick overview of all servers in a particular group. You can either enable or disable this at the factory by selecting the appropriate Option in this Module.

For more information about Embedded Systems Management, refer to the [Additional Resources](#) section of this document.

Module 1691 – iDRAC Service Module

The iDRAC Service Module is pre-installed on the iDRAC. It helps gather logs used to troubleshoot errors. You can either enable or disable this at the factory by selecting the appropriate Option in this Module.

For more information about iDRAC, refer to the [Additional Resources](#) section of this document.

Module 1659 – iDRAC Systems Management Options

Upgrades which provide additional functionality to iDRAC and OpenManage are available in this Module.

For more information about Systems Management, refer to the [Additional Resources](#) section of this document.

Module 1640 – Internal SD Storage

The PowerEdge T350 supports an optional Internal Dual SD module (IDSDM). The IDSDM module supports two microSD cards which are available in capacities of 16GB, 32GB, and 64GB.

NOTE: BOSS(Module 1696) and IDSDM(Module1640) cannot be ordered on the same blade.

2.4.8 Operating System

Module 1650 – Operating System *

PowerEdge T350 at time of launch supports below Operating Systems:

Linux: RHEL 8.4 (FI & NFI), SLES 15 (FI&NFI), Ubuntu NFI

Windows: Windows Server 2019 (OS media are mandatory selection in addition to OS type)



Operating systems (OS) that are supported for this platform as factory installed will be listed in this Module. The OS selected will determine the compatible media available in Module **1652** – OS Media Kits *, Module **1651** – Licenses & Module **1653** – Enabled Virtualization.

Note:

1. Ensure that the number and type of Licenses match the Processor Core count.
2. Ensure the Media Kits match the Operating System selected.

Virtualisation: One of the key features for virtualization on the T350 is the support for a failsafe hypervisor. By running the hypervisor on the optional SD/BOSS card and installing a backup copy of the other mirrored SD card, you can protect against hardware failure and maximize virtualization uptime.

General Configuration Notes: Hypervisors are installed on SD card. You need to select the correct SD card for selected type of hypervisor

2.4.9 Shipping

Module 1590 – System Documentation *

Choose whether your customer needs the System's Documentation / OpenManage DVD.

Module 1500 – Shipping *

In this module are offered regional shipping SKU.

Module 1690 – Shipping Material

Options will be selected automatically by validation rules based on selection in module 1500 – Shipping.

Module 1507 – Regulatory

Configurations shipped into the 63 countries or territories impacted by Lot 9, must meet the Lot9 criteria. To learn more please check chapter 2.2



A Additional Resources

- Sales Portal and Knowledge Center @ <https://www.delltechnologies.com/sales/en-us/auth/index.htm>
Recommended documentation:
 - Marketing: [sales card](#), [spec sheet](#)
 - Technical: [Sourcebook](#) / technical guide
 - [Dell Networking Optics and Cables Interoperability Matrix](#)
 - T350 Memory: [PowerEdge Memory Detailed Overview](#)
 - Link to Dell EMC PowerEdge SSD / Hard Drives: [Available in Oaks](#) (**Search term:** Server Storage)
- Enterprise Infrastructure Planning Tool(EIPT): Infrastructure sizing, i.e., server power consumption estimation @ <http://dell-eipt-landingpage.azurewebsites.net/>
- General Technical Resources @ DellTechCenter.com
- Customer Kit Selector Tool: http://compass.dell.com/snp/selectors/cust_kit_selector_launcher.html
- Link to Dell EMC PowerEdge PERC: <https://www.dell.com/learn/us/en/04/campaigns/dell-raid-controllers?c=us&l=en&s=bsd>
- Link to Dell EMC iDRAC for PowerEdge: <https://www.dell.com/support/kbdoc/en-us/000178016/support-for-integrated-dell-remote-access-controller-9-idrac9>
- Link to Dell Technologies - OEM Embedded and Edge Solutions: <https://www.dellemc.com/en-us/oem/index2.htm>
- Link to ErP LOT9 Configuration Guide:
 - <https://www.delltechnologies.com/asset/en-gb/products/servers/technical-support/erp-lot9-regulation-configuration-guide.pptx.external> (in case after clickin gon the link you see page has expired, just copy the whole llink and paste it ideally into chrome url)
 - <https://www.delltechnologies.com/resources/en-gb/auth/search.htm?q=ERP%20LOT9%20regulation%20configuration%20guide&sort=relevancy&numberOfResults=25>

