

Altos T310 F3 Specifications



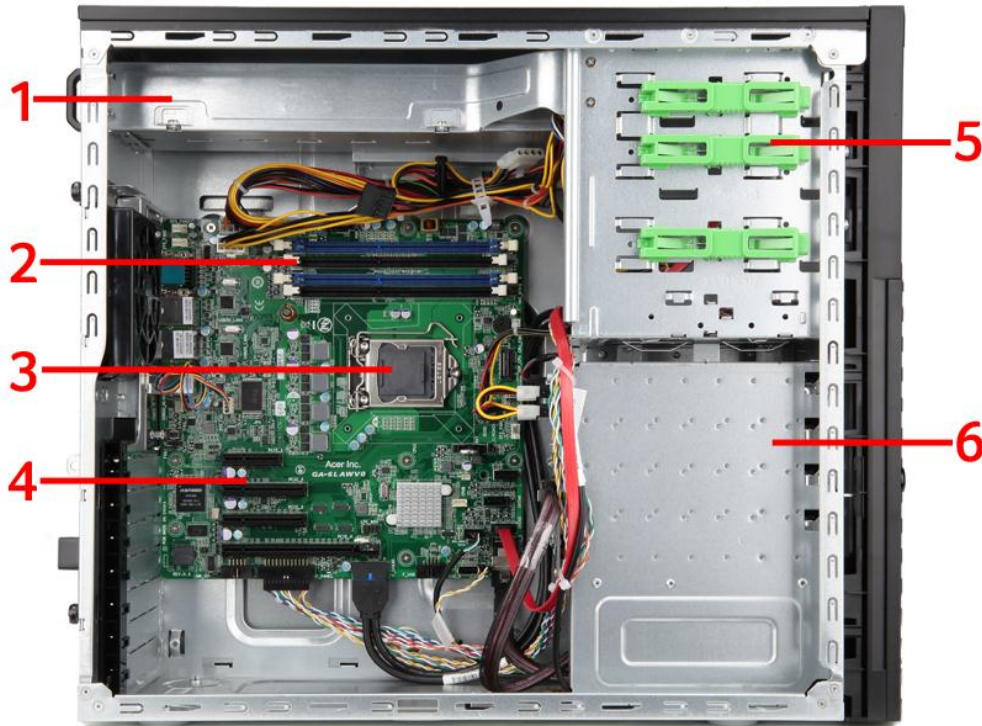
Product overview

The Altos T310 F3 delivers proactive management tools matched by best price-performance technology ideal for SMB and branch office operations. This single-socket tower server features an 80 PLUS® efficient power supply that runs smoothly and quietly for maximized productivity.



Product views

Internal view

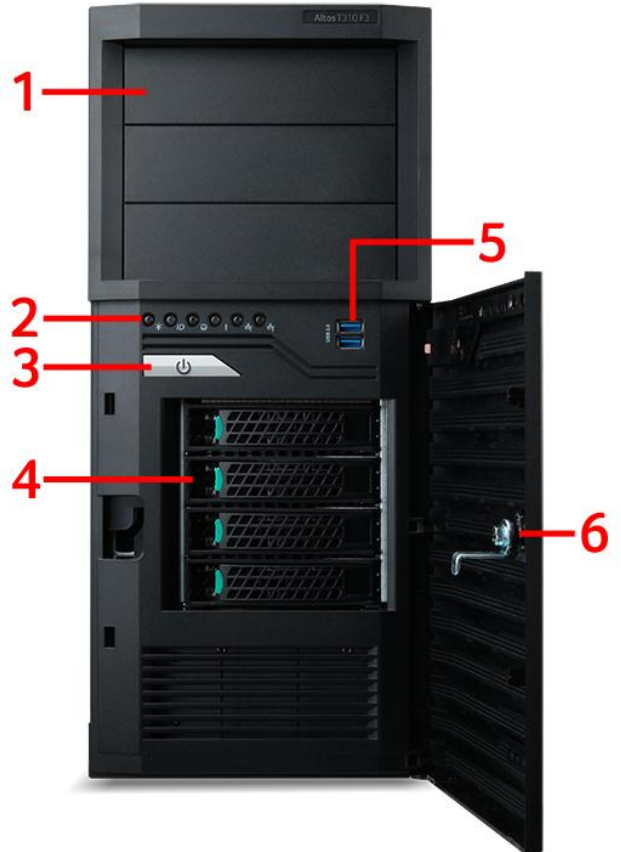


1. 1 x 500 W 80 PLUS® Gold-certified fixed power supply
or
2 x 400 W 80 PLUS® Gold-certified 1+1 redundant hot-swappable power supplies
2. 4 x DDR3L ECC unbuffered DIMMs
3. Intel® Xeon® E3-1200 v3 series or Intel® Core™ i3-2100 series processor
4. 1 x PCIe 3.0 + 3 x PCIe 2.0 expansion slots
5. 3 x 5.25" media expansion bays
6. 4 x tool-less removable hard drive bays

Altos T310 F3 Specifications

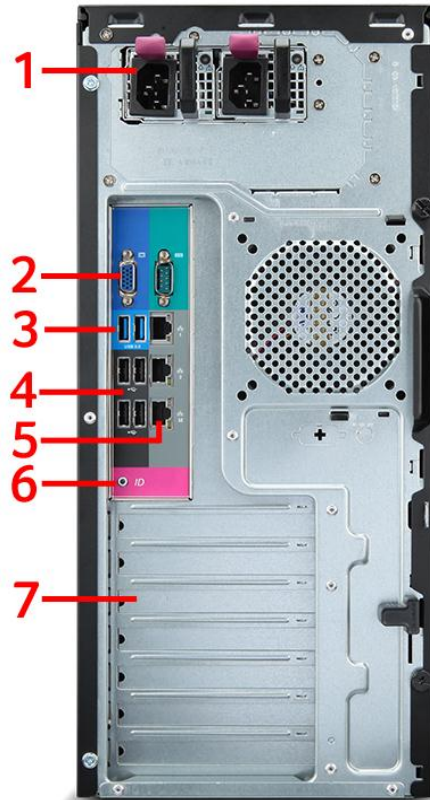
Front View

1. 3 x 5.25" media expansion bays
2. LED indicator panel
3. Power Button
4. 4 x tool-less removable hard drive bays
5. 2 x USB 3.0 ports
6. Drive bay door lock



Rear View

1. Optional 2 x removable power supplies (fixed power supply installed in standard configuration)
2. Video port + Serial port
3. 2 x USB 3.0 ports
4. 4 x USB 2.0 ports
5. 2 x Gigabit LAN port (RJ-45) + Management port
6. System ID button
7. PCIe expansion



Product Specifications

What's New?

- Intel® Xeon® E3-1200 v3 series processors
- Support for DDR3L low-voltage memory
- 500 W 80 PLUS® Gold-certified fixed power supply or 2 x 400 W 80 PLUS® Gold-certified 1+1 redundant hot-swappable power supplies
- Integrated 6 Gb/s SATA 3 RAID
- USB 3.0 ports
- Energy Star® 2.0 compliant
- Improved acoustics

Processors and Chipset

- Intel® Xeon® E3-1200 v3 or Intel® Core™ i3 family processor
- Chipset: Intel® C224

Memory

- Up to 4 x DDR3L unbuffered DIMMs

Network Controllers

- 2 x Intel® I210 single-port Ethernet controller

Storage

- Hard disk form factor: 3.5"
- Type: SAS / SATA
- Storage: HDD / SSD
- Maximum capacity:
 - Up to 16 TB SATA HDD (4 TB 3.5" x 4 HDDs)
 - Up to 16 TB SAS (4 TB 3.5" x 4 HDDs)

Storage Controllers

- Intel® C224 chipset with RSTe RAID and SATA RAID 0, 1, 5, 10 support
- SAS RAID 0, 1, 5, 10 support via optional SAS RAID add-on card

Note: Integrated SATA RAID supports RAID 0, 1, 5, 10 on Windows® OS only.

Expansion slots

- PCIe® 2.0 x1 (x4 connector)
- PCIe® 2.0 x4 (x8 connector)
- PCIe® 3.0 x0/x8 (x8 connector)*
- PCIe® 3.0 x16/x8 (x16 connector)*

Altos T310 F3 Specifications



* **Note:** If a card is installed in PCIe® 3.0 slot 3, slots 3 and 4 operate at x8.

Management

- Acer Smart Server Manager
- Acer Smart Console for server management and KVM over IP remote management
- System LAN LEDs
- System ID button / LED
- System health LED

Deployment/Serviceability

- Acer Smart Setup
- BIOS Update Tool

Operating Systems

- Microsoft® Windows Server® 2012 R2
- Microsoft® Windows Server® 2012
- Microsoft® Windows Server® 2008 R2 SP1
- Red Hat® Enterprise Linux® 6.4
- Red Hat® Enterprise Linux® 5.9
- Novell® SUSE® Linux® Enterprise Server 11 SP3
- VMware ESXi 5.1 update 1

Input/output interface

Front

- 2 x USB 3.0 ports
- Power/off button
- LED indicators: power, System ID, HDD activity, system health, LAN 1 and 2

Rear

- Video port
- Serial port
- 4 x USB 2.0 ports
- 2 x USB 3.0 ports
- 2 x Gigabit LAN port (RJ-45)
- Management port

Optical drive

- 5.25" SATA SuperMulti drive

Graphics

- Aspeed AST 2300 integrated in BMC
 - 128 MB shared VRAM
 - 16 MB dedicated memory

Altos T310 F3 Specifications



Chassis/Form Factor

- Mini tower

Power Supply

Determined by SKU:

- 500 W 80 PLUS® Gold-certified fixed power supply, or
- 2 x 400 W 80 PLUS® Gold-certified 1+1 redundant hot-swappable power supplies

Security

- Chassis intrusion alert
- Administrator / user password
- Power-on password
- Setup password
- Device boot control
- BIOS write-protected
- Power button lockout
- Optional TPM 1.2

Regulatory Compliant Standards

Energy Star® 2.0 compliant

EMC

- FCC (Class B)
- CE (Class B)
- BSMI (Class B)

Safety

- MET
- CB
- GS

Altos T310 F3 Specifications



Environmental Specifications

Dimensions	190 (W) x 485 (D) x 420 (H) mm (7.48 x 17.72 x 14.1 inches)	
Weight	Maximum	13.52 kg (29.8 lbs.)
System inlet temperature	Operating	10° - 40° C (50° - 104° F)
	Non-operating	-30° - 60° C (-22° - 140° F)
Relative humidity	Operating	20 ~ 80 %
	Non-operating	5 ~ 90 %
Acoustics	Idle	
	LWAd	3.8 BA
	LpAm	25 dBA
	Operating	
	LWAd	4.2 BA
	LpAm	30 dBA
Power	Rated steady-state power	500 W
	Maximum Peak Power	500 W
	BTU rating	1705 BTU/hr at 100 - 240 VAC

Technical specifications

PCIe® specifications

The primary I/O bus for the main board is PCIe® Gen3. The following table lists the characteristics of the PCI-E bus segments. Details about each bus segment follow the table.

NOTE: The signaling bit rate of PCI Express is 2.5 Gbit/s for Gen 1, 5.0 Gbit/s for Gen 2, and 8.0 Gbit/s for Gen 3.

Slot	CPU / PCH	Type	Bus width ¹	Voltage	Connector	Location	Height
PCIE_1	CPU	PCIe Gen2	x1	3.3 V	x4	Onboard	Full height
PCIE_2	PCH	PCIe Gen2	x4	3.3 V	x8	Onboard	Full height
PCIE_3	PCH	PCIe Gen2	x0 / x8 ²	3.3 V	x8	Onboard	Full height
PCIE_4	PCH	PCIe Gen3	x16 / x8 ²	3.3 V	x16	Onboard	Full height

NOTE:

1. Indicates the number of physical electrical lanes running to a PCIe® connector.
2. Slots 3 and 4 operate as a pair; sharing two multiplexed x8 connections. Slot 4 operates at full x16 unless a card is inserted in slot 3, whereupon both slots operate at x8.

Slots are enumerated differently based on the operating system. Microsoft® operating systems enumerate Device ID by bus starting from the lowest bus to the highest.

Onboard storage specifications

Item	Description
Controller	Intel® C224 Platform Controller Hub
Simultaneous drive transfer channels	2 onboard SATA ports

Altos T310 F3 Specifications



Max throughput per channel	1 mini SAS port (4 x SATA3) <ul style="list-style-type: none"> • 4 x 6 Gb/s (mini SAS) • 2 x 3 Gb/s
Data transfer method	<ul style="list-style-type: none"> • Non-RAID mode • RAID mode
Drive type supported	Serial ATA
RAID levels support	<ul style="list-style-type: none"> • RAID 0, 1, 5, 10 (Intel software RAID) <p>NOTE: Intel software RAID only supports Windows OS</p>
RAID function support	<ul style="list-style-type: none"> • Supports multiple logical volumes • Setup through ROM based Array Configuration Utility • Installation scripting support <p>NOTE: This controller does not support hot plug or LED functions</p>
Onboard/software RAID OS support	<ul style="list-style-type: none"> • Microsoft® Windows Server® 2012 R2 • Microsoft® Windows Server® 2012 • Microsoft® Windows Server® 2008 R2 SP1 <p>NOTE: Intel software RAID only supports Windows OS</p>
Add-in card RAID OS support (requires LSI add-in RAID card)	<ul style="list-style-type: none"> • Microsoft® Windows Server® 2012 R2 • Microsoft® Windows Server® 2012 • Microsoft® Windows Server® 2008 R2 SP1 • Red Hat® Enterprise Linux® 6.4 • Red Hat® Enterprise Linux® 5.9 • Novell® SUSE® Linux® Enterprise Server 11 SP3 • VMware ESXi 5.1 update 1
Additional features	<ul style="list-style-type: none"> • NCQ (Native Command Queuing) • AHCI (Advanced Host Controller Interface)

Onboard LAN specifications

Item	Description
Controller	Dual-port Intel® I210 Ethernet controller
Network interface	10Base-T / 100Base-TX / 1000Base-T
Compatibility standards	<ul style="list-style-type: none"> • IEEE 802.3 Ethernet interface for 10BASE-T • IEEE 802.3ab Ethernet interface for 1000BASE-T • IEEE 802.3u Ethernet interface for 100BASE-TX
Manageability	<ul style="list-style-type: none"> • PXE, iSCSI boot
Connector	RJ-45
Supported cable type	Cat 5e, Cat 6 wire

Memory specifications and population

Item	Description
Supported memory types	<ul style="list-style-type: none"> • Unbuffered DDR3L 1333 / 1600 MHz • 1.35 V (DDR3L) <p>NOTE: Acer does not qualify mixed memory configurations of</p>

memory type, capacity or make.

Population

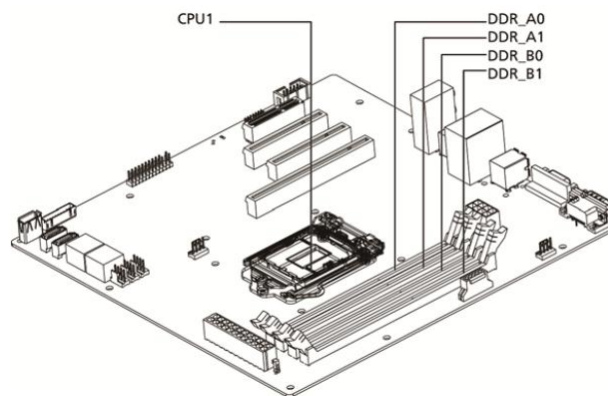
Acer's validated memory populations are listed below.

Memory Population Rules

Each processor provides four banks of memory, each capable of supporting up to 2 DIMMs.

- No support for RDIMMs.
- ECC and non-ECC UDIMMs may not be mixed.
- Installing 3 DIMMs is not recommended.
- DIMM modules must be installed in the slot sequence listed below.

DIMM slot layout



Total No. of DIMMs	DDR_A0	DDR_A1	DDR_B0	DDR_B1
1		V		
2		V		V
4	V	V	V	V

Memory Identification

Generally, there are some memory information printed on the label of DIMM, but different vendor may have different format. For example:

4 GB 2Rx4 PC3-10600R xx xx xxx

1. Density

- 2 GB, 4 GB, 8 GB

2. Rank

- 1R = Single Rank
- 2R = Dual Rank

3. Bit Organization

- This platform supports x8
- Note: It's not recommended to mix DIMM with different bit organization in one system.

4. Speed

- PC3 – 10600 => DDR3- 1333
- PC3 – 12800 => DDR3- 1600

Altos T310 F3 Specifications



Power specifications

500 W fixed power supply

Power supply input

Rated Line Voltage	100 to 127 VAC ; 220 to 240 VAC
Rated Input Current	500 W power supply: 8 A (@ 100~127 VAC), 4 A (@220~240 VAC)
Rated Input Frequency	47 to 63 Hz
Rated Input Power	500 W power supply: 609 W (@ 115 VAC)

Power supply output

Rated Steady-State Power	500 W power supply
Maximum Peak Power	500 W power supply

BTU Rating (Maximum)

500 W power supply: 1705 BTU/hr (@ 110 VAC), 1705 BTU/hr (@200 VAC)

Acoustic noise

Acoustic Noise (500 W fixed power supply)

Idle	Light-configuration	LWAd: 3.8 BA	LpAm: 25 dBA
	Full-configuration	LWAd: 4.8 BA	LpAm: 38 dBA
Operating	Light-configuration	LWAd: 4.2 BA	LpAm: 30 dBA
	Full-configuration	LWAd: 5.2 BA	LpAm: 43 dBA

Acoustic Noise (400 W redundant power supply)

Idle	Light-configuration	LWAd: 4.2 BA	LpAm: 30 dBA
	Full-configuration	LWAd: 5.4 BA	LpAm: 38 dBA
Operating	Light-configuration	LWAd: 6.6 BA	LpAm: 54 dBA
	Full-configuration	LWAd: 6.6 BA	LpAm: 54 dBA

Acer server software utilities

Smart Setup

Easy deployment provided by the latest version of Acer's Smart Setup. Smart Setup is available both in box as a driver packed installation DVD or a downloadable file to be put into a USB 2.0 device, and eases the deployment of Acer servers for any certified OS. Through its unique interface, users may select to have all the correct drivers be pre-deployed for the OS of their choosing, as well as setup hardware RAID devices, BMC settings (where available), and even clone the pre-settings to a bootable USB device to ease mass server deployments.

Smart Server Manager

Offering 24-7 monitoring for system health and performance

- Delivers proactive event management features including system event logging, event handling from e-mail and SNMP Trap (PET) alerting
- Monitors onboard hardware, operating systems and virtual machines
- Allows remote control from KVM and Power control
- Satisfies management in web-based UI, role-based administration, and automated management scripts
- Remote firmware deployment and scheduled updates
- Customizable BIOS settings and deployment to networked nodes
- Optional power-capping functionality for Acer servers with Intel® Xeon processors E3 or E5 families

Available options

Processors

Intel® Xeon® E3-1200 v3 processors

- E3-1280 v3 (8 MB L3 cache, 3.6 GHz, DDR3 1600/1333 MHz, 69 W, quad core)
- E3-1270 v3 (8 MB L3 cache, 3.5 GHz, DDR3 1600/1333 MHz, 69 W, quad core)
- E3-1240 v3 (8 MB L3 cache, 3.4 GHz, DDR3 1600/1333 MHz, 69 W, quad core)
- E3-1230 v3 (8 MB L3 cache, 3.3 GHz, DDR3 1600/1333 MHz, 69 W, quad core)
- E3-1220 v3 (8 MB L3 cache, 3.1 GHz, DDR3 1600/1333 MHz, 69 W, quad core)
- E3-1230L v3 (8 MB L3 cache, 1.8 GHz, DDR3 1600/1333 MHz, 25 W, quad core)
- E3-1220L v3 (8 MB L3 cache, 1.6 GHz, DDR3 1600/1333 MHz, 16 W, quad core)

Intel® Core™ i3 Processors

- Intel® Core™ i3-4340 (4 MB, 3.6 GHz, DDR3 1600, 54 W, dual core)
- Intel® Core™ i3-4330 (4 MB, 3.5 GHz, DDR3 1600, 54 W, dual core)
- Intel® Core™ i3-4130 (3 MB, 3.4 GHz, DDR3 1600, 54 W, dual core)

Memory

Memory type	Unbuffered DDR3 / DDR3L ECC memory
Capacities	2 / 4 / 8 GB DIMMs
DIMM number	4
Max memory	32 GB

Hard drives

Type	Interface, bandwidth	Capacities (RPM)
Enterprise SATA, 3.5"	6 Gb/s	2 TB (7.2 K)
		3 TB (7.2 K)
		4 TB (7.2 K)
Enterprise Nearline SATA, 3.5"	6 Gb/s	500 GB (7.2 K)
		1 TB (7.2 K)
		2 TB (7.2 K)
		3 TB (7.2 K)

Altos T310 F3 Specifications



Enterprise SAS*, 3.5"	6 Gb/s	4 TB (7.2 K)
		1 TB (7.2 K)
		2 TB (7.2 K)
		3 TB (7.2 K)
Enterprise SAS*, 3.5"	6 Gb/s	4 TB (7.2 K)
		300 GB (15 K)
		450 GB (15 K)
		600 GB (15 K)

* **NOTE:** SAS drives require an add-on RAID card.

Optical drives

- DVD-ROM
- SuperMulti (DVD ± RW)

RAID cards

Model	Port number	RAID support
LSI® MegaRAID SAS 9240-4i	4 internal ports	0, 1, 5, 10
LSI® MegaRAID SAS 9260-8i	8 internal ports	0, 1, 5, 6, 10, 50, 60
LSI® MegaRAID SAS 9271-8i	8 internal ports	0, 1, 5, 6, 10, 50, 60

Ethernet network cards

Model	Port number	Bandwidth
Intel® X540-T2 Dual RJ-45 port 10GBASE-T (I/O module)	2	10 Gb/s
Intel® Gigabit CT2 desktop adapter	2	10/100/1000 Mbps
Intel® i350 Gigabit server adapter	2	10/100/1000 Mbps

TPM module

Optional TPM 1.2 module

Service and support

Acer Servers offer a comprehensive service suite to take care of daily IT needs. Users can select the 3-year standard warranty or choose extended warranties and services.

In a continuing effort to improve the quality of our products, information in this document is subject to change without notice. Images shown are only representations of some of the configurations available for this model. Availability may vary depending on region.

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