

# Altos T110 F3 Specifications

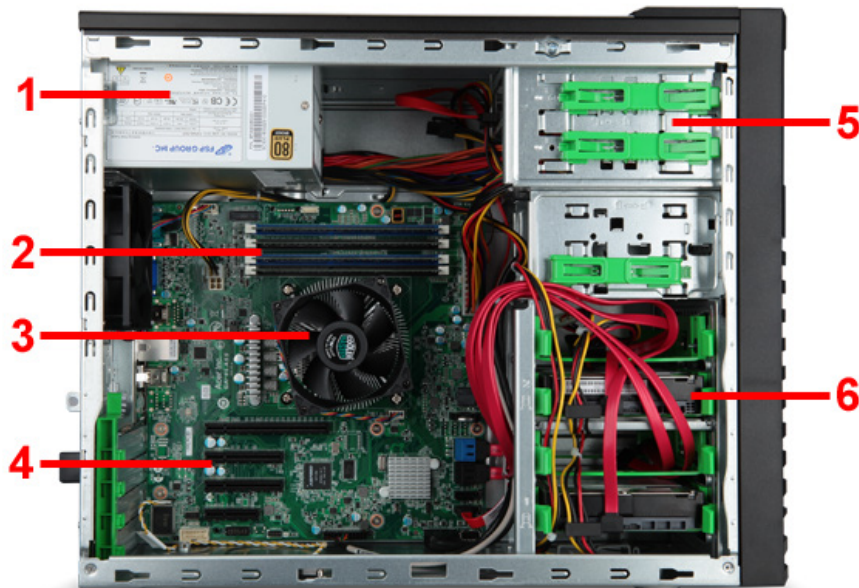
## Product overview

The Altos T110 F3 delivers true server-class features and expandability along with best price-performance technology to assure the success of your business. This single-socket tower server features an 80 PLUS® efficient power supply that runs smoothly and quietly for maximized productivity.



## Product views

### Internal view

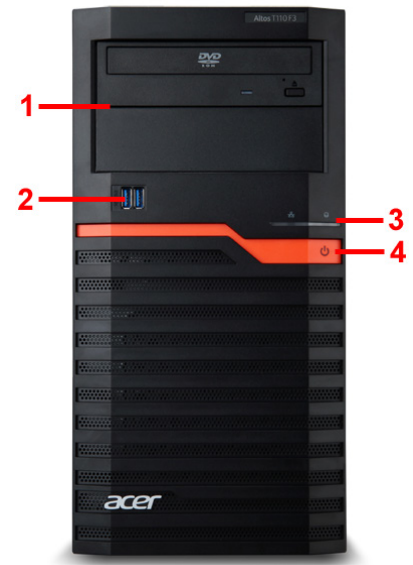


1. 500 W 80 PLUS® Gold- or Bronze-certified power supply
2. 4 x DDR3L ECC unbuffered DIMMs
3. Intel® Xeon® E3-1200 v3 series processor
4. 1 x PCIe 3.0 + 3 x PCIe 2.0 expansion slots
5. 2 x 5.25" media expansion bays
6. 4 x tool-less fixed hard drive bays

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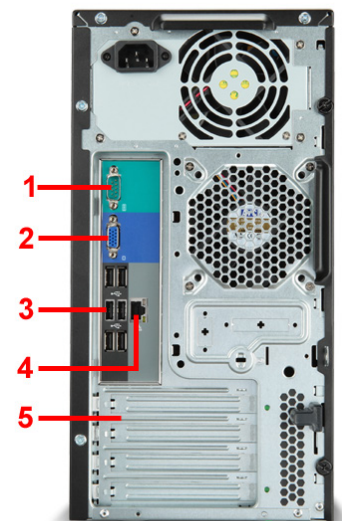
## Front View

1. 2 x 5.25" media expansion bays
2. 2 x USB 3.0 ports
3. LED indicators: HDD activity, LAN
4. Power Button



## Rear View

1. Serial port
2. Video port
3. 6 x USB 2.0 ports
4. Gigabit LAN port (RJ-45)
5. PCIe expansion



## Product Specifications

### What's New?

- Intel® Xeon® E3-1200 v3 series processors
- 500 W 80 PLUS® Gold- or Bronze-certified power supply
- 2 x SATA 3 connector (6 Gb/s)
- Front panel USB 3.0 ports
- Improved acoustics (possible under 23 dBA)

### Processors and Chipset

- Intel® Xeon® E3-1200 v3 family processor

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- Chipset: Intel® C222

## Memory

- Up to 4 x DDR3 unbuffered DIMMs

## Network Controllers

- 1 x Single-port Intel® I210 Ethernet controller

## Storage

- Hard disk form factor: 3.5"
- Type: SAS / SATA
- 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® C222 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® 3.0 x16 (x16 connector)
- PCIe® 2.0 x4 (x8 connector)
- PCIe® 2.0 x1 (x8 connector)
- PCIe® 2.0 x1 (x4 connector)

## Management

- System LAN LEDs

## Deployment/Serviceability

- Acer Smart Setup
- BIOS Update Tool

## Operating Systems

- 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 5.0 update 1

# Altos T110 F3 Specifications

## ***Input/output interface***

### **Front**

- 2 x USB 3.0 ports
- Power/off button
- LED indicators: power, HDD activity, LAN

### **Rear**

- 6 x USB 2.0 ports
- Gigabit LAN port (RJ-45)
- Video port
- Serial port

## ***Optical drive***

- 5.25" SATA SuperMulti drive

## ***Graphics***

- Embedded Intel® HD Graphics P4600
  - 32 MB dedicated memory

## ***Chassis/Form Factor***

- Micro ATX tower

## ***Power Supply***

Determined by SKU:

- 500 W 80 PLUS® Gold-certified fixed power supply, or
- 500 W 80 PLUS® Bronze-certified fixed power supply

## ***Security***

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

## ***Regulatory Compliant Standards***

Energy Star® 1.1 compliant

EMC

# Altos T110 F3 Specifications



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

## Safety

- MET
- CB
- GS
- UL
- CCC

## Environmental Specifications

<b>Dimensions</b>	180 (W) x 450 (D) x 358 (H) mm (7.1 x 17.7 x 14.1 inches)	
<b>Weight</b>	Maximum	12.4 kg (27.3 lbs.)
<b>System inlet temperature</b>	Operating	5° - 40° C (41° - 104° F)
	Non-operating	-20° - 60° C (-4° - 140° F)
<b>Relative humidity</b>	Operating	30 ~ 80 %
	Non-operating	5 ~ 95 %
<b>Acoustics</b>	<b>Idle</b>	
	LWAd	3.6 BA
	LpAm	22 dBA
	<b>Operating</b>	
	LWAd	4.0 BA
	LpAm	28 dBA
<b>Power</b>	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 <sup>1</sup>	Voltage	Connector	Location	Height
PCIE_1	CPU	PCIe Gen3	x16	3.3 V	x16	Onboard	Full height
PCIE_2	PCH	PCIe Gen2	x4	3.3 V	x8	Onboard	Full height
PCIE_3	PCH	PCIe Gen2	x1	3.3 V	x8	Onboard	Full height
PCIE_4	PCH	PCIe Gen2	x1	3.3 V	x4	Onboard	Full height

# Altos T110 F3 Specifications



## NOTE:

1. Indicates the number of physical electrical lanes running to a PCIe® connector.

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® C222 Platform Controller Hub
Simultaneous drive transfer channels	6 onboard SATA / SAS ports
Max throughput per channel	<ul style="list-style-type: none"><li>• 2x 6 Gb/s</li><li>• 4x 3 Gb/s</li></ul>
Data transfer method	<ul style="list-style-type: none"><li>• Non-RAID mode</li><li>• RAID mode</li></ul>
Drive type supported	Serial ATA
RAID levels support	<ul style="list-style-type: none"><li>• RAID 0, 1, 5 10 (Intel software RAID)</li></ul> <b>NOTE:</b> Intel software RAID only supports Windows OS
RAID function support	<ul style="list-style-type: none"><li>• Supports multiple logical volumes</li><li>• Setup through ROM based Array Configuration Utility</li></ul> Installation scripting support <b>NOTE:</b> This controller does not support hot plug or LED functions
RAID OS support	<ul style="list-style-type: none"><li>• Microsoft® Windows Server® 2012</li><li>• Microsoft® Windows Server® 2008 R2 SP1</li><li>• Red Hat® Enterprise Linux® 6.4</li><li>• Red Hat® Enterprise Linux® 5.9</li><li>• Novell® SUSE® Linux® Enterprise Server 11 SP3</li><li>• VMware ESXi 5.0 update 1</li></ul> <b>NOTE:</b> Intel software RAID only supports Windows OS
Additional features	<ul style="list-style-type: none"><li>• NCQ (Native Command Queuing)</li><li>• AHCI (Advanced Host Controller Interface)</li></ul>

## Onboard LAN specifications

Item	Description
Controller	1 x Single-port Intel® I210 Ethernet controller
Network interface	10Base-T / 100Base-TX / 1000Base-T
Compatibility standards	<ul style="list-style-type: none"><li>• IEEE 802.3 Ethernet interface for 10BASE-T</li><li>• IEEE 802.3ab Ethernet interface for 1000BASE-T</li><li>• IEEE 802.3u Ethernet interface for 100BASE-TX</li></ul>
Manageability	<ul style="list-style-type: none"><li>• PXE, iSCSI boot</li></ul>
Connector	RJ-45
Supported cable type	Cat 5e, Cat 6 wire

## Memory specifications and population

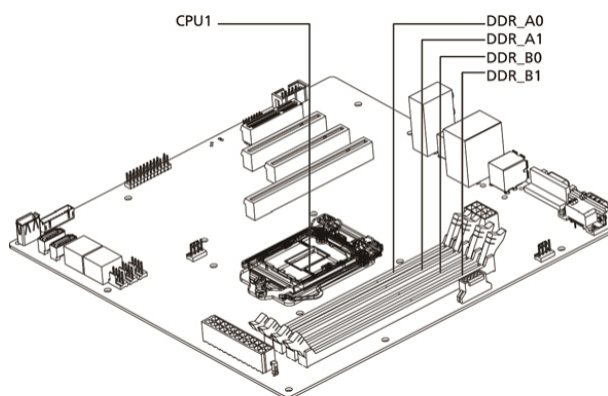
Item	Description
Supported memory types	<ul style="list-style-type: none"> <li>• Unbuffered DDR3L 800 / 1066 / 1333 MHz</li> <li>• 1.35 V (DDR3L)</li> </ul> <p><b>NOTE:</b> Acer does not qualify mixed memory configurations of memory type, capacity or make.</p>
Population	Acer's validated memory populations 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

- 1 GB, 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.

# Altos T110 F3 Specifications



## 4. Speed

- PC3 – 6400 => DDR3- 800
- PC3 – 8500 => DDR3- 1066
- PC3 – 10600 => DDR3- 1333

## Graphics Specifications

Embedded Intel® HD Graphics P4600

- 32 MB dedicated memory

## Power specifications

### 500 W 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 Gold-certified power supply)

Idle	Light-configuration	LWAd: 3.6BA	LpAm: 22 dBA
	Full-configuration	LWAd: 4.5 BA	LpAm: 33 dBA
Operating	Light-configuration	LWAd: 4.0 BA	LpAm: 28 dBA
	Full-configuration	LWAd: 4.8 BA	LpAm: 36 dBA

### Acoustic Noise (500 W Bronze-certified power supply)

Idle	Light-configuration	LWAd: 3.8 BA	LpAm: 25 dBA
	Full-configuration	LWAd: 4.5 BA	LpAm: 33 dBA
Operating	Light-configuration	LWAd: 4.0 BA	LpAm: 28 dBA
	Full-configuration	LWAd: 4.8 BA	LpAm: 36 dBA



## Acer server software utilities

### Smart Setup 2.2

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.

## Available options

### Processors

#### Intel® Xeon® E3-1200 v3 processors

- E3-1280 v3 (8 MB L3 cache, 3.60 GHz, DDR3 1600/1333/1066 MHz, 69 W, quad core)
- E3-1270 v3 (8 MB L3 cache, 3.50 GHz, DDR3 1600/1333/1066 MHz, 69 W, quad core)
- E3-1240 v3 (8 MB L3 cache, 3.40 GHz, DDR3 1600/1333/1066 MHz, 69 W, quad core)
- E3-1230 v3 (8 MB L3 cache, 3.30 GHz, DDR3 1600/1333/1066 MHz, 69 W, quad core)
- E3-1220 v3 (8 MB L3 cache, 3.10 GHz, DDR3 1600/1333/1066 MHz, 69 W, quad core)

### Memory

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

### Hard drives

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

**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

# Altos T110 F3 Specifications



## Ethernet network cards

Model	Port number	Bandwidth
Intel® Gigabit CT2 desktop adapter	2	10/100/1000 Mbps
Intel® i350 Gigabit server adapter	2	10/100/1000 Mbps

## Tape Backup Unit (TBU)

Model	Tape capacity	Form factor
DAT72 SATA/USB TBU	36 GB 72 GB	Internal 5.25" half-height
DAT160 USB TBU	160 GB	Internal 5.25" half-height

## TPM module

TPM 1.2 module with STMicro chip

## 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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