



AI161MT

Analytic Server Mini Tower

User Manual



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About This Manual

Conventions

Safety Symbols

Safety Precautions

**Regulatory and Integration
Information**

Convention

To make sure that you perform certain tasks properly, take note of the following symbols used throughout this manual.

**Warning:**

Provides Information to prevent injury in the process of completing a task.

**Caution:**

Provides Information to prevent damage to the components in the process of completing a task.

**Important:**

Provides Information required for completing a task.

**Note:**

Provides Tips to aid in completing a task.

Safety Symbols

The following symbols are placed on some components of the system to alert the user to potential hazards:



WARNING:	Electric Shock Hazard – To reduce risk of injury from electric shock hazards, do not open this component.
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WARNING:	Contains no user or field serviceable parts – To reduce the risk of injury from electric shock hazards, do not open this component.
-----------------	---



WARNING:	Hot Surface or Component - To reduce risk of injury from a hot component; allow the surface to cool before touching.
-----------------	--



WARNING:	Insert Network Interface Only - Any receptacle (e.g. RJ45) marked with this symbol indicates a network interface connection. To reduce the risk of electric shock, fire or damage to equipment, do not plug telephone or telecommunications connectors into this receptacle.
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WARNING:	This symbol, on power supplies or systems, indicates that the equipment is supplied by multiple sources of power. To reduce the risk of injury from electric shock, remove all power cords to completely power down the system.
-----------------	---



WARNING:

This symbol indicates that the component exceeds the recommended weight for one individual to handle safely. To reduce the risk of personal injury or damage to the equipment, observe local occupational health and safety requirements and guidelines for manual material handling

Safety Precautions



Technician Notes

- Only authorized technicians should attempt to repair this equipment.
- Before installing this system, carefully read all the manuals included with the system.
- All repair procedures allow only module replacement. Because of the complexity of the individual boards and sub-assemblies, no one should attempt to make repairs at the component level or make modifications to any printed wiring board. Improper repairs can create a safety hazard.
- To reduce the risk of personal injury from electric shock and hazardous energy levels, do not exceed the level of repairs specified in these procedures.
- The system is designed to be electrically grounded. To ensure proper operation, plug the AC power cord into a properly grounded AC outlet only.



Electrostatic Discharge Precautions

- Electrostatic discharge (ESD) can damage static sensitive devices or micro circuitry. Proper packaging and grounding techniques are required to prevent damage.
- Keep electrostatic-sensitive parts in their containers until they arrive at a staticfree work area.
- Use a wrist strap connected to the work surface as well as properly grounded tools and equipment
- Keep the area free of nonconductive materials such as ordinary plastic tools and foam packing.
- Avoid touching pins, leads, or circuitry.
- Always place drives with printed circuit board (PCB) assembly-side down.
- Grasp cards and boards by the edges. Hold drives by the frame. Avoid touching the solder joints or pins.

- If you need to lay the device down while it is out of the antistatic bag, lay it on the antistatic bag. Before picking it up again, touch the antistatic bag and the metal frame of the system unit at the same time.



Rack Warnings

If you plan to rack mount the AS 10MT, follow the rack manufacturer's safety instructions.

- Install the enclosure only in a rack that has been properly secured in an area with suitable environmental conditions.
- Have someone assist you during physical installation.
- To properly ventilate the system, you must provide at least 7.6 cm of clearance at the front and back of the system.
- To reduce the risk of personal injury or damage to equipment, always ensure that the rack is adequately stabilized prior to extending a component outside the rack. A rack may become unstable if more than one component is extended. Extend only one at a time.
- Do not stand or step on any components in the rack.
- If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (T_{ma}) specified by the manufacturer.
- Do not overload the AC power supply branch circuit that provides power to the rack. Observe extension cable and power strip ratings. Ensure that the total ampere rating of all equipment plugged into the extension cable or power strip does not exceed 80 percent of the ampere ratings limit for the extension cable or power strip.



System Warnings

- Avoid dust, humidity, and extreme temperatures; place the system on a stable surface.
- To reduce the risk of personal injury from hot surfaces, allow the hot-plug disk modules and other system modules to cool before touching them.
- To reduce the risk of electric shock or damage to the equipment, do not disable the power cord grounding plug. The grounding plug is an important safety feature.
- Ensure the power cord is inserted into a grounded electrical outlet that is easily accessible at all times. Unplug the power cord from the power supply module to shut off power to the equipment
- Protect the storage system from power fluctuations and temporary power interruptions with a regulating uninterruptible power supply (UPS). This device protects the hardware from damage caused by power surges and voltage spikes and keeps the system operational during a power failure.
- The storage system must always be operated with all hot plug modules installed or slot covers in place to ensure proper cooling.
- Route power cords so that they will not be walked on or pinched by items placed upon or against them. Pay particular attention to the plug, electrical outlet, and the point where the cords exit from the product.

Regulatory and Integration Information

FCC Notice

Part 15 of the Federal Communications Commission (FCC) Rules and Regulations has established Radio Frequency (RF) emission limits to provide an interference-free radio frequency spectrum. Many electronic devices, including computers, generate RF energy incidental to their intended function and are, therefore, covered by these rules. These rules place computers and related peripheral devices into two classes, A and B, depending upon their intended installation. Class A devices are those that may reasonably be expected to be installed in a business or commercial environment. Class B devices are those that may reasonably be expected to be installed in a residential environment (for example, personal computers). The FCC requires devices in both classes to bear a label indicating the interference potential of the device, as well as additional operating instructions for the user.

The rating label on the device shows which class (A or B) the equipment falls into. Class A devices do not have an FCC logo or FCC ID on the label. Class B devices have an FCC logo or FCC ID on the label. Once the class of the device is determined, refer to the following corresponding statement.

This equipment is assembled with components that have been tested and found to comply with the limit pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at personal expense.

Declaration of Conformity for Products Marked with the FCC Logo—United States Only

This device is assembled from components that complies with Part 15 of the FCC Rules Operation and is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For questions regarding your product, please contact your sales representative.

European Union Notice

CE Warning

The motherboard complies with directive 2014/53/EU issued by the Commission of the European Community.

It complies with EU radiation exposure limits set forth for an uncontrolled environment.

Power Cords

The power cord set included in the system meets the requirements for use in the country where the system was purchased. If this system is to be used in another country, contact your sales representative to purchase a power cord that is approved for use in that country.

The power cord must be rated for the product and for the voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cord should be greater than the voltage and current rating marked on the product. In addition, the cross-sectional area of the wires must be a minimum of 1.00mm² or 18AWG, and the length of the cords must be between 1.8m (6 feet) and 3.6m (12 feet). If you have questions about the type of power cord to use, contact your sales representative.

The following statement applies only to rack-installed products that are GS-Marked:

This equipment is not intended for use at workplaces with visual display units, in accordance with §2 of the German ordinance for workplaces with visual display units."

Chapter 1

Introduction

Audience Assumptions

About This Guide

Product Introduction

System Specifications

Audience Assumptions

This manual assumes that you are a service technician or network administrator familiar with computer hardware, data storage and network administration terminology and tasks.

About This Guide

This user guide provides step by step instructions on how to install, use and maintain the AI161MT Analytic Server. This manual is generally organized as follows:

- General introduction to the AI161MT and its components.
- What you need to do before you start.
- Detailed description of each hardware module and instructions for installation and removal.
- Initializing your system, setting up your system on a network, configuring your storage, and connecting hosts.
- Ongoing usage and maintenance information provided in a reference format and organized by major system component.

Product Introduction

AI161MT is a high-performance video viewing and administration Server.

The AI161MT is optimized for Video Surveillance applications and delivers the performance required for the most demanding megapixel installations. With support for up to 6 HD monitors with 8K resolution and 3D display, it provides the highest performance in high definition video surveillance viewing.

Powerful viewing and administration server built around the high performance Intel® i7/i9 processor.

Purpose-built

Open platform to integrate Video Management Software. All major supported Video Management Software providers are prequalified. More are continually added to ensure the widest possible certification coverage.

Effortless installation

Effortless installation, management and administration along with advance RAID

Complete Security Solution

Rasient provides a complete physical security solution. All necessary components are offered, including high-performance recording, viewing/monitoring and administration servers, and high-performance storage.

System Specification

Core Technology	Intel i7 10700 or i9 10900k
Memory size	up to 64 GB
Memory type	DDR4 2666 DIMM
Video Storage Performance	Up to 36Mbs/5MBs
Expansion	
Expansion Slot	1, used for installed Graphics card
Slot Type	1 x PCI-E x16 (Gen3 x16 Link)
Storage	1x 240GB SSD for OS (optional 512GB)
	3x 3.5" HDD
	Additional 2x 2.5" SSD
Networking	2 x GbE
Display Outputs	1x HDMI, 1x DVI-D, 1x VGA
On Board I/O	2x USB 3.1, 2x USB 2.0, Keyboard and Mouse PS2, HDMI, DVI, VGA, 1x USB 3.1 type C
Compliance	
Safety	UL/IEC 106950 (power supply)
EMI	FCC, CE (Motherboard, Power Supply)
Physical Characteristics	
Dimensions (in./mm)	10.63" x 8.35" x 15.47" / 270 x 212 x 393mm
Weight	20 lbs/9 kg
Power	Single
Voltage	110/220V AC
Watts	620W
Operating Environment	
Operation temperature	10°C ~ 35°C
Non operation temperature	-40°C ~ 70°C
Humidity:	20% ~ 90% (Non condensing)

* Maximum camera supported is calculated using 1MP HD cameras using H.264 at 15fps,

Chapter 2

Hardware Details

Front Panel

Rear Panel

Front panel

The server displays a simple yet stylish front panel with easily accessible features. The power and reset buttons, LED indicators, and two USB ports, microphone and speaker jack are located on the top side of front panel.



Figure 1: Front View





Rear panel

The rear panel includes a slot for the motherboard rear I/O ports, expansion slots, a chassis lock and intrusion switch, a vent for the system fan, and power supply module.

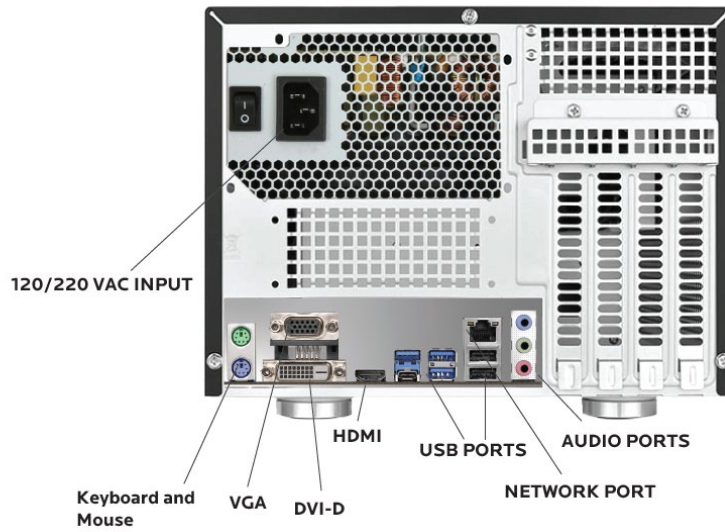
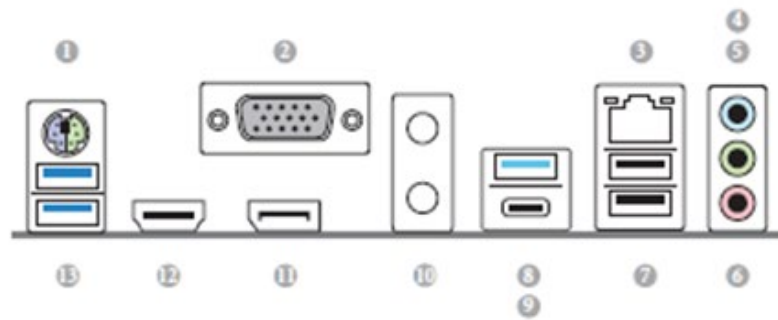


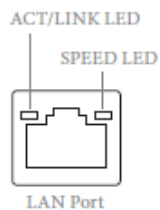
Figure 2: Rear Panel



No.	Description	No.	Description
1	PS/2 Mouse/Keyboard Port	8	USB 3.2 Gen2 Type-A Port (USB31_TA_1)
2	D-Sub Port	9	USB 3.2 Gen2 Type-C Port (USB31_TC_1)
3	LAN RJ-45 Port*	10	Antenna Bracket
4	Line In (Light Blue)**	11	DisplayPort 1.4
5	Front Speaker (Lime)**	12	HDMI Port
6	Microphone (Pink)**	13	USB 3.2 Gen1 Ports (USB3_1_2)
7	USB 2.0 Ports (USB_34)		

Figure 3: Rear Panel I/O

* There are two LEDs on each LAN port. Please refer to the table below for the LAN port LED indications.



Activity / Link LED		Speed LED	
Status	Description	Status	Description
Off	No Link	Off	10Mbps connection
Blinking	Data Activity	Orange	100Mbps connection
On	Link	Green	1Gbps connection

Figure 4: LAN LEDs

**** Function of the Audio Ports in 7.1-channel Configuration:**

Port	Function
Light Blue (Rear panel)	Rear Speaker Out
Lime (Rear panel)	Front Speaker Out
Pink (Rear panel)	Central /Subwoofer Speaker Out
Lime (Front panel)	Side Speaker Out

Figure 5: Audio Ports

Chapter 2

Before Deployment

Configuration Plan

Thoroughly research and establish an installation and configuration plan for your specific network environment. You should also plan how you want to configure your storage.

Gather information

The system has the ability to be set with one or multiple IP addresses. The simple online configuration procedures will allow you to set-up your system on your network using these IP addresses. Be sure to ask your network administrator to provide you with sufficient IP addresses for your planned configuration. Your administrator should provide the following information so that you can properly configure your system on your network:

IP Address(s)

Gateway address

Net mask address

DNS server information.

Packing Checklist

Make sure you have all the components that shipped with your system. If any item is damaged or missing, please contact your sales representative for a replacement. The AS 61SSD is shipped with the following:

Check your system package for the following items:

Model Name AI161MT

Chassis: Mini tower chassis

Component: AS61 Mini tower

1 x 620W Power Supply

Accessories:

1 x AC Power Cable