



R9000 SERIES RUGGED COMPUTERS

R9000E-AI

Rugged Computer w/ LGA 1200 for Intel 10th Gen CPU & W480E PCH, 2x PCIe/PCI Expansion

Features

- Intel® Core™ i7-10700TE, 8 Cores, 16MB cache, up to 4.4 GHz
- Intel® W480E chipset
- 32GB DDR4 Memory
- 1TB 2.5" SATA SSD
- NVIDIA ATX A2000 12GB
- 4x mDP, 2x DisplayPort, 1x DVI-I
- 2x Intel® GbE supporting Wake-on-LAN and PXE
- 2x Full-size Mini PCIe for communication or expansion modules, 2x SIM socket
- 1x M.2 (E Key, PCIe x1, USB 2.0, 2230)
- 8x RS-232/422/485 (6x internal), 6x USB 3.2 Gen 2, 3x USB 3.2 Gen 1 (1x internal)
- 8x DI + 8x DO with isolation
- 9 to 48VDC Wide Range Power Input Supporting AT/ATX Mode
- Wide Operating Temperature -25°C to 70°C (35W CPU)
- TPM 2.0 Supported
- Wifi / Bluetooth Optional
- Windows 10 IoT Enterprise
- UL Listed



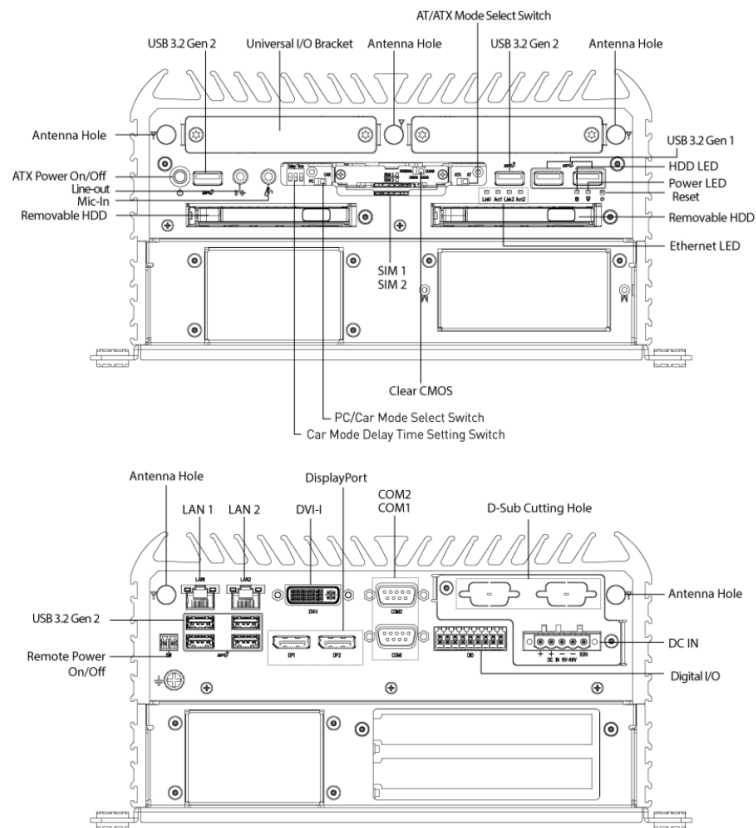
Specifications

System	
Processor	
Support 10th Gen Intel® CML S Processor (LGA 1200, 35W TDP)	
- Intel® Xeon® W-1290TE, 10 Cores, 20MB Cache, up to 4.5 GHz	
- Intel® Core™ i9-10900TE, 10 Cores, 20MB Cache, up to 4.5 GHz	
- Intel® Core™ i7-10700TE, 8 Cores, 16MB cache, up to 4.4 GHz	
- Intel® Core™ i5-10500TE, 6 Core, 12MB Cache, 3.7 GHz	
- Intel® Core™ i3-10100TE, 4 Cores, 9MB Cache, up to 3.6 GHz	
System Chipset	Intel® W480E Chipset
LAN Chipset	GbE1: Intel I219 (Support Wake-on-LAN and PXE) GbE2: Intel I210 (Support Wake-on-LAN and PXE)
Audio Codec	Realtek ALC888S
System Memory	2x 260-Pin DDR4 2666 /2933MHz SODIMM. Max. up to 64GB (ECC and Non-ECC)
Graphics	• Intel® UHD Graphics 630 • NVIDIA RTX A2000 12GB
BIOS	AMI 256Mbit SPI BIOS
Watchdog	Software Programmable Supports 1~255 sec. System Reset
TPM	TPM 2.0
Display	
Display Port	4x mDP, 2x DisplayPort, support resolution 4096 x 2304, DP++
DVI	1x DVI-I, support resolution 1920 x 1200
VGA	Yes (by optional split cable)
Storage	
SIM Socket	2x External SIM socket (Mini PCIE attached)
SSD/HDD	1x Internal 2.5" SATA/SSD HDD Bay (support H=9mm) 2x Removable 2.5" SATA HDD Bay (support H=7mm, Hot-swappable) Support RAID 0, 1, 5
Expansion	
M.2	1x M.2 (E Key, PCIe x1, USB 2.0, 2230)
Mini PCIe	2x Full-size Mini PCIe
Expansion Modules	
Optional:	
• 4-Port LAN/POE RJ45 10GbE with Intel X710 Chipset	
• Wifi / Bluetooth	
Card Dimension	235 (L) x 112 (H) mm
I/O	
Audio	1x Mic-in, 1x Line-out
CAN	2x CAN 2.0 A/B 2-pin Internal header
COM	2x RS-232/422/485 ; 6x RS-232/422/485 (internal)
DIO	8 in / 8 out (Isolated)
LAN	2x RJ45
Universal I/O Bracket	2x Universal I/O Bracket (By mini PCIe interface)
USB	6x USB 3.2 Gen 2 (10 Gbps) 3x USB 3.2 Gen 1 (5 Gbps, 1x Internal) 2x USB 2.0 header (internal)
Others	5x WiFi Antenna Holes 1x Power Switch, 1x AT/ATX Switch, 1x Remote Power On/Off 1x PC/Car Mode Switch, 1x Delay Time Switch 1x Removable CMOS Battery 4x 4-Pin Power Connector, 1x 4-PIN FAN Connector
Operating System	
Windows	Windows 10 IoT Enterprise

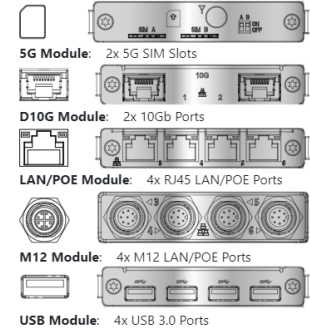
Power	
Power Adapter	Optional AC/DC 24V/5A, 120W Optional AC/DC 24V/9.2A, 220W
Power Mode	AT, ATX
Power Ignition Sensing	Power Ignition Management
Power Supply Voltage	9~48VDC
Power Connector	5-pin Terminal Block
Power Protection	OVP (Over Voltage Protection), OCP (Over Current Protection), Reverse Protection
Environment	
Operating Temperature	-25°C to 70°C (35W CPU)
Storage Temperature	-30°C to 85°C
Relative Humidity	10% to 95% (non-condensing)
Certification	UL 62368 Ed. 3, CE, FCC Class A
Vibration	With SSD: 5 Grms, 5 - 500 Hz, 0.5 hr/axis With HDD: 1 Grms, 5 - 500 Hz, 0.5 hr/axis
Shock	With SSD: 50G, half sine, 11ms
Physical	
Dimensions	240 (W) x 261 (D) x 126.8 (H) mm
Weights	5.6 kg
Construction	Extruded Aluminum with Heavy Duty Metal
Mounting Options	Wall Mounting

• All specifications and photos are subject to change without notice.

External I/O Mechanical Layout



Available Modules



Dimension

Unit: mm

