6th Gen Intel® Core™ Processor Rackmount Box PC

IoT Solutions Alliance

RM641-SD

Q170



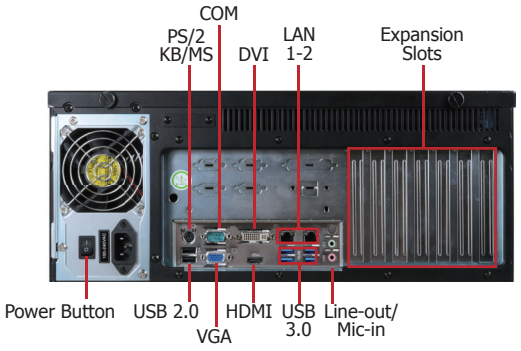
Features

- 6th Gen Intel Core Rackmount 4U Box PC
- Up to 1x 3.5"/2.5" SATA drive bay and 3x optical drive bays
- Front-accessible system fan and USB interfaces
- Supports 7 expansion slots: 2 PCIe x16, 2 PCIe x4, 3 PCI
- Designed for industrial server application

Panel

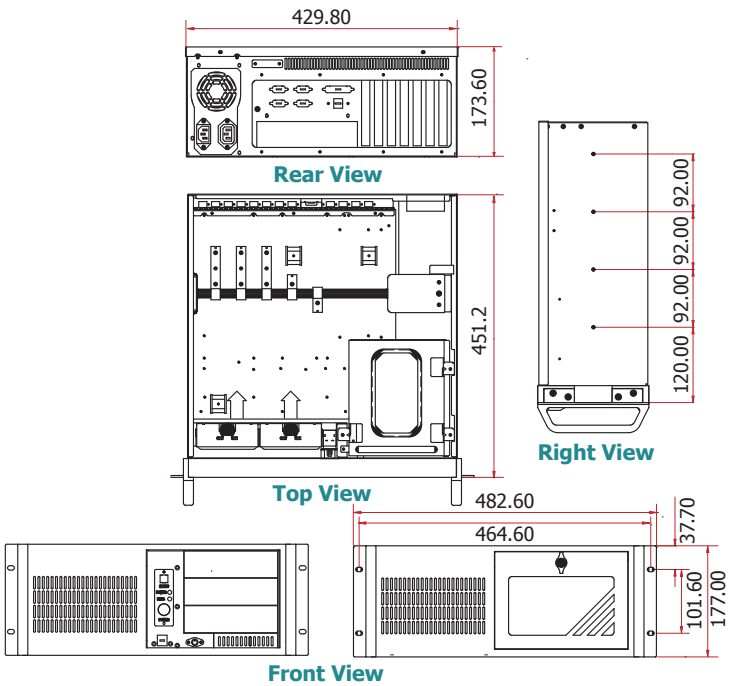


Front View



Rear View

Dimensions



Specifications

SYSTEM	**Processor**	LGA 1151 Socket 6th Generation Intel® Core™ Processors Intel® Core™ i7-6700 Processor, Quad Core, 8M Cache, 3.4GHz (4.0GHz), 65W Intel® Core™ i7-6700TE Processor, Quad Core, 8M Cache, 2.4GHz (3.4GHz), 35W Intel® Core™ i5-6500 Processor, Quad Core, 6M Cache, 3.2GHz (3.6GHz), 65W Intel® Core™ i5-6500TE Processor, Quad Core, 6M Cache, 2.3GHz (3.3GHz), 35W Intel® Core™ i3-6100 Processor, Dual Core, 3M Cache, 3.7GHz, 47W Intel® Core™ i3-6100TE Processor, Dual Core, 4M Cache, 2.7GHz, 35W Intel® Pentium® Processor G4400, Dual Core, 3M Cache, 3.3GHz, 47W Intel® Pentium® Processor G4400TE, Dual Core, 3M Cache, 2.4GHz, 35W	
	Chipset	Intel® Q170 Chipset	
	Memory	Four 288-pin DIMM up to 64GB	Dual Channel DDR4 1866/2133MHz
	BIOS	Insyde SPI 128Mbit	
GRAPHICS	**Controller**	Intel® HD Gen 9 Graphics	
	Feature	OpenGL 5.0, DirectX 12, OpenCL 2.1 HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9 HW Encode: MPEG2, AVC/H264, JPEG, HEVC/H265, VP8, VP9	
	Display	1 x VGA 1 x DVI-I (DVI-D signal) 1 x HDMI	VGA: resolution up to 1920x1200 @ 60Hz DVI: resolution up to 1920x1200 @ 60Hz HDMI: resolution up to 4096x2160 @ 24Hz
	Triple Displays	VGA + DVI-I (DVI-D signal) + HDMI	
STORAGE		3 x 5.25" Optical Drive Bays (Front Accessible) 1 x 3.5"/2.5" SATA 3.0 Drive Bay (Front Accessible)	
EXPANSION	**Interface**	2 x PCIe x16 (1 x16 or 2 x8 signal) (Gen 3) 2 x PCIe x4 (Gen 3) 3 x PCI	
AUDIO	**Audio Codec**	Realtek ALC888S-VD2-GR	
ETHERNET	**Controller**	1 x Intel® I210AT PCIe (10/100/1000Mbps) 1 x Intel® I219LM PCIe with iAMT11.0 (10/100/1000Mbps) (only Core i7/i5 supports iAMT)	
LED	**Indicators**	1 x Power LED 1 x HDD LED	
FRONT I/O	**USB**	2 x USB 2.0 (available upon request)	
	Front Door	1 x Drive Panel Door With Keylock	
	Buttons	1 x Power Switch 1 x Reset Switch	
REAR I/O	**Ethernet**	2 x GbE (RJ-45)	
	Serial	1 x RS-232/422/485 (RS-232 w/ power) (DB-9)	
	USB	4 x USB 3.0 2 x USB 2.0	
	PS/2	1 x PS/2 (mini-DIN-6)	
	Display	1 x VGA 1 x DVI-I (DVI-D signal) 1 x HDMI	
	Audio	1 x Line-in (available upon request) 1 x Line-out 1 x Mic-in	
	Buttons	1 x ATX Switch	
COOLING	**Fan**	2 x 92cm System Fan with Quick Access Filter	
WATCHDOG TIMER	**Output & Interval**	System Reset, Programmable via Software from 1 to 255 Seconds	
POWER	**Supply**	ATX PS/2 Power Supply 500W	AC Power Input : 90~264V
OS SUPPORT		Windows 7 (/WES7) 32/64-bit Windows 8.1 (64-bit) Windows 10 IoT Enterprise 64-bit	Debian 8 (with VESA graphic driver) CentOS 7 (with VESA graphic driver) Linux
MECHANISM	**Construction**	SECC	
	Mounting	Flexible Hold Down Bar	
	Dimensions (W x H x D)	483mm x 177mm x 451mm	
	Weight	21.7kg	
ENVIRONMENT	**Operating Temperature**	0 to 45°C	
	Storage Temperature	-20 to 60°C	
	Relative Humidity	0 to 90% RH (non-condensing)	
STANDARDS AND CERTIFICATIONS	**Shock**	Operating: 3G	Non-operating: 5G
	Vibration	Operating: Random 5~500Hz 1G	Non-operating: Sweep Sine 10~500Hz 1.5G
	Package Drop	ISTA Project 1A	
	Certification	CE, FCC, RoHS	

Ordering Information

Model Name	Part Number	Description
RM641-SD	750-RM6411-100G	RM641-SD631, 4U Rackmount System, SD631-Q170, 2 LAN, 1 COM, 6 USB, 7 Expansion Slots, ATX PS/2 500W, RoHS

Optional Items

Optional Items	Part Number	Description
CPU	785-1151DL	CPU, LGA1151, Long-Term Support, RoHS
Memory	TBD	DIMM, DDR4 Module, 8GB, RoHS
	TBD	DIMM, DDR4 Module, 4GB, RoHS
	TBD	DIMM, DDR4 Module, 2GB, RoHS
HDD	785-H351T0B	3.5” SATA HDD, 1TB, RoHS
	785-H35500G	3.5” SATA HDD, 500GB, RoHS
	785-H25500G	2.5” SATA HDD, 500GB, RoHS
HDD Bracket	622-050050-000G	5.25" to 3.5" HDD Bracket
SSD Bracket	A31-028264-000G	3.5" to 2.5" SSD Bracket
Power Supply	671-330005-000G	ATX PS/2, 300W, 24pin, RoHS
	671-350001-000G	ATX PS/2, 500W, 100~240V, RoHS
Power Cord	785-PWRD	Power Cord, Standards (USA/EUR/CH), 1.8m, RoHS

Packing List

- 1 RM641-SD System Unit (including SD631-Q170 MB, CPU cooler, ATX 500W PSU)
- 1 SATA Cable
- 1 Quick Installation Guide

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