

## RM641-SD

Q170



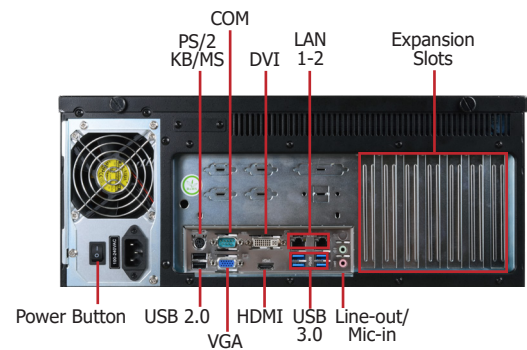
### Features

- 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

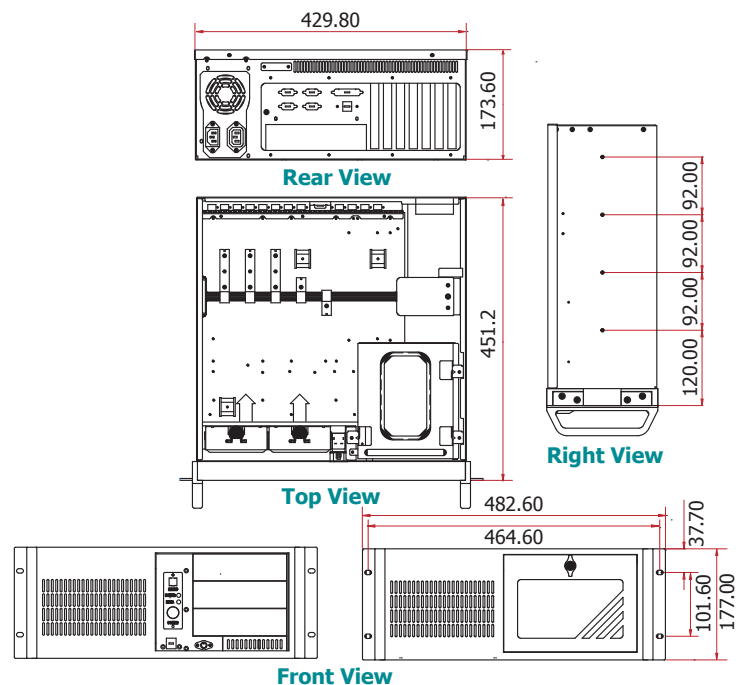


Front View



Rear View

### Dimensions



## Specifications

|                                     |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                             |
|-------------------------------------|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| <b>SYSTEM</b>                       | <b>Processor</b>                | LGA 1151 Socket<br>6th Generation Intel® Core™ Processors<br>Intel® Core™ i7-6700 Processor, Quad Core, 8M Cache, 3.4GHz (4.0GHz), 65W<br>Intel® Core™ i7-6700TE Processor, Quad Core, 8M Cache, 2.4GHz (3.4GHz), 35W<br>Intel® Core™ i5-6500 Processor, Quad Core, 6M Cache, 3.2GHz (3.6GHz), 65W<br>Intel® Core™ i5-6500TE Processor, Quad Core, 6M Cache, 2.3GHz (3.3GHz), 35W<br>Intel® Core™ i3-6100 Processor, Dual Core, 3M Cache, 3.7GHz, 47W<br>Intel® Core™ i3-6100TE Processor, Dual Core, 4M Cache, 2.7GHz, 35W<br>Intel® Pentium® Processor G4400, Dual Core, 3M Cache, 3.3GHz, 47W<br>Intel® Pentium® Processor G4400TE, Dual Core, 3M Cache, 2.4GHz, 35W |                                                                                                                             |
|                                     | <b>Chipset</b>                  | Intel® Q170 Chipset                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                             |
|                                     | <b>Memory</b>                   | Four 288-pin DIMM up to 64GB                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Dual Channel DDR4 1866/2133MHz                                                                                              |
|                                     | <b>BIOS</b>                     | Insyde SPI 128Mbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                             |
|                                     | <b>Controller</b>               | Intel® HD Gen 9 Graphics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                             |
| <b>GRAPHICS</b>                     | <b>Feature</b>                  | OpenGL 5.0, DirectX 12, OpenCL 2.1<br>HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9<br>HW Encode: MPEG2, AVC/H264, JPEG, HEVC/H265, VP8, VP9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                             |
|                                     | <b>Display</b>                  | 1 x VGA<br>1 x DVI-I (DVI-D signal)<br>1 x HDMI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | VGA: resolution up to 1920x1200 @ 60Hz<br>DVI: resolution up to 1920x1200 @ 60Hz<br>HDMI: resolution up to 4096x2160 @ 24Hz |
|                                     | <b>Triple Displays</b>          | VGA + DVI-I (DVI-D signal) + HDMI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                             |
|                                     |                                 | 3 x 5.25" Optical Drive Bays (Front Accessible)<br>1 x 3.5"/2.5" SATA 3.0 Drive Bay (Front Accessible)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                             |
| <b>STORAGE</b>                      |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                             |
| <b>EXPANSION</b>                    | <b>Interface</b>                | 2 x PCIe x16 (1 x16 or 2 x8 signal) (Gen 3)<br>2 x PCIe x4 (Gen 3)<br>3 x PCI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                             |
| <b>AUDIO</b>                        | <b>Audio Codec</b>              | Realtek ALC885-VD2-GR                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                             |
| <b>ETHERNET</b>                     | <b>Controller</b>               | 1 x Intel® I210AT PCIe (10/100/1000Mbps)<br>1 x Intel® I219LM PCIe with iAMT11.0 (10/100/1000Mbps) (only Core i7/i5 supports iAMT)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                             |
| <b>LED</b>                          | <b>Indicators</b>               | 1 x Power LED<br>1 x HDD LED                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                             |
| <b>FRONT I/O</b>                    | <b>USB</b>                      | 2 x USB 2.0 (available upon request)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                             |
|                                     | <b>Front Door</b>               | 1 x Drive Panel Door With Keylock                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                             |
|                                     | <b>Buttons</b>                  | 1 x Power Switch<br>1 x Reset Switch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                             |
| <b>REAR I/O</b>                     | <b>Ethernet</b>                 | 2 x GbE (RJ-45)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                             |
|                                     | <b>Serial</b>                   | 1 x RS-232/422/485 (RS-232 w/ power) (DB-9)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                             |
|                                     | <b>USB</b>                      | 4 x USB 3.0<br>2 x USB 2.0                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                             |
|                                     | <b>PS/2</b>                     | 1 x PS/2 (mini-DIN-6)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                             |
|                                     | <b>Display</b>                  | 1 x VGA<br>1 x DVI-I (DVI-D signal)<br>1 x HDMI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                             |
|                                     | <b>Audio</b>                    | 1 x Line-in (available upon request)<br>1 x Line-out<br>1 x Mic-in                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                             |
|                                     | <b>Buttons</b>                  | 1 x ATX Switch                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                             |
|                                     | <b>Fan</b>                      | 2 x 92cm System Fan with Quick Access Filter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                             |
| <b>COOLING</b>                      |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                             |
| <b>WATCHDOG TIMER</b>               | <b>Output &amp; Interval</b>    | System Reset, Programmable via Software from 1 to 255 Seconds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                             |
| <b>POWER</b>                        | <b>Supply</b>                   | ATX PS/2 Power Supply 500W                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | AC Power Input : 90~264V                                                                                                    |
| <b>OS SUPPORT</b>                   |                                 | Windows 7 (/WES7) 32/64-bit<br>Windows 8.1 (64-bit)<br>Windows 10 IoT Enterprise 64-bit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Debian 8 (with VESA graphic driver)<br>CentOS 7 (with VESA graphic driver)<br>Linux                                         |
|                                     |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                             |
| <b>MECHANISM</b>                    | <b>Construction</b>             | SECC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                             |
|                                     | <b>Mounting</b>                 | Flexible Hold Down Bar                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                             |
|                                     | <b>Dimensions ( W x H x D )</b> | 483mm x 177mm x 451mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                             |
|                                     | <b>Weight</b>                   | TBD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                             |
| <b>ENVIRONMENT</b>                  | <b>Operating Temperature</b>    | 0 to 45°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                             |
|                                     | <b>Storage Temperature</b>      | -20 to 60°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                             |
|                                     | <b>Relative Humidity</b>        | 0 to 90% RH (non-condensing)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                             |
|                                     | <b>Shock</b>                    | Operating: 3G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Non-operating: 5G                                                                                                           |
| <b>STANDARDS AND CERTIFICATIONS</b> | <b>Vibration</b>                | Operating: Random 5~500Hz 1G                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Non-operating: Sweep Sine 10~500Hz 1.5G                                                                                     |
|                                     | <b>Package Drop</b>             | ISTA Project 1A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                             |
|                                     | <b>Certification</b>            | TBD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                             |
|                                     |                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                             |



## ► 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<br>(including SD631-Q170 MB, CPU cooler, ATX 500W PSU) |
| • 1 SATA Cable                                                                  |
| • 1 Quick Installation Guide                                                    |