

**Preliminary**

# **RAK-100S Series**

1U Rack-mountable Industrial Box PC  
with Intel® Skylake / Kaby Lake S-Series Processors



- Intel® Skylake-S / Kaby Lake-S Processors (LGA1151 Socket)
- Intel® Q170 / H110 Chipset
- 2x DDR4 SO-DIMM Socket
- 1x DVI-D, 2x DP for video output
- 2x GbE LAN for Ethernet
- 4x USB3.0, 4x USB2.0, 2x RS-232/422/485 for peripherals
- up to 4x 2.5" SATA HDD/SSD or 1x 3.5" SATA HDD for storage
- RAID support (only for models with Q170 Chipset)
- 2x mPCIe (switchable to mPCIe for Q170 models), 2x PCIe8 slot for expansion
- 1U Rack-mountable design

## Product Overview

RAK-100S Series is an industrial-purpose box PC powered by Intel®'s latest powerful 6th / 7th Generation Skylake / Kaby Lake S-Series Processors. It is compatible with 1U rackmount configurations and allows users to integrate it within a rack cabinet.

Having 4x USB3.0, 4x USB2.0 and 2x RS-232/422/485, it provides a large number of interfaces to peripherals. In addition, up to 4x 2.5" SATA HDD/SSD or 1x 3.5" SATA HDD, 2x mPCIe (shared with mSATA for Q170 models) and 2x PCIe8 slot on rear make it flexible in storage and expansion.

## Technical Information

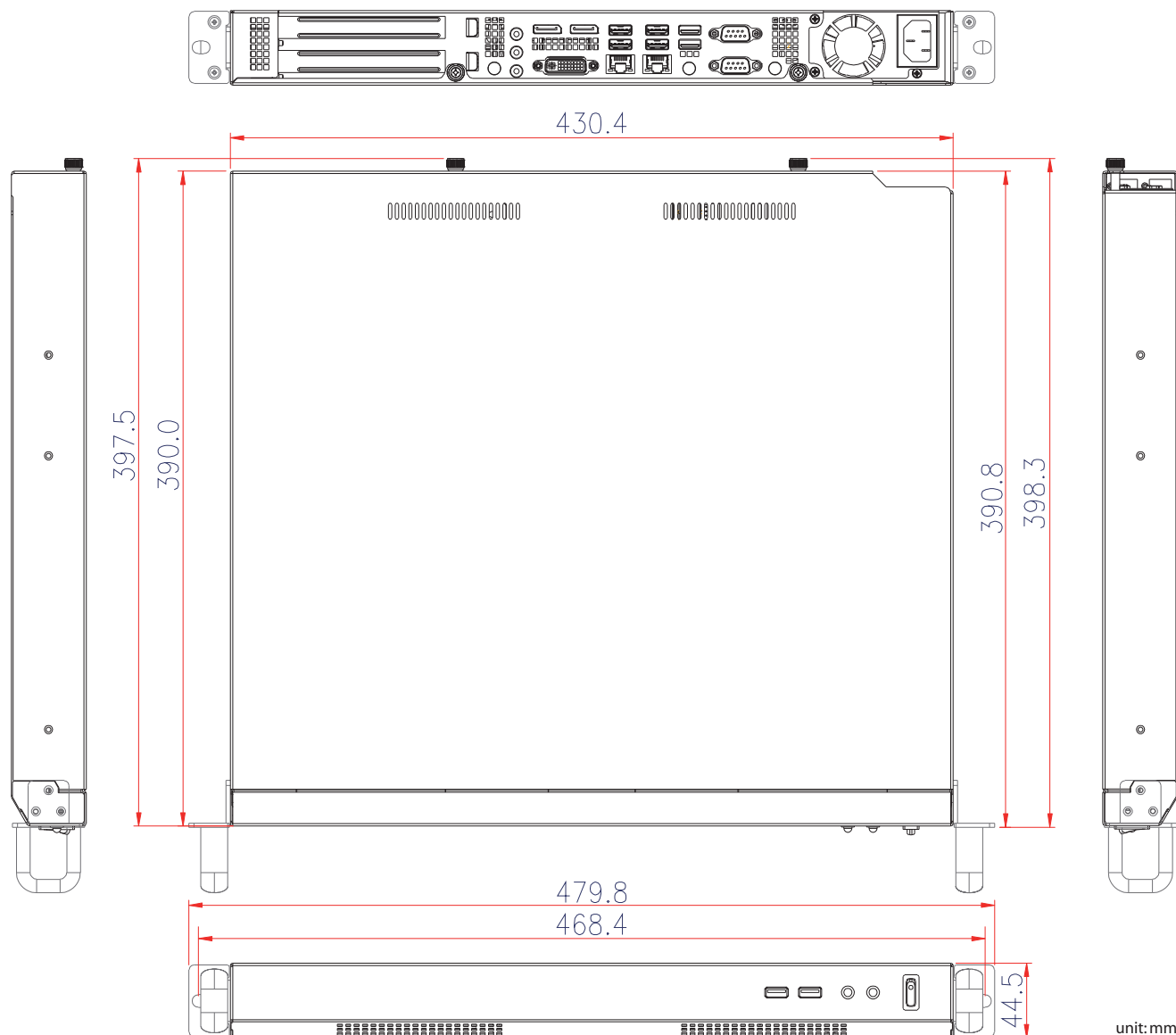
CPU Support	
<b>RAK-100S/101S:</b>	Intel® Skylake-S Processors (FCLGA1151 Socket)
<b>RAK-102S/103S:</b>	Intel® Kaby Lake-S Processors (FCLGA1151 Socket)
Chipset	
	Intel® Q170 (RAK-100S/102S)
	Intel® H110 (RAK-101S/103S)
Memory	
	2x DDR4 1866/2133 SO-DIMM up to 32GB
Graphic Controller	
	up to Intel® HD Graphics 620
Display Interfaces	
	1x DVI-D (on rear, 2560 x 1600 @ 60Hz)
	2x DP (on rear, 4096 x 2304 @ 60Hz)
Multiple Display	
	Triple
Audio Chipset	
	Realtek ALC662
Audio Interfaces	
	1x Line-in (on rear)
	1x Line-out (on rear)
	1x Mic-in (on rear)
Ethernet	
	2x GbE LAN (RJ-45 on rear, 1x Intel® I219-LM, 1x Intel® I210-AT)
USB	
	4x USB3.0 (Type A on rear)
	4x USB2.0 (2x Type A on front, 2x Type A on rear)
Serial Ports	
	2x RS-232/422/485 (DB9 on rear)
Storage & Expansion	
	up to 4x 2.5" SATA HDD/SSD (w/ RAID 0/1/5/10 for Q170) or 1x 3.5" HDD
	2x mSATA/mPCIe (1x full size, 1x half size, Q170 models, RAK-100S/102S)
	2x mPCIe (1x full size, 1x half size, H110 models, RAK-101S/103S)
	2x PCIe8 Slot (on rear)
	1x SIM Card Cage (by cable, optional)

Power Supply	
	Connector: C14 AC Power Connector (on rear)
	Input Voltage: AC 100V ~ 240V
Firmware	
	BIOS: AMI uEFI BIOS w/ 128Mb SPI Flash
	Watchdog: Programmable WDT to generate system reset event
	H/W Monitor: Input & Core Voltages, CPU & System Temperatures
	Real Time Clock: Chipset integrated RTC
	TPM: Yes (Infineon SLB 9665 TPM 2.0)
	iAMT: depending on processor
System Control & Monitoring	
	1x Power Switch (on front)
	1x Power LED (on front)
	1x Storage LED (on front)
Cooling	
	Active
OS Support	
	Windows 10, Linux
Construction	
	1U Rackmount Metal Chassis
Dimensions (W x D x H)	
	430.4 x 390 x 44.5 mm / 16.94" x 15.35" x 1.75" (without handles)
	479.8 x 390.8 x 44.5 mm / 18.89" x 15.39" x 1.75" (with handles)
Weight	
	5800 g / 12.79 lb
Environmental Characteristics	
	Operation Temp.: 0°C ~ 40°C / 32°F ~ 104°F
	Storage Temp.: -20°C ~ 80°C / -4°F ~ 176°F
	Humidity: 0% ~ 90%
Mounting	
	Rackmount
Certification	
	CE, FCC Class A

## RAK-100S Series I/Os



## Mechanical Dimensions



## Ordering Information

Article	Part No.	Description
RAK-100S		6th Gen. Intel® Skylake-S CPU, Intel® Q170, 1x DVI-D, 2x DP, 2x LAN, 4x USB3.0, 4x USB2.0, 2x RS-232/422/485, 2x mSATA/mPCIe, 2x PCIe, w/ RAID support
RAK-101S		6th Gen. Intel® Skylake-S CPU, Intel® H110, 1x DVI-D, 2x DP, 2x LAN, 4x USB3.0, 2x USB2.0, 3x RS-232/422/485, 3x RS-232, 2x mPCIe, 2x PCIe, w/o RAID support
RAK-102S		7th Gen. Intel® Kaby Lake-S CPU, Intel® Q170, 1x DVI-D, 2x DP, 2x LAN, 4x USB3.0, 2x USB2.0, 3x RS-232/422/485, 3x RS-232, 2x mSATA/mPCIe, 2x PCIe, w/ RAID support
RAK-103S		7th Gen. Intel® Kaby Lake-S CPU, Intel® H110, 1x DVI-D, 2x DP, 2x LAN, 4x USB3.0, 2x USB2.0, 3x RS-232/422/485, 3x RS-232, 2x mPCIe, 2x PCIe, w/o RAID support