



## KSM-SD Series

Q170

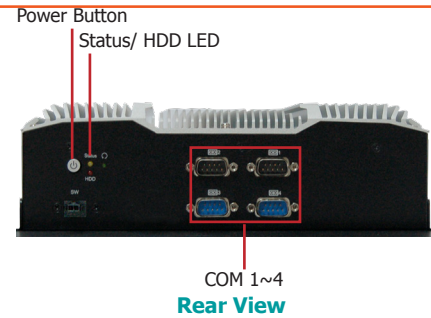
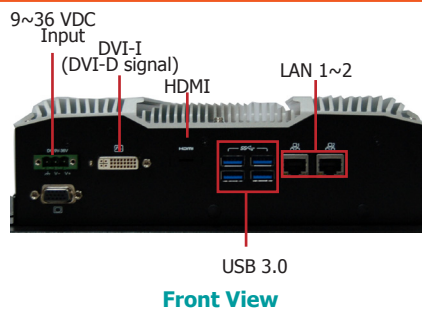


### ► Features

- Support Adaptive Display Platform
- Multiple Panel Sizes with Resistive/P-Capacitive Touch Screen
- Fanless Design Intel Core Processor with fanless design
- Supports 9~36V Power Input
- IP65 Front Panel Protection
- Operating Temperature: -20 to 50°C (optional)



### ► System



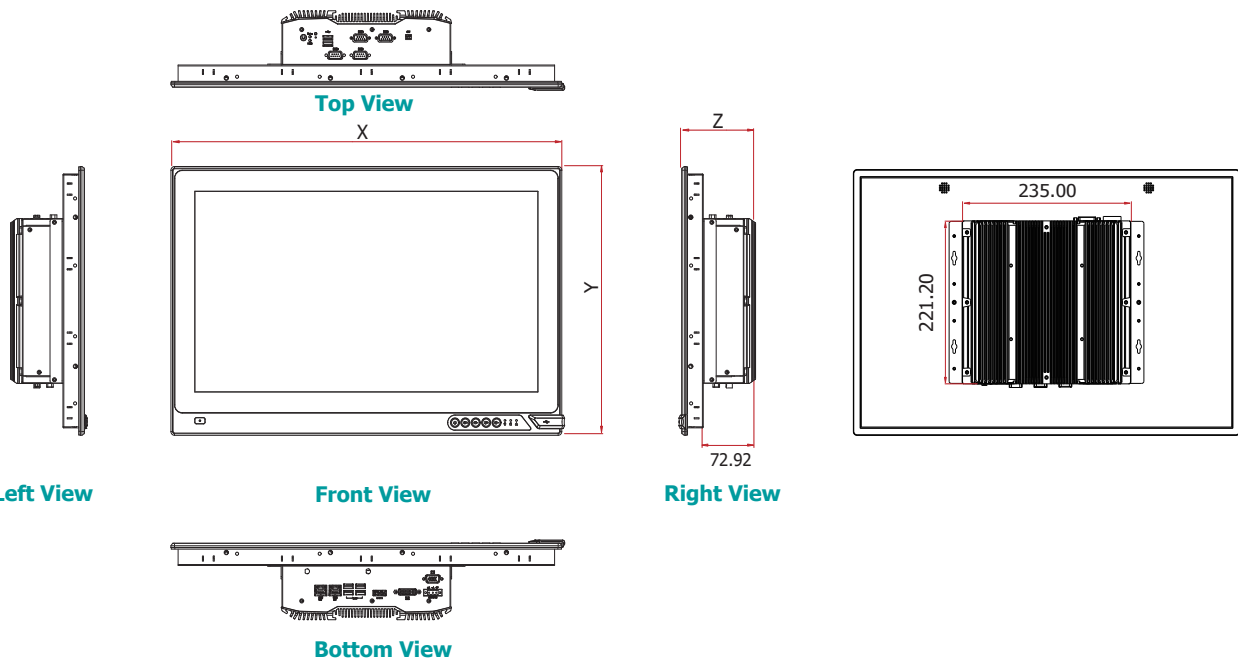
## Standard Ratio Specifications

Model Name		KSM150-SD	KSM170-SD	KSM190-SD
<b>Display &amp; Touch Screen</b>	<b>Display Type</b>	15" TFT LCD Panel	17" TFT LCD Pane	19" TFT LCD Panel
	<b>Max. Resolution</b>	1024 x 768	1280 x 1024	1280 x 1024
	<b>Brightness (cd/m<sup>2</sup>)</b>	300	350	350
	<b>Touch Type</b>	Projected Capacitive / 5-wire Resistive		
	<b>Backlight Lifetime (hours)</b>	70,000	30,000	70,000
<b>Front I/O</b>	<b>USB (Optional)</b>	1 x USB 2.0		
	<b>OSD (Optional)</b>	Backlight On-Off / Brightness Up / Brightness Down / Audio Up / Audio Down		
	<b>LED Indicators (Optional)</b>	Power LED / HDD LED / Alarm LED		
<b>Audio</b>	<b>Speaker (Optional)</b>	TBD	TBD	TBD
<b>Others</b>	<b>Auto Dimming (Optional)</b>	Light Sensor		
<b>Environment</b>	<b>Operating Temperature</b>	-20 to 70°C	0 to 50°C	-20 to 70°C
	<b>Storage Temperature</b>	-30 to 70°C	-20 to 60°C	-30 to 85°C
	<b>Relative Humidity</b>	5 to 90% RH (non-condensing)		
<b>SYSTEM</b>	<b>Processor</b>	6th Generation Intel® Core™ Processors, LGA 1151 Socket Intel® Core™ i7-6700TE, Quad Core, 8M Cache, 2.4GHz (3.4GHz), 35W Intel® Core™ i5-6500TE, Quad Core, 6M Cache, 2.3GHz (3.3GHz), 35W Intel® Core™ i3-6100TE, Dual Core, 4M Cache, 2.7GHz, 35W		
	<b>Chipset</b>	Intel® Q170 Chipset		
	<b>Memory</b>	Two 260-pin SODIMM up to 32GB	Dual Channel DDR4 1866/2133MHz	
	<b>BIOS</b>	Insyde SPI 128Mbit		
<b>GRAPHICS</b>	<b>Controller</b>	Intel® HD Gen 9 Graphics		
	<b>Feature</b>	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		
	<b>Display</b>	1 x VGA 1 x DVI (DVI-D signal) 1 x HDMI/DP (DP available upon request)	VGA: resolution up to 1920x1200 @ 60Hz DVI: resolution up to 2560x1600 @ 60Hz HDMI: resolution up to 4096x2160 @ 24Hz or 2560x1600 @ 60Hz DP: resolution up to 4096x2304 @ 60Hz	
	<b>Triple Displays</b>	VGA + DVI (DVI-D signal) + HDMI VGA + DVI (DVI-D signal) + DP		
<b>STORAGE EXPANSION</b>	<b>Internal Interface</b>	1 x 2.5" SATA 3.0 Drive Bay 1 x Full-size Mini PCIe (PCIe/USB) 1 x Half-size Mini PCIe (USB/mSATA)		
<b>ETHERNET</b>	<b>Controller</b>	1 x Intel® I211AT PCIe (10/100/1000Mbps) 1 x Intel® I219V with iAMT11.0 PCIe (10/100/1000Mbps) (only Core i7/i5 supports iAMT)		
<b>LED</b>	<b>Indicators</b>	1 x Power LED 1 x HDD LED		
<b>FRONT I/O</b>	<b>Serial</b>	2 x RS-232/422/485 (DB-9) (RS-232 with power) 2 x RS-232/422/485 (DB-9)		
	<b>Buttons</b>	1 x Power Button 1 x Reset Button		
<b>REAR I/O</b>	<b>Ethernet</b>	2 x GbE (RJ-45)		
	<b>USB</b>	4 x USB 3.0 (type A)		
	<b>Display</b>	1 x DVI (DVI-D signal) 1 x HDMI/DP (DP available upon request)		
<b>WATCHDOG TIMER</b>	<b>Output &amp; Interval</b>	System Reset, Programmable via Software from 1 to 255 Seconds		
<b>POWER</b>	<b>Type</b>	9~36 VDC Input		
	<b>Connector</b>	3-pole Terminal Block		
<b>OS SUPPORT</b>		Windows 7 (32/64-bit) Windows 10 IoT LTSB RS1 Enterprise (64bit)	Linux	
<b>MECHANISM</b>	<b>Construction</b>	Aluminum + SGCC		
	<b>IP Rating</b>	IP65 Front Panel Protection		
	<b>Mounting</b>	Panel/VESA Mount 100 x 100 mm		
	<b>Dimensions (W x H x D)</b>	387 x 320 x 118 mm	404 x 363.8 x 102.8 mm	467 x 400 x 118mm
	<b>Weight</b>	7.7 kg	8.1 kg	10 kg
<b>STANDARDS AND CERTIFICATIONS</b>	<b>Shock</b>	Half sine wave 3G, 11ms, 3 shock per axis		
	<b>Vibration</b>	IEC68-2-64		
	<b>Certification</b>	CE, FCC Class A, RoHS		

## ► Widescreen Ratio Specifications

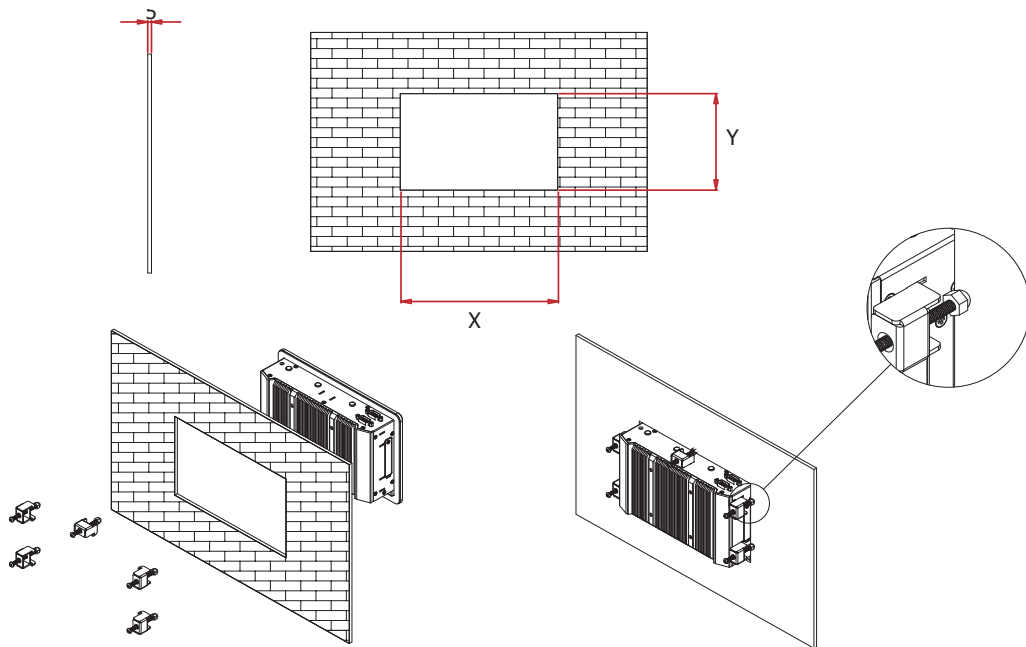
Model Name		KSM156-SD	KSM185-SD	KSM215-SD
Display & Touch Screen	Display Type	15.6" TFT LCD Panel	18.5" TFT LCD Panel	21.5" TFT LCD Panel
	Max. Resolution	1366 x 768	1366 x 768	1920 x 1080
	Brightness (cd/m <sup>2</sup> )	400	450	300
	Touch Type	Projected Capacitive / 5-wire Resistive		
	Backlight Lifetime (hours)	50,000	50,000	50,000
Front I/O	USB (Optional)	1 x USB 2.0		
	OSD (Optional)	Backlight On-Off / Brightness Up / Brightness Down / Audio Up / Audio Down		
	LED Indicators (Optional)	Power LED / HDD LED / Alarm LED		
Audio	Speaker (Optional)	TBD	TBD	TBD
Others	Auto Dimming (Optional)	Light Sensor		
Environment	Operating Temperature	0 to 60°C	0 to 60°C	0 to 60°C
	Storage Temperature	-20 to 60°C	-20 to 60°C	-20 to 60°C
	Relative Humidity	5 to 90% RH (non-condensing)		
SYSTEM	Processor	6th Generation Intel® Core™ Processors, LGA 1151 Socket Intel® Core™ i7-6700TE, Quad Core, 8M Cache, 2.4GHz (3.4GHz), 35W Intel® Core™ i5-6500TE, Quad Core, 6M Cache, 2.3GHz (3.3GHz), 35W Intel® Core™ i3-6100TE, Dual Core, 4M Cache, 2.7GHz, 35W		
	Chipset	Intel® Q170 Chipset		
	Memory	Two 260-pin SODIMM up to 32GB	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 (DVI-D signal) 1 x HDMI/DP (DP available upon request)	VGA: resolution up to 1920x1200 @ 60Hz DVI: resolution up to 2560x1600 @ 60Hz HDMI: resolution up to 4096x2160 @ 24Hz or 2560x1600 @ 60Hz DP: resolution up to 4096x2304 @ 60Hz	
	Triple Displays	VGA + DVI (DVI-D signal) + HDMI VGA + DVI (DVI-D signal) + DP		
STORAGE EXPANSION	Internal Interface	1 x 2.5" SATA 3.0 Drive Bay 1 x Full-size Mini PCIe (PCIe/USB) 1 x Half-size Mini PCIe (USB/mSATA)		
ETHERNET	Controller	1 x Intel® I211AT PCIe (10/100/1000Mbps) 1 x Intel® I219V with iAMT11.0 PCIe (10/100/1000Mbps) (only Core i7/i5 supports iAMT)		
LED	Indicators	1 x Power LED 1 x HDD LED		
FRONT I/O	Serial	2 x RS-232/422/485 (DB-9) (RS-232 with power) 2 x RS-232/422/485 (DB-9)		
	Buttons	1 x Power Button 1 x Reset Button		
REAR I/O	Ethernet	2 x GbE (RJ-45)		
	USB	4 x USB 3.0 (type A)		
	Display	1 x DVI (DVI-D signal) 1 x HDMI/DP (DP available upon request)		
WATCHDOG TIMER	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds		
POWER	Type	9~36 VDC Input		
	Connector	3-pole Terminal Block		
OS SUPPORT		Windows 7 (32/64-bit) Windows 10 IoT LTSB RS1 Enterprise (64bit)	Linux	
MECHANISM	Construction	Aluminum + SGCC		
	IP Rating	IP65 Front Panel Protection		
	Mounting	Panel/VESA Mount 100 x 100 mm		
	Dimensions (W x H x D)	407.3 x 277.3 x 97.92 mm	472.06 x 314.15 x 102.8mm	544.2 x 360.6 x 118mm
STANDARDS AND CERTIFICATIONS	Weight	TBD	8.1 kg	9.4 kg
	Shock	Half sine wave 3G, 11ms, 3 shock per axis		
	Vibration	IEC68-2-64		
	Certification	CE, FCC Class A, RoHS		

► Dimensions



	System Dimensions		
Display Type	X1	Y1	Z1
15" TFT LCD Panel	387	320	118
15.6" TFT LCD Panel	407.3	277.3	98
17" TFT LCD Panel	404	363.8	102.8
18.5" TFT LCD Panel	472.06	314.15	102.8
19" TFT LCD Panel	467	400	118
21.5" TFT LCD Panel	544.2	360.6	118

## Panel Mounting



Suggested cut out size

Display Type	System Dimensions (mm)	
	X1	Y1
<b>PMKS150</b>	367	300
<b>PMKS156</b>	389.3	259.3
<b>PMKS170</b>	386	346
<b>PMKS185</b>	454	296.1
<b>PMKS190</b>	447	380
<b>PMKS215</b>	526.2	342.6

## Ordering Information

Model Name	Part Number	Description
<b>KSM150P-SDW36</b>	750-K15002-100G	15" TFT XGA Fanless Panel PC with Projected Capacitive Touch, Intel® 6th Core Processor, DC Input 9~36V Terminal, F/G SYSTEM RoHS
<b>KSM150R-SDW36</b>	750-K15002-200G	15" TFT XGA Fanless Panel PC with Resistive Touch, Intel® 6th Core Processor, DC Input 9~36V Terminal, F/G SYSTEM RoHS
<b>KSM150P-SDW36-KLU</b>	750-K15002-300G	15" TFT XGA Fanless Panel PC with Projected Capacitive Touch, OSD, Light Sensor, USB, Intel® 6th Core Processor, DC Input 9~36V Terminal, F/G SYSTEM RoHS
<b>KSM156P-SDW36</b>	750-K15602-100G	15.6" TFT XGA Fanless Panel PC with Projected Capacitive Touch, Intel® 6th Core Processor, DC Input 9~36V Terminal, F/G SYSTEM RoHS
<b>KSM156R-SDW36</b>	750-K15602-200G	15.6" TFT XGA Fanless Panel PC with Resistive Touch, Intel® 6th Core Processor, DC Input 9~36V Terminal, F/G SYSTEM RoHS
<b>KSM156P-SDW36-KLU</b>	750-K15602-300G	15.6" TFT XGA Fanless Panel PC with Projected Capacitive Touch, OSD, Light Sensor, USB, Intel® 6th Core Processor, DC Input 9~36V Terminal, F/G SYSTEM RoHS

► **Optional Items**

Optional Items	Part Number	Description
<b>CPU</b>	143-102402-500G	Intel® Core™ i7-6700TE, Quad Core, 8M Cache, 2.4GHz (3.4GHz);35W
	143-102303-500G	Intel® Core™ i5-6500TE, Quad Core, 6M Cache, 2.3GHz (3.3GHz);35W
	143-102701-500G	Intel® Core™ i3-6100TE, Dual Core, 4M Cache, 2.7GHz;35W
	143-102401-500G	Intel® Pentium® G4400TE, Dual Core, 3M Cache, 2.4GHz, 35W
<b>Memory</b>	138-540002-100G	4GB DDR4 SODIMM RAM
	138-580002-100G	8GB DDR4 SODIMM RAM
	138-5G0161-100G	16GB DDR4 SODIMM RAM
<b>HDD/SSD</b>	635-550092-050G	2.5" SATA HDD, 500GB, RoHS
	635-500100-200G	2.5" SATA HDD, 1TB, RoHS
	635-610002-110G	2.5" SATA SSD, 1TB MLC, RoHS
	635-605122-110G	2.5" SATA SSD, 512GB MLC, RoHS
	635-602562-120G	2.5" SATA SSD, 256GB MLC, RoHS
	635-601282-190G	2.5" SATA SSD, 128GB MLC, RoHS
	635-600642-150G	2.5" SATA SSD, 064GB MLC, RoHS
<b>mSATA</b>	638-712803-100G	mSATA Card, 128GB MLC, RoHS
	638-706405-110G	mSATA Card, 64GB MLC, RoHS
	638-703206-100G	mSATA Card, 32GB MLC, RoHS
	638-701605-130G	mSATA Card, 16GB MLC, RoHS
	638-700805-120G	mSATA Card, 8GB MLC, RoHS
	638-712803-100G	mSATA Card, 128GB MLC, RoHS (wide temperature)
	638-706405-110G	mSATA Card, 64GB MLC, RoHS (wide temperature)
	638-703206-100G	mSATA Card, 32GB MLC, RoHS (wide temperature)
<b>Wi-Fi</b>	761-110091-000G	Wi-Fi Kit, SparkLAN, WPEA-121N, w/IPX cable & antenna
	612-110050-300G	Wi-Fi module, SparkLAN, WPEA-252NI
<b>Power Cord</b>	785-PWRD	Power Cord, Standards (USA/EUR/CH), 1.8m, RoHS
<b>Power Adapter</b>	671-116001-000G	Power Adapter 160W , 19V/8.4A Level 5, RoHS
	671-116003-000G	Power Adapter 160W , 19V/8.4A Level 6, RoHS
<b>Panel Mount Kits</b>	761-P15002-000G	Panel Mount Kit for PMKS150 RoHS
	761-P19003-000G	Panel Mount Kit for PMKS190 RoHS
	761-P15002-000G	KSM150 Panel Mount Kit RoHS
	761-P19003-000G	KSM170-AL / KSM190-AL Panel Mount Kit RoHS
	TBD	KSM185 Panel Mount Kit RoHS
	761-KS2150-000G	KSM215-AL Panel Mount Kit RoHS
<b>Wall Mount</b>	761-TPC000-000G	ACCESSORY WALL MOUNT KITS

785-XXX is a group number instead of a unique part number. Please contact your regional sales representative if you need more information.

► **Matrix List**

		PMKS150	PMKS156	PMKS170	PMKS185	PMKS190	PMKS215
<b>Box Module</b>	BMAL	V	V	V	V	V	V
	BMSD	V	V	V	V	V	V
	BMKH	V	V	V	V	V	V

► **Packing List**

- 1 Single Box
- 1 3 pin Terminal Block Connector
- 2 Mini PCIe Screw
- 1 SATA Screw