

Industrial Panel PCs & Displays

Our Rugged Industrial Panel PCs and Displays Empower Your Productivity



Our Rugged Industrial Panel PCs Empower Your Productivity

We provide diverse panel PCs with advanced display technologies to ensure stable performance in industrial environments. Equipped with our motherboard, this product family possesses high stability and reliability to fulfilling your various requirements in various industry fields.

Industrial Panel PCs & Displays Index

Fanless Touch Panel PC

KS215P-EHL



KS101P-EHL



Size	Processor	Model Name	Index
21.5"	11th Gen Intel® Core™ Processor	KS215P-TGU	9
	Intel® Atom® Processor x6000/Celeron	KSX215P-EHL	
		KS215P-EHL	
15.6"	11th Gen Intel® Core™ Processor	KS156P-TGU	10
	Intel® Atom® Processor x6000/Celeron	KS156P-EHL	
	Intel® Atom® Processor E3900	KS156-AL	
	Intel® Celeron® J1900	KS156-BT	
15"	Intel® Atom® Processor x6000/Celeron	KS150-ADN (Preliminary)	11
	Intel® Atom® Processor E3800	KS150-BT	
12.1"	NXP i.MX8	KIT121P-M8M	
10.1"	Intel® Atom® Processor x6000/Celeron	KS101P-EHL	12
	Intel® Atom® Processor E3800	KS101-BT	
	NXP i.MX8	KIT101P-M8M	
7"	Intel® Atom® Processor E3900	KS070-AL	13
	Intel® Atom® Processor E3800	KS070-BT	
	NXP i.MX8	KS070-M8M	14
		KIT070P-M8M	
5.7"	NXP i.MX6	KS070-FS	
	NXP i.MX6	KS057R-FS	

Expandable Touch Panel PC

TPC150-SD



Size	Processor	Model Name	Page
17"	7th/6th Gen Intel® Core™ Processor	TPC170-SD	16
15"	7th/6th Gen Intel® Core™ Processor	TPC150-SD	

Modularized Touch Panel PC

KSM215-KH



KSM156-AL



Size	Processor	Model Name	Page
21.5"	7th Gen Intel® Core™ Processor	KSM215-KH	18
	6th Gen Intel® Core™ Processor	KSM215-SD	
	Intel Atom® Processor E3900	KSM215-AL	
19"	7th Gen Intel® Core™ Processor	KSM190-KH	19
	6th Gen Intel® Core™ Processor	KSM190-SD	
	Intel® Atom® Processor E3900	KSM190-AL	
18.5"	7th Gen Intel® Core™ Processor	KSM185-KH	20
	6th Gen Intel® Core™ Processor	KSM185-SD	
	Intel® Atom® Processor E3900	KSM185-AL	
17"	7th Gen Intel® Core™ Processor	KSM170-KH	21
	6th Gen Intel® Core™ Processor	KSM170-SD	
	Intel® Atom® Processor E3900	KSM170-AL	
15.6"	7th Gen Intel® Core™ Processor	KSM156-KH	22
	6th Gen Intel® Core™ Processor	KSM156-SD	
	Intel® Atom® Processor E3900	KSM156-AL	
15"	7th Gen Intel® Core™ Processor	KSM150-KH	23
	6th Gen Intel® Core™ Processor	KSM150-SD	
	Intel® Atom® Processor E3900	KSM150-AL	
12.1"	Intel® Atom® Processor E3900	KSM121-AL	24
10.1"	Intel® Atom® Processor E3900	KSM101-AL	
7"	Intel® Atom® Processor E3900	KSM070-AL	

Industrial Display & Touch Display

IDP156-MS



Size	Processor	Model Name	Page
21.5"	-	IDP215P	26
19"	-	IDP190-ME	
17"	-	IDP170-ME	
15.6"	-	IDP156-MS	
15"	-	IDP150-ME	
7"	-	IDP070-MS	

Application Specific Group

MDPi238



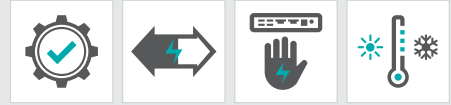
VP101-M8M



Size	Processor	Model Name	Page
Medical			
27"	-	MDPi270	28
23.8"	-	MDPi238	
21.5"	-	MDPi215	
15.6"	-	MDP156	
In-vehicle			
10.1"	Intel® Atom® Processor E3800	VP101-BT	29
	NXP i.MX8M	VP101-M8M	
7"	NXP i.MX8M	VP070-M8M	

Rugged Design

- Industrial-rated components with high MTBF over 100,000 hrs
- Extended operating temperatures
- High ESD protection for I/O ports
- Signal integrity measurement
- Wide range power design
- 100% Japanese-made solid capacitor
- Power hot plug protection for DC-in type SBC and Industrial Motherboards



Software Integration

- Embedded BIOS and OS customization services
- Windows licensing offerings
- Android, Linux distribution (Yocto/Ubuntu/CentOS/Debian)
- Embedded API
(Hardware Monitor, SMBus, I²C, Brightness Control, GPIO, Watchdog)
- Remote management utility

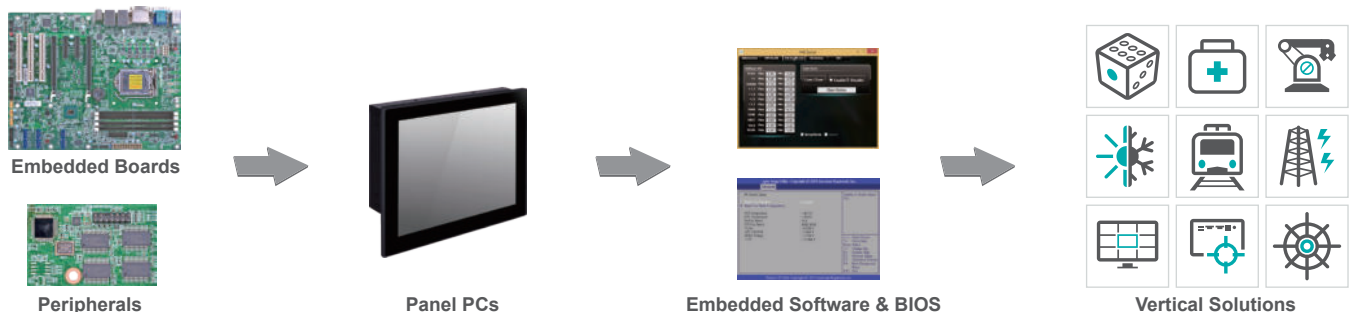


Embedded Total Solution

- Express customization service: 30 days (NRE cost: project based)
- Strict revision control
- Long product life cycle support
- High volume OEM/ODM production capabilities



We Provide a Total Solution Designed for Your Embedded Applications



x86



ARM



x86 & ARM Platform Support

- Supporting ARM platform (NXP series), and x86 platform (Intel® Core™ and Intel® Atom®) to fulfill different computing requirements
- Diverse operating system supports: Android, Windows, and Linux



Adaptive Display Platform

- Instantly building a solution by your demand: multiple-choice panel modules from 7" to 21.5", Intel® Core™ and Intel® Atom® box modules
- Lower ownership cost and higher upgraded capability with rugged design



Heavy-Duty



Bar Type



Fanless

Complete Panel Computing Solution

- Suited for diverse application scenarios: resistive & capacitive, high ingress protection, wide power input, and temperature resistance
- Product family includes: Fanless Panel PC, Heavy-Duty Panel PC, Bar Panel PC
- Sizes available from 7" to 42"

Fanless Touch Panel PC

Compact Design & Effective Computing



Features

We offer fanless industrial Panel PCs in compact design to satisfy various space-limited applications. Supporting x86 and ARM platform and embedded with rich I/O ports, the series is able to meet your different computing requirements. Certified with IP65 rating and powered by effective computing processors, light industrial Panel PCs are suited for home automation, kiosk, interactive information system, and healthcare computing solution.

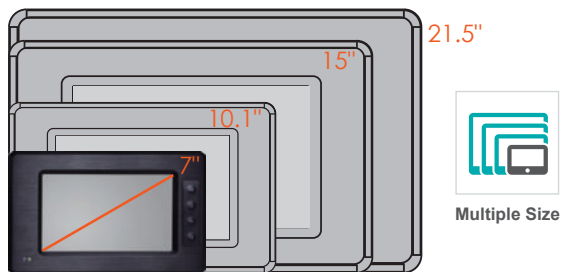
IP65 / IP66 Front Water Proof



Fanless and Compact Design



Available in Several Sizes



Support Several Platforms and OS



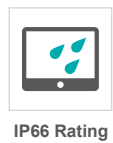


Fanless Touch Panel PC

KSX Series

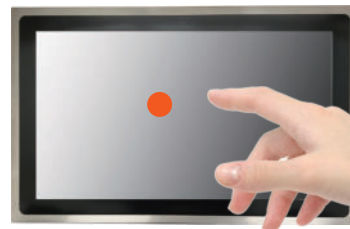
KSX series develops a full IP66 protective panel PC solution. KSX system is preventing the machine from dust accumulation and supports high-pressure water washing down with M12 connectors. It's highly designed for industrial applications including food, chemical and factory automation environments.

Full IP66 Protection



IP66 Rating

Projected Capacitive Touch



Available in Several Sizes



15.6"

21.5"



Multiple Size

Construction 304 stainless steel chassis



Waterproof M12 I/O ports



Fanless Touch Panel PC

KIT Series

DFI KIT series is powered by NXP I.MX8M and supports multiple communication interfaces e.g USB, Ethernet and HDMI. DFI provides various panel sizes from SVGA to WXGA that you can choose it based on your requirements . KIT series includes extensive I/O ports and has the scalability for Wifi function, highly used for a wide range of applications.

ARM Based solution



Powered by i.MX 8M Processor



Easy Installation & Maintenance

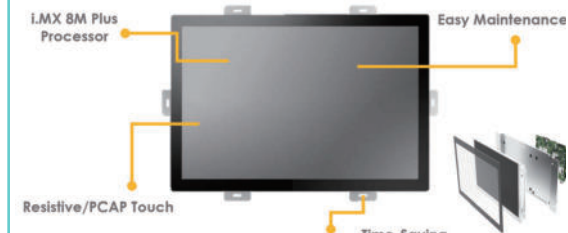
i.MX 8M Plus Processor

Easy Maintenance

Resistive/PCAP Touch

Time-Saving

Saving developing time to deploy to market agily.



Projected Capacitive Touch



Available in Several Sizes



12.1"

7"

10.1"



Multiple Size



21.5"



21.5"



21.5"

Model Name		KS215P-TGU	KSX215P-EHL	KS215P-EHL
Platform		Intel® Core i	Intel® Celeron	Intel® Atom®
System	Processor	Intel® Core™ i5-1145GRE / Intel® Celeron® 6305E	Intel® Celeron J6413	Intel® Atom® x6425E / Intel® Atom® x6413E
	Socket	BGA1449	BGA1493	BGA1493
	Max. Speed	4.4GHz / 1.8GHz	3.0GHz	3.0GHz
	TDP	15W	10W	12W / 9W
	Cache	8M / 4M	1.5M	1.5M
	BIOS	AMI SPI 256Mbit	AMI SPI 128Mbit (support UEFI boot only)	AMI SPI 256Mbit (supports UEFI boot only)
Memory	Technology	Dual Channel DDR4 3200MHz	Dual Channel DDR4 3200MHz	Dual Channel DDR4 3200MHz
	Max. Capacity	64GB	32GB, 4GB built-in	32GB
	Socket	2 SODIMM	1 SODIMM	2 SODIMM
Display & Touch Screen	Display Type	21.5" PCAP TFT	21.5" PCAP TFT	21.5" PCAP TFT
	Max. Resolution	1920 x 1080	1920 x 1080	1920 x 1080
	Brightness	300 cd/m ²	250 cd/m ²	300 cd/m ²
Graphics	Connector	DP++ / HDMI	-	DP++ / HDMI
Storage		1x 2.5" SATA 3.0 Drive Bay	128GB 3DTLC built-in	1x 2.5" SATA 3.0 Drive Bay
Expansion	Mini PCIe, M.2, PCIe, SIM	1 M.2 2242/2280 M Key, 1 M.2 2242/3042/3052 B Key, 1 M.2 2230 E Key	1 M.2 2242/2280/3052 B Key, 1 M.2 2230 E Key, 1 Nano SIM	1 M.2 2242/2280/3052 B Key, 1 M.2 2230 E Key, 1 Nano SIM
Audio	Audio Codec	Realtek ALC888	Realtek ALC888	Realtek ALC888
Ethernet	Controller	2 Intel® I211AT, 1 Intel® I225LM	2 Intel® I225LM	2 Intel® I225LM
LED	Indicators	Power	Power	Power
I/O	Ethernet (GbE)	2 GbE, 1 2.5GbE	1x M12 8pin for GbE Lan with waterproof cover	2 2.5GbE
	Serial	2 RS232/422/485, 2 RS232	1x M12 8pin COM1, RS-232/422/485 default RS-232, with waterproof cover	2 RS232/422/485, 2 RS232
	USB	4 USB 3.2 Gen2, 1 USB Type-C	2 x M12 8pin for 2 USB 2.0 with waterproof cover	2 USB 3.2 Gen1, 2 USB 3.2 Gen2
	Display	DP++, HDMI	-	DP++, HDMI
	Audio	1 Line-out	-	1 Line-out
	Buttons	Power Button	-	Power Button
Power		9~36V DC-in	9~36V DC-in	9~36V DC-in
OS Support		Win10 IoT Enterprise & Linux	Win10 IoT Enterprise & Linux	Win10 IoT Enterprise & Linux
Mechanism	Construction	Plastic + Sheet Metal	304 Stainless steel chassis	Plastic + Sheet Metal
	IP Rating	IP65 Front Panel	Full IP66 & 69K	IP65 Front Panel
	Mounting	VESA Mount	VESA Mount	VESA / Panel Mount
	Dimensions (W x H x D)	TBD	563 x 354 x 70 mm	521.8 x 323.8 x 54.1 mm
	Weight	TBD	9.5 kg	7.0 kg
Environment	Operating Temp.	0°C ~ 50°C	0°C ~ 50°C	0°C ~ 50°C
	Relative Humidity	10% ~ 95% @ 40°C (non-condensing)	10% ~ 95% @ 40°C (non-condensing)	10% ~ 95% @ 40°C (non-condensing)



15.6"



15.6"



15.6"



15.6"

Model Name		KS156P-TGU	KS156P-EHL	KS156-AL	KS156-BT
Platform		Intel® Core™ i	Intel® Atom®	Intel® Atom®	Intel® Atom®
System	Processor	Intel® Core™ i5-1145GRE / Intel® Celeron® 6305E	Intel® Atom® x6425E Intel® Atom® x6413E	Intel® Atom® x5-E3940 Intel® Pentium® Processor N4200	Intel® Celeron® J1900
	Socket	BGA1449	BGA1493	BGA 1296	-
	Max. Speed	4.4GHz / 1.8GHz	3.0GHz	2.5GHz / 1.8GHz	2.42GHz
	TDP	15W	12W / 9W	9.5W / 6W	10W
	Cache	8M / 4M	1.5M	2M	2M
	BIOS	AMI SPI 256Mbit	AMI SPI 256Mbit (supports UEFI boot only)	Insyde SPI 64Mbit (supports UEFI boot only)	AMI SPI 64Mbit
Memory	Technology	Dual Channel DDR4 3200MHz	Dual Channel DDR4 3200MHz	Dual Channel DDR3L 1867MHz	Single Channel DDR3L 1066MHz Dual Channel DDR3L 1333MHz
	Max. Capacity	64GB	32GB	8GB	4GB / 8GB
	Socket	2 SODIMM	2 SODIMM	2 SODIMM	1 SODIMM 2 SODIMM
Display & Touch Screen	Display Type	15.6" PCAP TFT	15.6" PCAP TFT	15.6" TFT Capacitive / 5-wire Resistive Touch	15.6" TFT Capacitive / Capacitive Touch Screen
	Max. Resolution	1920 x 1080	1920 x 1080	1366 x 768	1920 x 1080
	Brightness	400 cd/m ²	400 cd/m ²	400 cd/m ²	400 cd/m ²
Graphics	Connector	DP++ / HDMI	DP++ / HDMI	1 VGA, 1 HDMI	1 DVI-I
Storage		1x 2.5" SATA 3.0 Drive Bay	1x 2.5" SATA 3.0 Drive Bay	1x 2.5" SATA 3.0 Drive Bay	1x 2.5" SATA 2.0 Drive Bay, 1 mSATA (Shared by Mini PCIe Socket)
Expansion	Mini PCIe, M.2, PCIe, SIM	1 M.2 2242/2280 M Key, 1 M.2 2242/3042/3052 B Key, 1 M.2 2230 E Key	1 M.2 2242/2280/3052 B Key, 1 M.2 2230 E Key, 1 Nano SIM	1 Full-size Mini PCIe, 1 M.2 key	1 Mini PCIe
Audio	Audio Codec	Realtek ALC888	Realtek ALC888	Realtek ALC888 5.1-channel	Realtek ALC888
Ethernet	Controller	2 Intel® I211AT 1 Intel® I225LM	2 Intel® I225LM	2 Intel® I210	2 Intel® I210
LED	Indicators	Power	Power	Power, HDD LED	Power, HDD LED
I/O	Ethernet (GbE)	2 GbE, 1 2.5GbE	2 2.5GbE	2	2
	Serial	2 RS232/422/485, 2 RS232	2 RS232/422/485, 2 RS232	2 RS-232/422/485	2 RS-232/422/485
	USB	4 USB 3.1 Gen2, 1 USB Type-C	2 USB 3.2 Gen1, 2 USB 3.2 Gen2	4 USB 3.2 Type A	1 USB 3.2, 2 USB 2.0
	Display	DP++, HDMI	DP++, HDMI	1 VGA, 1 HDMI	1 DVI-I
	Audio	1 Line-out	1 Line-out	1 Line-out	1 Line-out
	Buttons	Power Button	Power Button	Power Button	Power Switch
	Wi-Fi Antenna	-	-	2 Holes	-
Power		9~36V DC-in	9~36V DC-in	12V DC-in or 15-36V DC-in	19~24V DC-in
OS Support		Win10 IoT Enterprise & Linux	Win10 IoT Enterprise & Linux	Win10 IoT & Fedora 24 & Linux	Win10 IoT
Mechanism	Construction	Plastic + Sheet Metal	Plastic + Sheet Metal	Sheet Metal	Sheet Metal
	IP Rating	IP65 Front Panel	IP65 Front Panel	IP65 Front Panel	IP65 Front Panel
	Mounting	VESA Mount	VESA / Panel Mount	Panel / VESA Mount	Panel / VESA Mount
	Dimensions (W x H x D)	TBD	392 x 256 x 51.7 mm	412.1 x 261.4 x 63 mm	409 x 259 x 65.5 mm
	Weight	TBD	4.1 Kg	6.17 kg	6 kg
Environment	Operating Temp.	0°C ~ 50°C	0°C ~ 50°C	0°C ~ 50°C (SSD)	0°C ~ 50°C (SSD)
	Relative Humidity	10% ~ 95% @ 40°C (non-condensing)	10% ~ 95% @ 40°C (non-condensing)	5% ~ 85% RH (non-condensing)	5% ~ 85% RH (non-condensing)



15"



Preliminary

15"



12.1"

Model Name		KS150-ADN	KS150-BT	KIT121P-M8M
Platform		Intel® Atom®	Intel® Atom®	ARM
System	Processor	Intel® Atom® x7425E Intel® Atom® x7213E	Intel® Atom® E3845 Intel® Atom® E3825	NXP i.MX 8M
	Socket	BGA1493	BGA 1170	-
	Max. Speed	3.4GHz	1.91GHz / 1.33GHz	1.5GHz
	TDP	12W / 10W	10W / 6W	-
	Cache	6M	2M / 1M	-
	BIOS	AMI SPI 256Mbit	AMI SPI 64Mbit	-
Memory	Technology	Single Channel DDR5 4800MHz	Single Channel DDR3L 1066MHz (E3825) Dual Channel DDR3L 1333MHz (E3845)	Single Channel LPDDR4 3200MHz
	Max. Capacity	16GB	4GB / 8GB	2GB / 4GB
	Socket	1 SODIMM	1 SODIMM (E3825) 2 SODIMM (E3845)	Memory Down
Display & Touch Screen	Display Type	15" TFT	15" TFT Capacitive / 5-wire Resistive TFT	12.1" TFT LCD
	Max. Resolution	1024 x 768	1024 x 768	1024 x 768
	Brightness	300 cd/m ²	250 cd/m ²	500 cd/m ²
Graphics	Connector	DP++ / HDMI	1 DVI-I	-
Storage		1x 2.5" SATA 3.0 Drive Bay	1x 2.5" SATA 2.0 Drive Bay, 1 mSATA (Shared by Mini PCIe Socket)	16GB eMMC on board
Expansion	Mini PCIe, M.2, PCIe, SIM	1 M.2 2242/3042 B Key, 1 M.2 2230 E Key	1 Full-size Mini PCIe	1 M.2 B key 3042/2242, 1 M.2 E Key 2230
Audio	Audio Codec	Realtek ALC888	Realtek ALC888	SGTL5000
Ethernet	Controller	2 Intel® I226V	2 Intel® I210	AR8035
LED	Indicators	Power	Power, HDD LED	-
I/O	Ethernet (GbE)	2 2.5GbE	2	1
	Serial	2 RS232/422/485, 2 RS232	3 RS-232/422/485, 1 RS-232	1 RS485
	USB	3 USB 3.2 Gen2, 1 USB 2.0	1 USB 3.2, 2 USB 2.0	2 USB 3.2 Gen1 Type A, 1 Micro USB 2.0
	Display	DP++, HDMI	1 DVI-I	-
	Audio	1 Line-out	1 Line-out	-
	Buttons	Power Button	Power Switch	-
Power		9~36V DC-in	12V DC-in	12V DC-in / 9-48V DC-in (Opt.)
OS Support		Win10 IoT Enterprise & Linux	Win7, Win8	Android 9.0 & Yocto 4.3
Mechanism	Construction	Aluminum Front Bezel	Aluminum Front Bezel	-
	IP Rating	IP65 Front Panel	IP65 Front Panel	Aluminum
	Mounting	VESA Mount	Panel / VESA Mount	Open frames
	Dimensions (W x H x D)	TBD	373 x 297 x 46.1 mm	312.9 x 226.25 x 45.2 mm
	Weight	TBD	3.8 kg	1.1 kg
Environment	Operating Temp.	-5°C ~ 65°C	-10°C ~ 60°C (SSD)	0°C ~ 50°C with 0.6m/s air flow
	Relative Humidity	10% ~ 95% @ 40°C (non-condensing)	85% RH @ 60°C (with SSD)	5% ~ 90% RH (non-condensing)



10.1"



10.1"



10.1"

Model Name		KS101P-EHL	KS101-BT	KIT101P-M8M
Platform		Intel® Atom®	Intel® Atom®	ARM
System	Processor	Intel® Atom® x6425E Intel® Atom® x6413E	Intel® Atom® Processor E3845 Intel® Celeron® Processor J1900	NXP i.MX 8M
	Socket	BGA1493	BGA1170	-
	Max. Speed	3.0GHz	1.91GHz / 2.42GHz	1.5GHz
	TDP	12W / 9W	10W / 10W	-
	Cache	1.5M	2M / 2M	-
	BIOS	AMI SPI 256Mbit (supports UEFI boot only)	AMI SPI 64Mbit	-
Memory	Technology	Single Channel DDR4 3200MHz	Single Channel DDR3L 1333MHz	Single Channel LPDDR4 3200MHz
	Max. Capacity	32GB	2GB / 4GB	2GB / 4GB
	Socket	1 SODIMM	Memory Down	Memory Down
Display & Touch Screen	Display Type	10.1" PCAP TFT	10.1" TFT LCD Panel with Capacitive Touch Screen	10.1" TFT LCD
	Max. Resolution	1280 x 800	1280 x 800	1280 x 800
	Brightness	500 cd/m ²	500 cd/m ²	500 cd/m ²
Graphics	Connector	DP++ / VGA	1 HDMI	-
Storage		1x 2.5" SATA 3.0 Drive Bay	1x 2.5" SATA 2.0 Drive Bay, 1 micro SD (Opt.), 1 mSATA	16GB eMMC on board
Expansion	Mini PCIe, M.2, PCIe, SIM	1 Mini-PCIe, 1 x M.2 2230 E Key	3 Mini PCIe, 1 SIM	1 M.2 B Key 3042/2242, 1 M.2 E Key 2230
Audio	Audio Codec	Realtek ALC888	Realtek ALC886	SGTL5000
Ethernet	Controller	2 Intel® I225IT	2 Intel® I210	AR8035
LED	Indicators	Power	Power, HDD LED	-
I/O	Ethernet (GbE)	2	2	1
	Serial	1 RS232/422/485, 1 RS232	4 RS-232/422/485, 1 RS-232	1 RS485
	USB	2 USB 3.2 Gen2, 2 USB 2.0	1 USB 3.2 Gen1, 3 USB 2.0	2 USB3.1 Gen1 Type A, 1 Micro USB 2.0
	Display	DP++, VGA	1 HDMI	-
	Audio	1 Line-out	1 Line-out, 1 Mic-in	-
	DIO	-	8-bit DIO	-
	Buttons	Power Button	Power Button, Reset Button	-
	Wi-Fi Antenna	-	2 Holes	-
Power		9~36V DC-in	16~24V DC-in	12V DC-in / 9-48V DC-in (Opt.)
OS Support		Windows 10 IoT Enterprise 64bit & Linux	Win7, Win 8.1 (Opt.), Win10, Linux	Android 9.0 & Yocto 4.3
Mechanism	Construction	Aluminum Front Bezel	Aluminum Front Bezel	Aluminum
	IP Rating	IP65 Front Panel	IP65 Front Panel	-
	Mounting	VESA Mount	Panel / VESA Mount	Open frames
	Dimensions (W x H x D)	294 x 193 x 48 mm	294 x 193 x 48 mm	279.1 x 172.95 x 43.6 mm
	Weight	1.7 Kg	1.7 kg	1 Kg
Environment	Operating Temp.	0°C ~ 60°C	0°C ~ 60°C (SSD)	0°C ~ 50°C with 0.6m/s air flow
	Relative Humidity	10% ~ 95% @ 40°C (non-condensing)	5% ~ 90% RH (non-condensing)	5% ~ 90% RH (non-condensing)

Fanless Panel PC



7"



7"



7"

Model Name		KS070-AL	KS070-BT	KS070-M8M
Platform		Intel® Atom®	Intel® Atom®	ARM
System	Processor	Intel® Atom® x5-E3940 Intel® Celeron® Processor N3350	Intel® Atom® Processor E3845 Intel® Celeron® Processor J1900	NXP i.MX 8M Dual
	Socket	BGA 1296	BGA 1170	-
	Max. Speed	1.8GHz / 2.4GHz	1.91GHz / 2.42GHz	1.3GHz
	TDP	9.5W / 6W	10W / 10W	-
	Cache	2M	2M/2M	-
	BIOS	Insyde SPI 128Mbit (supports UEFI boot only)	AMI SPI 64Mbit	-
Memory	Technology	Single Channel DDR3L 1866MHz	Single Channel DDR3L 1333MHz	Single Channel LPDDR4 1600MHz
	Max. Capacity	8GB	2GB / 4GB	2GB / 4GB
	Socket	1 SODIMM	Memory Down	Memory Down
Display & Touch Screen	Display Type	7" TFT Capacitive / Resistive Touch Screen	7" TFT LCD Panel with Capacitive Touch Screen	7" Projected Capacitive TFT
	Max. Resolution	800 x 480	800 x 480	1024 x 600
	Brightness	500 cd/m ²	500 cd/m ²	425 cd/m ²
Graphics	Connector	1 VGA, 1 DP++	1 HDMI	-
Storage		1 CFast	1x 2.5" SATA 2.0 Drive Bay, 1 micro SD (Opt.), 1 mSATA	1 Micro SD, 16GB eMMC
Expansion	Mini PCIe, M.2, PCIe, SIM	1 Full-size Mini PCIe, 1 M.2 2242 B-key	3 Mini PCIe, 1 SIM	1 M.2 B key, 1 M.2 E key, 1 Nano SIM (Opt.)
Audio	Audio Codec	Realtek ALC262	Realtek ALC886	SGTL5000
Ethernet	Controller	2 Intel® I211	2 Intel® I210	AR8031
LED	Indicators	-	Power, HDD LED	Power
I/O	Ethernet (GbE)	2	2	1
	Serial	2 RS-232/422/485	4 RS-232/422/485	1 RS485, 1 RS232/422/485
	USB	2 USB 3.2 Gen1, 2 USB 2.0	1 USB 3.2 Gen1, 3 USB 2.0	2 USB 3.2 (type A)
	Display	1 VGA, 1 DP++	1 HDMI	-
	Audio	1 Line-out, 1 Mic-in	1 Line-out, 1 Mic-in	1 Line out
	DIO	8-bit DIO (Opt.)	8-bit DIO	8-bit DIO
	Buttons	Power Button	Power Button, Reset Button	1 Power Switch
	Wi-Fi Antenna	3 Holes	3 Holes	2 Holes
Power		12V DC-in	16~24V DC-in	12V DC
OS Support		Win10	Win7, Win 8.1 (Opt.), Win10, Linux	Android 9.0, Yocto 4.3
Mechanism	Construction	Sheet Metal	Aluminum Front Bezel	Aluminum front bezel
	IP Rating	IP65 Front Panel	IP65 Front Panel	IP65 front panel
	Mounting	Panel / VESA Mount	Panel / VESA Mount	Panel / VESA / Din-rail (Opt.)
	Dimensions (W x H x D)	230 x 150 x 58.3 mm	208 x 156 x 48.1 mm	235 x 150 x 43.8 mm
	Weight	1.5 kg	2 kg	1.2 kg
Environment	Operating Temp.	-20°C ~ 55°C (SSD)	0°C ~ 50°C (SSD)	0°C ~ 60°C
	Relative Humidity	5% ~ 85% RH (non-condensing)	5% ~ 85% RH (non-condensing)	85% RH @ 65°C (non-condensing)



7"



7"



5.7"

Model Name		KIT070P-M8M	KS070-FS	KS057R-FS
Platform		ARM	ARM	ARM
System	Processor	NXP i.MX 8M	NXP i.MX6	NXP i.MX6
	Socket	-	-	-
	Max. Speed	1.5GHz	1.0GHz	1.0GHz
	TDP	-	-	-
	Cache	-	512KB	512KB
	BIOS	-	-	-
Memory	Technology	Single Channel LPDDR4 3200MHz	Single Channel DDR3L 1600MHz	Dual Channel DDR3 400MHz
	Max. Capacity	2GB / 4GB	2GB	1GB
	Socket	Memory Down	Memory down	Memory Down
Display & Touch Screen	Display Type	7" TFT LCD	7" Projected Capacitive TFT	5.7" Resistive Touch Screen
	Max. Resolution	800 x 480	1024 x 600	640 x 480
	Brightness	425 cd/m ²	425 cd/m ²	400 cd/m ²
Graphics	Connector	-	1 HDMI	1 HDMI
Storage		16GB eMMC on board	1 SD, 4GB eMMC Onboard	1 Micro SD, 8GB eMMC
Expansion	Mini PCIe, M.2, PCIe, SIM	1 M.2 B key 3042/2242, 1 M.2 E Key 2230	1 Mini PCIe, 1 mSATA, 1 SIM	1 Mini PCIe
Audio	Audio Codec	SGTL5000	2 Built-in 1W Speaker	-
Ethernet	Controller	AR8035	Atheros AR8033	Atheros AR8033 / LAN7500
LED	Indicators	-	1 Status LED	-
I/O	Ethernet (GbE)	1	1	2
	Serial	1 RS485	1 RS-232/422/485, 1 RS-232	1 RS-485, 1 RS-232
	USB	2 USB3.1 Gen1 Type A, 1 Micro USB 2.0	2 USB 2.0 (type A), 1 OTG USB	2 USB 2.0 (type A)
	Display	-	1 HDMI	1 HDMI
	Audio	-	1 Line-out/Mic-in	-
	DIO	-	-	-
	Buttons	-	Power Switch	1 Reset Switch
	Wi-Fi Antenna	-	2 Holes	2 Holes
Power		12V DC-in / 9-48V DC-in (Opt.)	12~36V DC-in	12V DC
OS Support		Android 9.0 & Yocto 4.3	Android 4.3	Yocto 1.8, Android 5.1.1 (Opt.)
Mechanism	Construction	Aluminum	Sheet Metal	Sheet Metal
	IP Rating	-	IP65 Front Panel	IP20 Front Panel
	Mounting	Open frames	VESA /Panel	Wall, Din-rail
	Dimensions (W x H x D)	203 x 118 x 39.09 mm	235 x 150 x 43.8 mm	170.2 x 121 x 57.5mm
	Weight	0.7 kg	1.26 kg	1.05 kg
Environment	Operating Temp.	0°C ~ 50°C with 0.6m/s air flow	0°C ~ 60°C	-20°C ~ 60°C
	Relative Humidity	5% ~ 90% RH (non-condensing)	10% ~ 90% RH (non-condensing)	5% ~ 90% RH (non-condensing)

Expandable Touch Panel PC

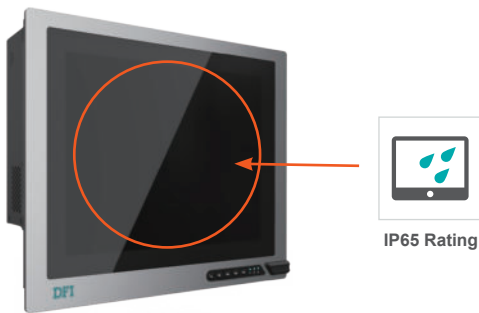
High Performance & Strong Scalability



Features

Powered by Intel® Core™ Desktop Processor, our TPC series is designed for high computing requirements. The various I/O interfaces and expandability makes it easier to increase functional add-ons required in your application scenario. Certified with IP65 and wide voltage support, these heavy industrial Panel PCs are suited for demanding applications in factory automation and other harsh environments.

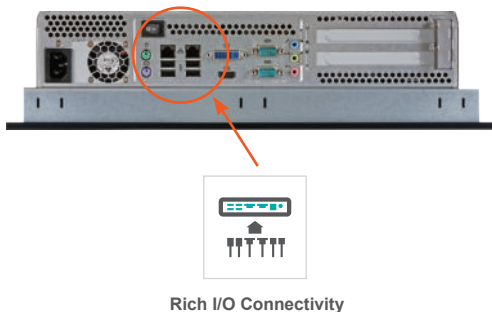
IP65 Front Water Proof



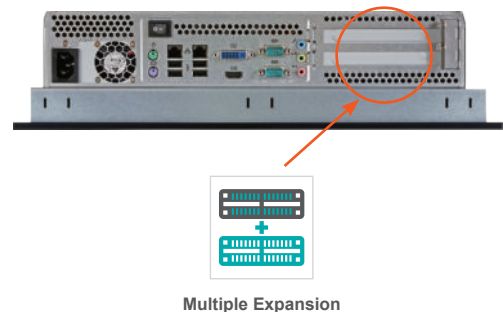
Resistive or Projected Capacitive Touch



Rich I/O : Connectivity



Expandability: 2 PCI/PCIe Slots



17"



15"



Model Name		TPC170-SD	TPC150-SD
Platform		Desktop	
System	Processor	7th/6th Gen Intel® Core™ Processor	
	Socket	LGA 1151	
	Max. Speed	2.8 ~ 4.2GHz	
	TDP	47W / 65W	
	Cache	2M / 3M / 6M / 8M	
	Chipset	Intel® Q170	Intel® H110/Q170
	BIOS	Insyde SPI 128Mbit	
Memory	Technology	Dual Channel DDR4 1866 / 2133MHz	
	Max. Capacity	32GB	
	Socket	2 SODIMM	
Display & Touch Screen	Display Type	17" PCAP/Resistive TFT	
	Max. Resolution	1280 x 1024	1024 x 768
	Brightness	350 cd/m ²	300 cd/m ²
Graphics	Connector	1 VGA, 1 DVI-I, 1 DP++	
Storage		2x 2.5" SATA 2.0 Drive Bay	
Expansion	PCIe, PCI	2 PCI or 2 PCIe x8	
	Mini PCIe	1 Mini PCIe	
Audio	Audio Codec	ALC888	
Ethernet	Controller	1 Intel® I211, 1 Intel® I219	
LED	Indicators	Power, HDD, Alarm LED	
I/O	Ethernet (GbE)	2	
	Serial	1 RS-232/422/485, 1 RS-232, 1 RS-232 (Opt.)	
	USB	4 USB 3.2 Gen1, 3 USB 2.0	
	Display	1 VGA, 1 DVI-I, 1 DP++	
	Audio	1 Line-out (Opt.)	
	PS/2	1	
	Buttons	Power Switch, Remote Power Switch	
Power		100-240VAC	
OS Support		Win7, Win10 IoT, Linux	
Mechanism	Construction	Sheet Metal	
	IP Rating	IP65 Front Panel	
	Mounting	VESA / Panel Mount	
	Dimensions (W x H x D)	404 x 363.8 x 98.9 mm	403 x 330 x 103.5 mm
	Weight	9.6 kg	10.87 kg
Environment	Operating Temp.	0°C ~ 50°C	
	Relative Humidity	10% ~ 90% @ 40°C (non-condensing)	

Modularized Touch Panel PC

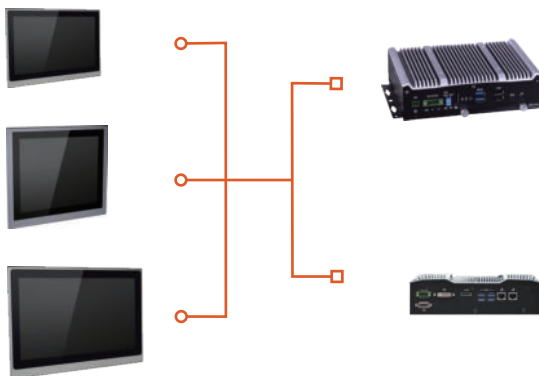
Modular Design & Easy Maintenance



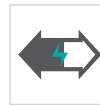
Features

Adaptive Display Platform (ADP) is an advanced configure solution for Panel PC. It is a flexible modular system that provides customers with easy maintenance, installation, and configuration. The concept of this platform is modular design, which means letting users combine their ideal displays and box PCs themselves. The components are interconnected, but user can separate and detach the components for repair and development. It will be much cheaper to upgrade certain modules instead of the whole unit.

Configure by Demand



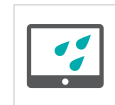
Rugged Design



Wide-voltage



Wide-temp



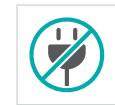
IP65 Rating



Anti-shock/vibration



Fanless

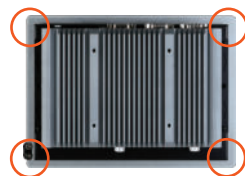


Cableless

Easy Installation & Maintenance



• Step 1



• Step 2

Upgrade Capability

- Brightness
- Resolution
- Panel Size
- Performance
- Function
- Connectivity



Modularized Touch Panel PC



21.5"



21.5"



21.5"

Model Name		KSM215-KH	KSM215-SD	KSM215-AL
Platform		Mobile	Desktop	Atom
System	Processor	7th Gen Intel® Core™ Processor	6th Gen Intel® Core™ Processor	Intel® Atom® E3900
	Socket	BGA 1440	LGA 1151	BGA 1296
	Max. Speed	2.1~4.2GHz	2.7~3.4GHz	1.8~2.4GHz
	TDP	25W / 35W / 45W	35W	6W/9.5W
	Cache	3M / 6M / 8M	4M / 6M / 8M	2M
	Chipset	Intel® CM238/QM175	Intel® H110	-
	BIOS	Insyde SPI 32Mbit	Insyde SPI 128Mbit	Insyde SPI 128Mbit (supports UEFI support only)
Memory	Technology	Dual Channel DDR4 2400MHz	Dual Channel DDR4 1866/2133MHz	Single Channel DDR3L 1866MHz
	Max. Capacity	32GB	32GB	8GB
	Socket	2 SODIMM	2 SODIMM	1 SODIMM
Display & Touch Screen	Display Type	21.5" PCAP/Resistive TFT	21.5" PCAP/Resistive TFT	21.5" PCAP/Resistive TFT
	Max. Resolution	1920 x 1080	1920 x 1080	1920 x 1080
	Brightness	300 cd/m ²	300 cd/m ²	300 cd/m ²
Graphics	Connector	1 VGA, 1 HDMI*/DVI, 1 HDMI*/DP++	1 VGA, 1 DVI, 1 HDMI*/DP	1 DP++, 1 VGA*/DVI-D
Storage		1x 2.5" SATA 3.0 Drive Bay (RAID)	1x 2.5" SATA 3.0 Drive Bay	1x 2.5" SATA 3.0 Drive Bay (accessible), 1 mSATA (share by Mini PCIe)
Expansion	Mini PCIe, M.2, PCIe, SIM	2 Full-size Mini PCIe, 1 M.2 M Key 2280, SIM	2 Mini PCIe	2 Mini PCIe, 1 SIM
Audio	Audio Codec	Realtek ALC886	Realtek ALC888	Realtek ALC262
Ethernet	Controller	1 Intel® I211, 1 Intel® I219	1 Intel® I211, 1 Intel® I219	2 Intel® I210AT
LED	Indicators	Power, Status, HDD	Power, HDD, Alarm	Power, HDD, Alarm LED
I/O	Ethernet (GbE)	2	2	2 GbE, Support Jumbo Frame, IEEE1588v2, WOL, PXE 802.3 af PoE (PSE), Individual Port 15.4W (Opt.)
	Serial	4 RS-232/422/485	4 RS-232/422/485	2 RS-232/422/485
	USB	4 USB 3.2 Gen1, 2 USB 2.0	4 USB 3.2 Gen1, 1 USB 2.0	2 USB 3.2 Gen1, 2 USB 2.0
	Display	1 VGA, 1 HDMI*/DVI, 1 HDMI*/DP++	1 DVI-I, 1 HDMI*/DP	1 DP++, 1 VGA*/DVI-D
	Audio	1 Line-out, 1 Mic-in (Opt.)	1 Line-out, 1 Mic-in	1 Line-out, 1 Mic-in
	DIO	-	-	4 x DI/4 x DO (10-pin terminal block) (Opt.)
	Buttons	Power, Reset	Power, Reset	Power Button, Reset Switch
	Wi-Fi Antenna	2 Holes	-	4 Holes
Power		9~36V DC-in	9~36V DC-in / 12V DC-in (Opt.)	12V/24V/48V DC-in or 24V DC-in (Opt.) or 9~48V DC-in (Opt.)
OS Support		Win10, Linux	Win7, Win10, Linux	Win10, Linux
Mechanism	Construction	Metal + Aluminum	Aluminum + SGCC	Aluminum Front Bezel
	IP Rating	IP65 Front Panel	IP65 Front Panel	IP65 Front Panel
	Mounting	VESA / Panel Mount	VESA / Panel Mount	VESA / Panel Mount
	Dimensions (W x H x D)	544.2 x 360.6 x 118 mm	544.2 x 360.6 x 118 mm	544.2 x 360.6 x 80.9 mm
	Weight	9.4 kg	9.4 kg	7 kg
Environment	Operating Temp.	-20°C ~ 50°C (SSD/mSATA-mini/CFast card, with 0.7m/s air flow)	-20°C ~ 60°C	0°C ~ 60°C
	Relative Humidity	5% ~ 95% RH (non-condensing)	5% ~ 90% RH (non-condensing)	5% ~ 95% RH (non-condensing)

*Populated by default

Modularized Touch Panel PC



Model Name		KSM190-KH	KSM190-SD	KSM190-AL
Platform		Mobile	Desktop	Atom
System	Processor	7th Gen Intel® Core™ Processor	6th Gen Intel® Core™ Processor	Intel® Atom® E3900
	Socket	BGA 1440	LGA 1151	BGA 1296
	Max. Speed	2.1~4.2GHz	2.7~3.4GHz	1.8~2.4GHz
	TDP	25W / 35W / 45W	35W	6W / 9.5W
	Cache	3M / 6M / 8M	4M / 6M / 8M	2M
	Chipset	Intel® CM238/QM175	Intel® H110	-
	BIOS	Insyde SPI 32Mbit	Insyde SPI 128Mbit	Insyde SPI 128Mbit (supports UEFI support only)
Memory	Technology	Dual Channel DDR4 2400MHz	Dual Channel DDR4 1866/2133MHz	Single Channel DDR3L 1866MHz
	Max. Capacity	32GB	32GB	8GB
	Socket	2 SODIMM	2 SODIMM	1 SODIMM
Display & Touch Screen	Display Type	19" PCAP/Resistive TFT	19" PCAP/Resistive TFT	19" PCAP/Resistive TFT
	Max. Resolution	1280 x 1024	1280 x 1024	1280 x 1024
	Brightness	350 cd/m ²	350 cd/m ²	350 cd/m ²
Graphics	Connector	1 VGA, 1 HDMI*/DVI, 1 HDMI*/DP++	1 VGA, 1 DVI, 1 HDMI*/DP	1 DP++, 1 VGA*/DVI-D
Storage		1x 2.5" SATA 3.0 Drive Bay (RAID)	1x 2.5" SATA 3.0 Drive Bay	1x 2.5" SATA 3.0 Drive Bay (accessible), 1 mSATA (share by Mini PCIe)
Expansion	Mini PCIe, M.2, PCIe, SIM	2 Full-size Mini PCIe, 1 M.2 M Key 2280, SIM	2 Mini PCIe	2 Mini PCIe, 1 SIM
Audio	Audio Codec	Realtek ALC886	Realtek ALC888	Realtek ALC262
Ethernet	Controller	1 Intel® I211, 1 Intel® I219	1 Intel® I211, 1 Intel® I219	2 Intel® I210
LED	Indicators	Power, Status, HDD	Power, HDD, Alarm	Power, HDD, Alarm LED
I/O	Ethernet (GbE)	2	2	2 GbE, Support Jumbo Frame, IEEE1588v2, WOL, PXE 802.3 af PoE (PSE), Individual Port 15.4W (Opt.)
	Serial	4 RS-232/422/485	4 RS-232/422/485	2 RS-232/422/485
	USB	4 USB 3.2 Gen1, 2 USB 2.0	4 USB 3.2 Gen1, 1 USB 2.0	2 USB 3.2 Gen1, 2 USB 2.0
	Display	1 VGA, 1 HDMI*/DVI, 1 HDMI*/DP++	1 DVI-I, 1 HDMI*/DP	1 DP++, 1 VGA*/DVI-D
	Audio	1 Line-out, 1 Mic-in	1 Line-out, 1 Mic-in	1 Line-out, 1 Mic-in
	DIO	-	-	4 x DI/4 x DO (10-pin terminal block) (Opt.)
	Buttons	Power, Reset	Power, Reset	Power Button, Reset Switch
	Wi-Fi Antenna	2 Holes	-	4 Holes
Power		9~36V DC-in	9~36V DC-in / 12V DC-in (Opt.)	12V/24V/48V DC-in or 24V DC-in (Opt.) or 9~48V DC-in (Opt.)
OS Support		Win10, Linux	Win7, Win10, Linux	Win10, Linux
Mechanism	Construction	Metal + Aluminum	Aluminum + SGCC	Aluminum Front Bezel
	IP Rating	IP65 Front Panel	IP65 Front Panel	IP65 Front Panel
	Mounting	VESA / Panel Mount	VESA / Panel Mount	VESA / Panel Mount
	Dimensions (W x H x D)	467 x 400 x 118 mm	467 x 400 x 118 mm	467 x 400 x 80.5 mm
	Weight	10 kg	10 kg	7.6 kg
Environment	Operating Temp.	-20°C ~ 50°C (SSD/mSATA-mini/CFast card, with 0.7m/s air flow)	-30°C ~ 50°C	-20°C ~ 70°C
	Relative Humidity	5% ~ 95% RH (non-condensing)	5% ~ 90% RH (non-condensing)	5% ~ 95% RH (non-condensing)

*Populated by default

Modularized Touch Panel PC



Model Name		KSM185-KH	KSM185-SD	KSM185-AL
Platform		Mobile	Desktop	Atom
System	Processor	7th Gen Intel® Core™ Processor	6th Gen Intel® Core™ Processor	Intel Atom® E3900
	Socket	BGA 1440	LGA 1151	BGA 1296
	Max. Speed	2.1~4.2GHz	2.7~3.4GHz	1.8~2.4GHz
	TDP	25W / 35W / 45W	35W	6W / 9.5W
	Cache	3M / 6M / 8M	4M / 6M / 8M	2M
	Chipset	Intel® CM238/QM175	Intel® H110	-
	BIOS	Insyde SPI 32Mbit	Insyde SPI 128Mbit	Insyde SPI 128Mbit (supports UEFI support only)
Memory	Technology	Dual Channel DDR4 2400MHz	Dual Channel DDR4 1866/2133MHz	Single Channel DDR3L 1866MHz
	Max. Capacity	32GB	32GB	8GB
	Socket	2 SODIMM	2 SODIMM	1 SODIMM
Display & Touch Screen	Display Type	18.5" PCAP/Resistive TFT	18.5" PCAP/Resistive TFT	18.5" PCAP/Resistive TFT
	Max. Resolution	1366 x 768	1366 x 768	1366 x 768
	Brightness	450 cd/m²	450 cd/m²	450 cd/m²
Graphics	Connector	1 VGA, 1 HDMI*/DVI, 1 HDMI*/DP++	1 VGA, 1 DVI, 1 HDMI*/DP	1 DP++, 1 VGA*/DVI-D
Storage		1x 2.5" SATA 3.0 Drive Bay (RAID)	1x 2.5" SATA 3.0 Drive Bay	1x 2.5" SATA 3.0 Drive Bay (accessible), 1 mSATA (share by Mini PCIe)
Expansion	Mini PCIe, M.2, PCIe, SIM	2 Full-size Mini PCIe, 1 M.2 M Key 2280, SIM	2 Mini PCIe	2 Mini PCIe, 1 SIM
Audio	Audio Codec	Realtek ALC886	Realtek ALC888	Realtek ALC262
Ethernet	Controller	1 Intel® I211, 1 Intel® I219	1 Intel® I211, 1 Intel® I219	2 Intel® I210AT
LED	Indicators	Power, Status, HDD	Power, HDD, Alarm	Power, HDD, Alarm LED
I/O	Ethernet (GbE)	2	2	2 GbE, Support Jumbo Frame, IEEE1588v2, WOL, PXE 802.3 af PoE (PSE), Individual Port 15.4W (Opt.)
	Serial	4 RS-232/422/485	4 RS-232/422/485	2 RS-232/422/485
	USB	4 USB 3.2 Gen1, 2 USB 2.0	4 USB 3.2 Gen1, 1 USB 2.0	2 USB 3.2 Gen1, 2 USB 2.0
	Display	1 VGA, 1 HDMI*/DVI, 1 HDMI*/DP++	1 DVI-I, 1 HDMI*/DP	1 DP++, 1 VGA*/DVI-D (Opt.)
	Audio	1 Line-out, 1 Mic-in (Opt.)	1 Line-out, 1 Mic-in	1 Line-out, 1 Mic-in
	DIO	-	-	4 x DI/4 x DO (10-pin terminal block) (Opt.)
	Buttons	Power, Reset	Power, Reset	Power Button, Reset Switch
	Wi-Fi Antenna	2 Holes	-	4 Holes
Power		9~36V DC-in	9~36V DC-in / 12V DC-in (Opt.)	12V/24V/48V DC-in or 24V DC-in (Opt.) or 9~48V DC-in (Opt.)
OS Support		Win10, Linux	Win7, Win10, Linux	Win10, Linux
Mechanism	Construction	Metal + Aluminum	Aluminum + SGCC	Aluminum Front Bezel
	IP Rating	IP65 Front Panel	IP65 Front Panel	IP65 Front Panel
	Mounting	VESA / Panel Mount	VESA / Panel Mount	VESA / Panel Mount
	Dimensions (W x H x D)	472.06 x 314.15 x 102.8 mm	472.06 x 314.15 x 102.8 mm	472.1 x 314.1 x 80.9 mm
	Weight	8.1 kg	8.1 kg	5.7 kg
Environment	Operating Temp.	-20°C ~ 50°C (SSD/mSATA-mini/CFast card, with 0.7m/s air flow)	-20°C ~ 60°C	0°C ~ 60°C
	Relative Humidity	5% ~ 95% RH (non-condensing)	5% ~ 90% RH (non-condensing)	5% ~ 95% RH (non-condensing)

*Populated by default

Modularized Touch Panel PC



Model Name		KSM170-KH	KSM170-SD	KSM170-AL
Platform		Mobile	Desktop	Atom
System	Processor	7th Gen Intel® Core™ Processor	6th Gen Intel® Core™ Processor	Intel® Atom® E3900
	Socket	BGA 1440	LGA 1151	BGA 1296
	Max. Speed	2.1~4.2GHz	2.7~3.4GHz	1.8~2.4GHz
	TDP	25W / 35W / 45W	35W	6W / 9.5W
	Cache	3M / 6M / 8M	4M / 6M / 8M	2M
	Chipset	Intel® CM238/QM175	Intel® H110	-
	BIOS	Insyde SPI 32Mbit	Insyde SPI 128Mbit	Insyde SPI 128Mbit (supports UEFI support only)
Memory	Technology	Dual Channel DDR4 2400MHz	Dual Channel DDR4 1866/2133MHz	Single Channel DDR3L 1866MHz
	Max. Capacity	32GB	32GB	8GB
	Socket	2 SODIMM	2 SODIMM	1 SODIMM
Display & Touch Screen	Display Type	17" PCAP/Resistive TFT	17" PCAP/Resistive TFT	17" PCAP/Resistive TFT
	Max. Resolution	1280 x 1024	1280 x 1024	1280 x 1024
	Brightness	350 cd/m²	350 cd/m²	350 cd/m²
Graphics	Connector	1 VGA, 1 HDMI*/DVI, 1 HDMI*/DP++	1 VGA, 1 DVI, 1 HDMI*/DP	1 DP++, 1 VGA*/DVI-D
Storage		1x 2.5" SATA 3.0 Drive Bay (RAID)	1x 2.5" SATA 3.0 Drive Bay	1x 2.5" SATA 3.0 Drive Bay (accessible), 1 mSATA (share by Mini PCIe)
Expansion	Mini PCIe, M.2, PCIe, SIM	2 Full-size Mini PCIe, 1 M.2 M Key 2280, SIM	2 Mini PCIe	2 Mini PCIe, 1 SIM
Audio	Audio Codec	Realtek ALC886	Realtek ALC888	Realtek ALC262
Ethernet	Controller	1 Intel® I211, 1 Intel® I219	1 Intel® I211, 1 Intel® I219	2 Intel® I210
LED	Indicators	Power, Status, HDD	Power, HDD, Alarm	Power, HDD, Alarm LED
I/O	Ethernet (GbE)	2	2	2 GbE, Support Jumbo Frame, IEEE1588v2, WOL, PXE 802.3 af PoE (PSE), Individual Port 15.4W (Opt.)
	Serial	4 RS-232/422/485	4 RS-232/422/485	2 RS-232/422/485
	USB	4 USB 3.2 Gen1, 2 USB 2.0	4 USB 3.2 Gen1, 1 USB 2.0	2 USB 3.2 Gen1, 2 USB 2.0
	Display	1 VGA, 1 HDMI*/DVI, 1 HDMI*/DP++	1 DVI-I, 1 HDMI*/DP	1 DP++, 1 VGA*/DVI-D (Opt.)
	Audio	1 Line-out, 1 Mic-in	1 Line-out, 1 Mic-in	1 Line-out, 1 Mic-in
	DIO	-	-	4 x DI/4 x DO (10-pin terminal block) (Opt.)
	Buttons	Power, Reset	Power, Reset	Power Button, Reset Switch
	Wi-Fi Antenna	2 Holes	-	4 Holes
Power		9~36V DC-in	9~36V DC-in / 12V DC-in (Opt.)	12V/24V/48V DC-in or 24V DC-in (Opt.) or 9~48V DC-in (Opt.)
OS Support		Win10, Linux	Win7, Win10, Linux	Win10, Linux
Mechanism	Construction	Metal + Aluminum	Aluminum + SGCC	Aluminum Front Bezel
	IP Rating	IP65 Front Panel	IP65 Front Panel	IP65 Front Panel
	Mounting	VESA / Panel Mount	VESA / Panel Mount	VESA / Panel Mount
	Dimensions (W x H x D)	404 x 363.8 x 102.8 mm	404 x 363.8 x 102.8 mm	404 x 363.8 x 80.9 mm
	Weight	7.8 kg	8.1 kg	5.4 kg
Environment	Operating Temp.	-20°C ~ 50°C (SSD/mSATA-mini/CFast card, with 0.7m/s air flow)	-20°C ~ 60°C	0°C ~ 50°C
	Relative Humidity	5% ~ 95% RH (non-condensing)	5% ~ 90% RH (non-condensing)	5% ~ 95% RH (non-condensing)

*Populated by default

Modularized Touch Panel PC



15.6"



15.6"



15.6"

Model Name		KSM156-KH	KSM156-SD	KSM156-AL
Platform		Mobile	Desktop	Atom
System	Processor	7th Gen Intel® Core™ Processor	6th Gen Intel® Core™ Processor	Intel® Atom® E3900
	Socket	BGA 1440	LGA 1151	BGA 1296
	Max. Speed	2.1~4.2GHz	2.7~3.4GHz	1.8~2.4GHz
	TDP	25W / 35W / 45W	35W	6W / 9.5W
	Cache	3M / 6M / 8M	4M / 6M / 8M	2M
	Chipset	Intel® CM238/QM175	Intel® H110	-
	BIOS	Insyde SPI 32Mbit	Insyde SPI 128Mbit	Insyde SPI 128Mbit (supports UEFI support only)
Memory	Technology	Dual Channel DDR4 2400MHz	Dual Channel DDR4 1866/2133MHz	Single Channel DDR3L 1866MHz
	Max. Capacity	32GB	32GB	8GB
	Socket	2 SODIMM	2 SODIMM	1 SODIMM
Display & Touch Screen	Display Type	15.6" PCAP/Resistive TFT	15.6" PCAP/Resistive TFT	15.6" PCAP/Resistive TFT
	Max. Resolution	1366 x 768	1366 x 768	1366 x 768
	Brightness	400 cd/m ²	400 cd/m ²	400 cd/m ²
Graphics	Connector	1 VGA, 1 HDMI*/DVI, 1 HDMI*/DP++	1 VGA, 1 DVI, 1 HDMI*/DP	1 DP++, 1 VGA*/DVI-D
Storage		1x 2.5" SATA 3.0 Drive Bay (RAID)	1x 2.5" SATA 3.0 Drive Bay	1x 2.5" SATA 3.0 Drive Bay (accessible), 1 mSATA (share by Mini PCIe)
Expansion	Mini PCIe, M.2, PCIe, SIM	2 Full-size Mini PCIe, 1 M.2 M Key 2280, SIM	2 Mini PCIe	2 Mini PCIe, 1 SIM
Audio	Audio Codec	Realtek ALC886	Realtek ALC888	Realtek ALC262
Ethernet	Controller	1 Intel® I211, 1 Intel® I219	1 Intel® I211, 1 Intel® I219	2 Intel® I210
LED	Indicators	Power, Status, HDD	Power, HDD, Alarm	Power, HDD, Alarm LED
I/O	Ethernet (GbE)	2	2	2 GbE, Support Jumbo Frame, IEEE1588v2, WOL, PXE 802.3 af PoE (PSE), Individual Port 15.4W (Opt.)
	Serial	4 RS-232/422/485	4 RS-232/422/485	2 RS-232/422/485
	USB	4 USB 3.2 Gen1, 2 USB 2.0	4 USB 3.2 Gen1, 1 USB 2.0	2 USB 3.2 Gen1, 2 USB 2.0
	Display	1 VGA, 1 HDMI*/DVI, 1 HDMI*/DP++	1 DVI-I, 1 HDMI*/DP	1 DP++, 1 VGA*/DVI-D (Opt.)
	Audio	1 Line-out, 1 Mic-in (Opt.)	1 Line-out, 1 Mic-in	1 Line-out, 1 Mic-in
	DIO	-	-	4 x DI/4 x DO (10-pin terminal block) (Opt.)
	Buttons	Power, Reset	Power, Reset	Power Button, Reset Switch
	Wi-Fi Antenna	2 Holes	-	4 Holes
Power		9~36V DC-in	9~36V DC-in / 12V DC-in (Opt.)	12V/24V/48V DC-in or 24V DC-in (Opt.) or 9~48V DC-in (Opt.)
OS Support		Win10, Linux	Win7, Win10, Linux	Win10, Linux
Mechanism	Construction	Metal + Aluminum	Aluminum + SGCC	Aluminum Front Bezel
	IP Rating	IP65 Front Panel	IP65 Front Panel	IP65 Front Panel
	Mounting	VESA / Panel Mount	VESA / Panel Mount	VESA / Panel Mount
	Dimensions (W x H x D)	407.3 x 277.3 x 97.92 mm	407.3 x 277.3 x 97.92 mm	407.3 x 277.3 x 76.1 mm
	Weight	8 kg	6.6 kg	4.2 kg
Environment	Operating Temp.	-20°C ~ 50°C (SSD/mSATA-mini/CFast card, with 0.7m/s air flow)	-20°C ~ 60°C	0°C ~ 60°C
	Relative Humidity	5% ~ 95% RH (non-condensing)	5% ~ 90% RH (non-condensing)	5% ~ 95% RH (non-condensing)

*Populated by default

Modularized Touch Panel PC

15"



15"



15"



Model Name		KSM150-KH	KSM150-SD	KSM150-AL
Platform		Mobile	Desktop	Atom
System	Processor	7th Gen Intel® Core™ Processor	6th Gen Intel® Core™ Processor	Intel® Atom® E3900
	Socket	BGA 1440	LGA 1151	BGA 1296
	Max. Speed	2.1~4.2GHz	2.7~3.4GHz	1.8~2.4GHz
	TDP	25W / 35W / 45W	35W	6W / 9.5W
	Cache	3M / 6M / 8M	4M / 6M / 8M	2M
	Chipset	Intel® CM238/QM175	Intel® H110	-
	BIOS	Insyde SPI 32Mbit	Insyde SPI 128Mbit	Insyde SPI 128Mbit (supports UEFI support only)
Memory	Technology	Dual Channel DDR4 2400MHz	Dual Channel DDR4 1866/2133MHz	Single Channel DDR3L 1866MHz
	Max. Capacity	32GB	32GB	8GB
	Socket	2 SODIMM	2 SODIMM	1 SODIMM
Display & Touch Screen	Display Type	15" PCAP/Resistive TFT	15" PCAP/Resistive TFT	15" PCAP/Resistive TFT
	Max. Resolution	1024 x 768	1024 x 768	1024 x 768
	Brightness	300 cd/m²	300 cd/m²	300 cd/m²
Graphics	Connector	1 VGA, 1 HDMI*/DVI, 1 HDMI*/DP++	1 VGA, 1 DVI, 1 HDMI*/DP	1 DP++, 1 VGA*/DVI-D
Storage		1x 2.5" SATA 3.0 Drive Bay (RAID)	1x 2.5" SATA 3.0 Drive Bay	1x 2.5" SATA 3.0 Drive Bay (accessible), 1 mSATA (share by Mini PCIe)
Expansion	Mini PCIe, M.2, PCIe, SIM	2 Full-size Mini PCIe, 1 M.2 M Key 2280, SIM	2 Mini PCIe	2 Mini PCIe, 1 SIM
Audio	Audio Codec	Realtek ALC886	Realtek ALC888	Realtek ALC262
Ethernet	Controller	1 Intel® I211, 1 Intel® I219	1 Intel® I211, 1 Intel® I219	2 Intel® I210AT
LED	Indicators	Power, Status, HDD	Power, HDD, Alarm	Power, HDD, Alarm LED
I/O	Ethernet (GbE)	2	2	2 GbE, Support Jumbo Frame, IEEE1588v2, WOL, PXE 802.3 af PoE (PSE), Individual Port 15.4W (Opt.)
	Serial	4 RS-232/422/485	4 RS-232/422/485	2 RS-232/422/485
	USB	4 USB 3.2 Gen1, 2 USB 2.0	4 USB 3.2 Gen1, 1 USB 2.0	2 USB 3.2 Gen1, 2 USB 2.0
	Display	1 VGA, 1 HDMI*/DVI, 1 HDMI*/DP++	1 DVI-I, 1 HDMI*/DP	1 DP++, 1 VGA*/DVI-D (Opt.)
	Audio	1 Line-out, 1 Mic-in	1 Line-out, 1 Mic-in	1 Line-out, 1 Mic-in
	DIO	-	-	4 x DI/4 x DO (10-pin terminal block) (Opt.)
	Buttons	Power, Reset	Power, Reset	Power Button, Reset Switch
	Wi-Fi Antenna	2 Holes	-	4 Holes
Power		9~36V DC-in	9~36V DC-in / 12V DC-in (Opt.)	12V/24V/48V DC-in or 24V DC-in (Opt.) or 9~48V DC-in (Opt.)
OS Support		Win10, Linux	Win7, Win10, Linux	Win10, Linux
Mechanism	Construction	Metal + Aluminum	Aluminum + SGCC	Aluminum Front Bezel
	IP Rating	IP65 Front Panel	IP65 Front Panel	IP65 Front Panel
	Mounting	VESA / Panel Mount	VESA / Panel Mount	VESA / Panel Mount
	Dimensions (W x H x D)	387 x 320 x 118 mm	387 x 320 x 118 mm	387 x 320 x 80.5 mm
	Weight	7.7 kg	7.7 kg	5.3 kg
Environment	Operating Temp.	-20°C ~ 50°C (SSD/mSATA-mini/CFast card, with 0.7m/s air flow)	-30°C ~ 70°C	-20°C ~ 70°C
	Relative Humidity	5% ~ 95% RH (non-condensing)	5% ~ 90% RH (non-condensing)	5% ~ 95% RH (non-condensing)

*Populated by default

Modularized Touch Panel PC



12.1"



10.1"



7"

Model Name		KSM121-AL	KSM101-AL	KSM070-AL
Platform		Atom	Atom	Atom
System	Processor	Intel® Atom® E3900	Intel® Atom® E3900	Intel® Atom® E3900
	Socket	BGA 1296	BGA 1296	BGA 1296
	Max. Speed	1.8~2.4GHz	1.8~2.4GHz	1.8~2.4GHz
	TDP	6W / 9.5W	6W / 9.5W	6W / 9.5W
	Cache	2M	2M	2M
	Chipset	-	-	-
	BIOS	Insyde SPI 128Mbit (supports UEFI support only)	Insyde SPI 128Mbit (supports UEFI support only)	Insyde SPI 128Mbit (supports UEFI support only)
Memory	Technology	Single Channel DDR3L 1866MHz	Single Channel DDR3L 1866MHz	Single Channel DDR3L 1866MHz
	Max. Capacity	8GB	8GB	8GB
	Socket	1 SODIMM	1 SODIMM	1 SODIMM
Display & Touch Screen	Display Type	12.1" PCAP/Resistive TFT	10.1" PCAP/Resistive TFT	7" PCAP/Resistive TFT
	Max. Resolution	1024 x 768	1280 x 800	800 x 480
	Brightness	500 cd/m ²	350 cd/m ²	500 cd/m ²
Graphics	Connector	1 DP++, 1 VGA*/DVI-D	1 DP++, 1 VGA*/DVI-D	1 DP++, 1 VGA*/DVI-D
Storage		1x 2.5" SATA 3.0 Drive Bay (accessible), 1 mSATA (share by Mini PCIe)	1x 2.5" SATA 3.0 Drive Bay (accessible), 1 mSATA (share by Mini PCIe)	1x 2.5" SATA 3.0 Drive Bay (accessible), 1 mSATA (share by Mini PCIe)
Expansion	Mini PCIe, M.2, PCIe, SIM	2 Mini PCIe, 1 SIM	2 Mini PCIe, 1 SIM	2 Mini PCIe, 1 SIM
Audio	Audio Codec	Realtek ALC262	Realtek ALC262	Realtek ALC262
Ethernet	Controller	2 Intel® I210AT	2 Intel® I210AT	2 Intel® I210AT
LED	Indicators	Power, HDD, Alarm LED	Power, HDD, Alarm LED	Power, HDD, Alarm LED
I/O	Ethernet (GbE)	2 GbE, Support Jumbo Frame, IEEE1588v2, WOL, PXE 802.3 af PoE (PSE), Individual Port 15.4W (Opt.)	2 GbE, Support Jumbo Frame, IEEE1588v2, WOL, PXE 802.3 af PoE (PSE), Individual Port 15.4W (Opt.)	2 GbE, Support Jumbo Frame, IEEE1588v2, WOL, PXE 802.3 af PoE (PSE), Individual Port 15.4W (Opt.)
	Serial	2 RS-232/422/485	2 RS-232/422/485	2 RS-232/422/485
	USB	2 USB 3.2 Gen1, 2 USB 2.0	2 USB 3.2 Gen1, 2 USB 2.0	2 USB 3.2 Gen1, 2 USB 2.0
	Display	1 DP++, 1 VGA*/DVI-D (Opt.)	1 DP++, 1 VGA*/DVI-D (Opt.)	1 DP++, 1 VGA*/DVI-D (Opt.)
	Audio	1 Line-out, 1 Mic-in	1 Line-out, 1 Mic-in	1 Line-out, 1 Mic-in
	DIO	4 x DI/4 x DO (10-pin terminal block) (Opt.)	4 x DI/4 x DO (10-pin terminal block) (Opt.)	4 x DI/4 x DO (10-pin terminal block) (Opt.)
	Buttons	Power Button, Reset Switch	Power Button, Reset Switch	Power Button, Reset Switch
	Wi-Fi Antenna	4 Holes	4 Holes	4 Holes
Power		12V/24V/48V DC-in or 24V DC-in (Opt.) or 9~48V DC-in (Opt.)	12V/24V/48V DC-in or 24V DC-in (Opt.) or 9~48V DC-in (Opt.)	12V/24V/48V DC-in or 24V DC-in (Opt.) or 9~48V DC-in (Opt.)
OS Support		Win10, Linux	Win10, Linux	Win10, Linux
Mechanism	Construction	Aluminum Front Bezel	Aluminum Front Bezel	Aluminum Front Bezel
	IP Rating	IP65 Front Panel	IP65 Front Panel	IP65 Front Panel
	Mounting	VESA / Panel Mount	VESA / Panel Mount	VESA / Panel Mount
	Dimensions (W x H x D)	308 x 265.3 x 77.9 mm	275 x 212.3 x 72.9 mm	224 x 163.55 x 72.9 mm
	Weight	3.2 kg	2.4 kg	2.2 kg
Environment	Operating Temp.	-20°C ~ 70°C	-20°C ~ 70°C	-20°C ~ 70°C
	Relative Humidity	5% ~ 95% RH (non-condensing)	5% ~ 95% RH (non-condensing)	5% ~ 95% RH (non-condensing)

*Populated by default

Industrial Display & Touch Display

Multiple Sizes & High Brightness

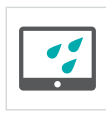


Industrial Display & Touch Display

IDP Series

DFI provides an array of industrial-grade monitor series supporting multi-touch and Wifi display functions, which are suitable for harsh environments in various applications. The sizes are available covering from 7" to 21.5".

IP65 Front Water Proof



IP65 Rating

Resistive or Projected Capacitive Touch



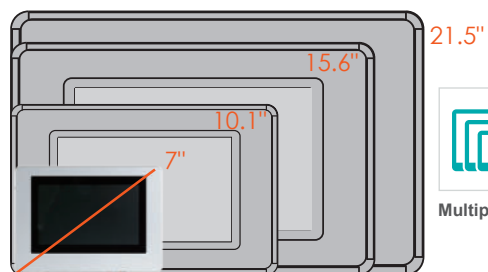
Resistive Touch

Modular Extend Display Module Support



Wifi Display Module

Available in Several Sizes



Multiple Size



21.5"



19"



17"

Model Name	IDP215P	IDP190-ME	IDP170-ME
Display Type	21.5" PCAP TFT	19" TFT LCD	17" TFT LCD
Max. Resolution	1920 x 1080	1280 x 1024	1280 x 1024
Brightness	250 cd/m ²	250 cd/m ² (without Touch screen)	250 cd/m ² (without Touch screen)
Contrast Ratio	1000:1	1000:1	1000:1
View Angle	170(H) / 130(V)	170(H) / 160(V)	170(H) / 160(V)
Input Interface	VGA, HDMI, DP, USB, Line-in	VGA, HDMI, USB DVI (opt)	VGA, HDMI, USB DVI (opt)
Backlight Life	50,000 hrs	30,000 Hrs	30,000 Hrs
Power	AC Input, External power adapter, 100~240V	AC Input 12V DC-IN	AC Input 12V DC-IN
Operating Temp.	0°C ~ 50°C	0°C ~ 50°C	0°C ~ 50°C
Dimensions (W x H x D)	524 x 317 x 46 mm	442 x 366.7 x 59 mm	399.6 x 331 x 57 mm
External Display	-	-	-



15.6"

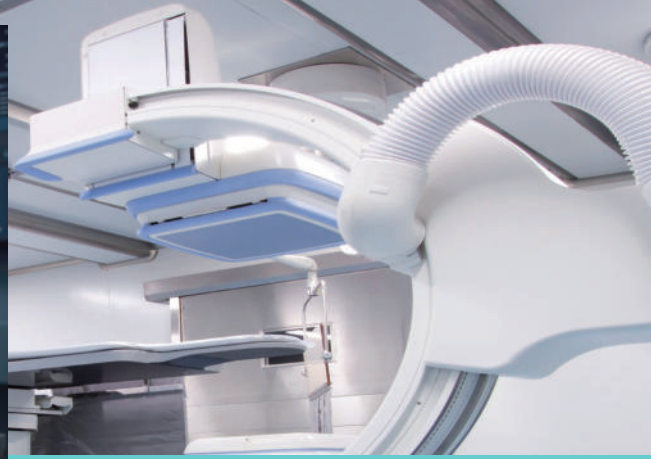


15"



7"

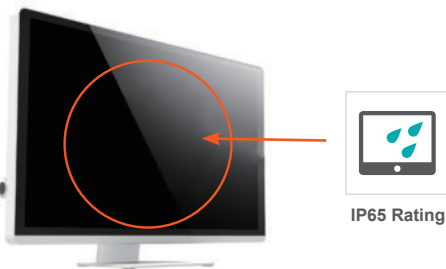
Model Name	IDP156-MS	IDP150-ME	IDP070-MS
Display Type	15.6" PCAP / Resistive TFT	15" TFT LCD	7" PCAP / Resistive TFT
Max. Resolution	1366 x 768	1024 x 768	800 x 480
Brightness	400 cd/m ²	300 cd/m ² (without Touch screen)	500 cd/m ²
Contrast Ratio	400:1	2500:1	400:1
View Angle	170(H) / 130(V)	176(H) / 176(V)	130(H) / 140(V)
Input Interface	VGA, DVI, HDMI, USB	VGA, HDMI, USB DVI (Opt.)	VGA, DVI, HDMI, USB, COM
Backlight Life	50,000 Hrs	50,000 Hrs	40,000 Hrs
Power	20V USB Type C VDC input / 12 to 24 VDC input with DC Jack	AC Input 12V DC-IN	20V USB Type C VDC input / 12 to 24 VDC input with DC Jack (Opt.)
Operating Temp.	0°C ~ 70°C	0°C ~ 50°C	-20°C ~ 70°C / -40°C ~ 70°C (available upon request)
Dimensions (W x H x D)	407.3 x 227.3 x 56 mm	358.7 x 281.7 x 55 mm	224 x 163.55 x 43.6 mm
External Display	Wifi Display	-	Wifi Display



Application Specific Group

DFI Application Specific Group is a slim and stylish medical grade touch display, featuring P-CAP, various I/O, Full HD resolution, IEC / EN 60601-1 standard, and DICOM Part 14 compliance. It provides excellent medical image quality, color reproduction and image contrast to meet a variety of medical imaging segments such as clinical review or clinical consultant.

IP65 Front Water Proof



Certification and Regulatory

Design for safety / reliability / anti-bacterial



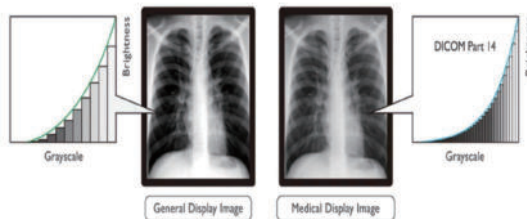
EMI IT & Medical, Safety - IT



Safety - Medical

IEC 60601-1
Compliance

DICOM Grayscale and Gamma Correction



Support Gamma 2.2
Gamma Correction (LUT 10bits)

Built-in Medical Level Power (Option)



Easy to maintain a clean and tidy environment



Model Name		MDPi270	MDPi238	MDPi215	MDP156
Display	Display	27" TFT LCD	23.8" TFT LCD	21.5" TFT LCD	15.6" TFT LCD
	Max. Resolution	1920 x 1080 (4K Option)	1920 x 1080	1920 x 1080	1920 x 1080
	Luminance	300 nits	250 nits	350 nits	250 nits
	Contrast	3000:1	1000:1	1000:1	700:1
	View Angle	160(H) / 140(V)	178(H) / 178(V)	178(H) / 178(V)	-85~85(H) / -85~85(V)
	Color Depth	8 bits	6 bits + FRC	8 bits	6 bits
	Display Colors	16.7M	16.7M	16.7M	262K
	Response Time (ms)	12 (On/Off)	14 (GtG)	22 (On/Off)	30
Touch Screen	Backlight MTBF	30,000 hrs (Min.)	30,000 hrs (Min.)	50,000 hrs (Min.)	50,000 hrs (Min.)
	Type	Projected Capacitive	Projected Capacitive	Projected Capacitive	Projected Capacitive
	Touch Point	10	10	10	10
	Glass Coating	AG	AG	AG	N/A
Systems	Interface	Combo (USB/RS232)	Combo (USB/RS232)	Combo (USB/RS232)	USB
	Color Temperature	Neutral/Warm/Cool/User	Neutral/Warm/Cool/User	Neutral/Warm/Cool/User	9300/7500/6500/5800/sRGB/User
	Gamma Selection	Neutral/2.2/DICOM	Neutral/2.2/DICOM	Neutral/2.2/DICOM	OFF/1.8/2.0/2.2/2.4
	Gamma LUT (bits)	10	10	10	N/A
	OSD Languages	English/French/German/Italian/Spanish/Japanese	English/French/German/Italian/Spanish/Japanese	English/French/German/Italian/Spanish/Japanese	English/Japanese
I/O Interface	Speaker	2 x 2W Speaker	2 x 2W Speaker	2 x 2W Speaker	2 x 2 Watt speaker
	VGA	1 VGA	1 VGA	1 VGA	1 VGA
	DP	1 DP1.2	1 DP1.2	1 DP1.2	N/A
	HDMI / DVI	1 HDMI 1.4 or DVI-D	1 HDMI 1.4 or DVI-D	1 HDMI 1.4 or DVI-D	1 HDMI
	Audio	1 Line-in	1 Line-in	1 Line-in	1 Line-in
Power requirements	Power input	1 DC IN	1 DC IN	1 DC IN	1 DC IN
	AC Input	External power adapter, 100 ~ 250V	External power adapter, 100 ~ 250V	External power adapter, 100 ~ 250V	DC 12V /3A, < 36 Watt
Mechanical	Power Consumption	40W (Max)	40W (Max)	40W (Max)	10W typical, normal operation
	Chassis Material	Plastic ABS	Plastic ABS	Plastic ABS	Plastic
	Color	White	White	White	White
	Dimension (W x H x D)	651 x 441 x 175 mm (with Stand) 651 x 402 x 69 mm (w/o Stand)	581 x 400 x 175 mm (with Stand) 581 x 360 x 69 mm (w/o Stand)	537 x 387 x 175 mm (with Stand) 537 x 339 x 69 mm (w/o Stand)	387.8 x 232.9 x 38.45 mm
	Weight	10.3 (with Stand) 8.4 (w/o Stand)	9.5 (with Stand) 7.7 (w/o Stand)	8.2 (with Stand) 6.5 (w/o Stand)	3.5 (w/o Stand)
	Mounting	100 x 100 mm VESA mount	100 x 100 mm VESA mount	100 x 100 mm VESA mount	75 x 75 mm VESA mount
	Operating Temperature	0°C ~ 40°C	0°C ~ 40°C	0°C ~ 40°C	0°C ~ 40°C
	Storage Temperature	-20°C ~ 60°C	-20°C ~ 60°C	-20°C ~ 60°C	-20°C ~ 60°C
Others	Operating Humidity	30% ~ 75% (non-condensing)	30% ~ 75% (non-condensing)	30% ~ 75% (non-condensing)	5% ~ 95% (non-condensing)
	OSD	RotaryKnob buttons on the side edge Power On/Off, Menu	RotaryKnob buttons on the side edge Power On/Off, Menu	RotaryKnob buttons on the side edge Power On/Off, Menu	7 keys (Menu,Input,Power...)
Certification	Certification	CE(EN 60601-1, EN60601-1-2,) cTUVus(60601 Ed3.1), FCC-class B	CE(EN 60601-1, EN60601-1-2,) cTUVus(60601 Ed3.1), FCC-class B	CE(EN 60601-1, EN60601-1-2,) cTUVus(60601 Ed3.1), FCC-class B	CE, FCC, RoHS, UL60601
Protection	IP level	IP65 Rating Protection in front bezel & IPx1 in back cover	IP65 Rating Protection in front bezel & IPx1 in back cover	IP65 Rating Protection in front bezel & IPx1 in back cover	-



10.1"



7"



Model Name		VP101-BT	VP101-M8M	VP070-M8M
Platform		Atom	ARM	ARM
System	Processor	Intel® Atom® Processor E3800	NXP i.MX 8M Dual / Quad Cortex-A53	NXP i.MX 8M Dual / Quad Cortex-A53
	Socket	BGA 1170	-	-
	Max. Speed	1.33~1.91GHz	1.3GHz	1.3GHz
	TDP	10W	-	-
	Cache	2M	-	-
	BIOS	AMI SPI 64Mbit	-	-
Memory	Technology	Single Channel DDR3L 1333MHz	Single Channel LPDDR4 3200 MHz	Single Channel LPDDR4 3200 MHz
	Max. Capacity	2GB / 4GB	2GB* / 4GB	2GB* / 4GB
	Socket	ECC Memory onboard	Memory Down	Memory Down
Display & Touch Screen	Display Type	10.1" TFT LCD Panel with Capacitive Touch Screen	10.1" PCAP TFT	7" PCAP TFT
	Max. Resolution	1280 x 800	1280 x 800	1024 x 600
	Brightness	500 cd/m ²	1200 cd/m ² , 500 cd/m ²	425 cd/m ²
Graphics	Connector	HDMI, VGA	-	-
Storage		1x 2.5" SATA 2.0 Drive Bay, 1 micro SD (Opt.), Onboard eMMC (Opt.)	16GB eMMC (Up to 64GB)	16GB eMMC (Up to 64GB)
Expansion	Mini PCIe, M.2, PCIe, SIM	2 Full-size Mini PCIe, 1 Half-size Mini PCIe, 1 SIM	1 M.2 2242 / 3042 B Key, 1 M.2 2230 E Key, 1 Nano SIM	1 M.2 2242 / 3042 B Key, 1 M.2 2230 E Key, 1 Nano SIM
Audio	Audio Codec	Realtek ALC886	SGTL5000	SGTL5000
Ethernet	Controller	2 Intel® I210	AR8035	AR8035
LED	Indicators	Power, HDD LED	Power	Power
I/O	Ethernet (GbE)	2	1	1
	Serial	4 RS-232/422/485, 1 RS-232	1 RS-232/422/485, 3 RS-232, 1 CAN Bus	1 RS-232/422/485, 1 RS-232, 1 CAN Bus
	USB	1 USB 3.2 Gen1, 3 USB 2.0	2 USB 3.2 Gen1, 1 OTG micro USB	2 USB 3.2 Gen1, 1 OTG micro USB
	Display	1 HDMI, 1 VGA	-	-
	Audio	1 Line-out, 1 Mic-in	1 x 3W Speaker	with Amplifier to support 2W speaker (Opt.) 1 Line-out, 1 Mic-in (internal header)
	Buttons	Power Button, Reset Button	1 Reset switch, 1 re-download switch	1 Reset switch
	Wi-Fi Antenna	2	-	-
Power	9~36V DC-in In-Vehicle Power Management Includes Ignition On/Off and System On/Off Delay Time Control		9~36V DC Power input, with ACC / IGN control	9~36V DC Power input, with ACC / IGN control
OS Support	Win7, Win10, Linux		Android 9.0 / Yocto 2.5 (Opt.)	Android 9.0 / Yocto 2.5 (Opt.)
Mechanism	Construction	Aluminum Front Bezel	Aluminum + SGCC	Aluminum + SGCC
	IP Rating	IP65 Front Panel	IP65 Front Panel	IP65 Front Panel
	Mounting	Panel / VESA Mount	Panel Mount / VESA Mount	Panel Mount / VESA Mount
	Dimensions (W x H x D)	294 x 193 x 65 mm	294 x 193 x 53 mm	235 x 150 x 54 mm
	Weight	1.7 kg	1.67 kg	2.9 kg
Environment	Operating Temp.	-20°C ~ 60°C	-20°C ~ 70°C	-20°C ~ 70°C
	Relative Humidity	5% ~ 85% RH (non-condensing)	10% ~ 90% RH (non-condensing)	10% ~ 90% RH (non-condensing)

*Populated by default

