



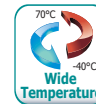
**Intel Atom® / Celeron® Processor
Modular-Designed Industrial Panel PC**

KS-AL Series

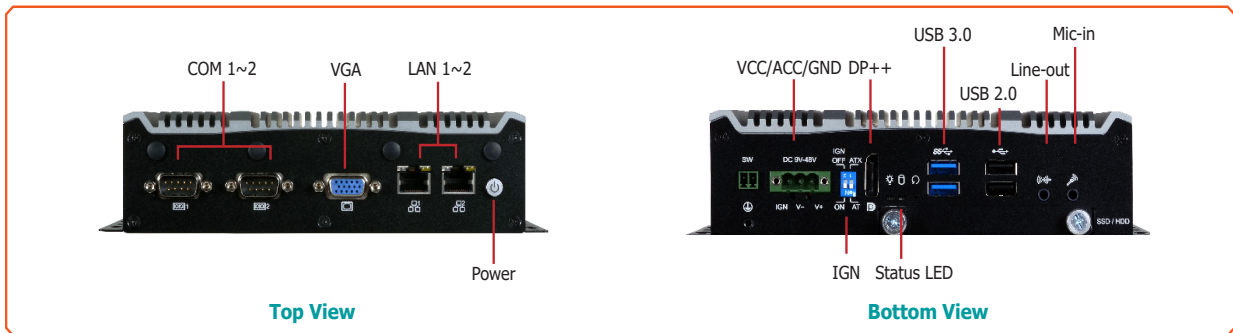


► Features

- Support Adaptive Display Platform
- Multiple Panel Sizes with Resistive/P-Capacitive Touch Screen
- Front OSD & Auto Dimming
- Supports 24V / 9~48V Power Board Module
- Accessible 2.5" SATA Drive Bay
- IP65 Front Panel Protection
- Ignition Power Control
- Wide Operating Temperature



► System



► Panel Specifications

Model Name	KS070-AL	KS150-AL	KS190-AL	KS215-AL	
Display & Touch Screen	Display Type	7" TFT LCD Panel	15" TFT LCD Panel	19" TFT LCD Panel	21.5" TFT LCD Panel
	Max. Resolution	800 x 480	1024 x 768	1280 x 1024	1920 x 1080
	Brightness (cd/m²)	500	300	350	250
	Touch Type	Projected Capacitive / 4-wire Resistive	Projected Capacitive / 5-wire Resistive	Projected Capacitive / 5-wire Resistive	Projected Capacitive / 5-wire Resistive
	Backlight Lifetime (hours)	50,000	70,000	70,000	30,000
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)	2 x 1.5W Speaker			
Others	Auto Dimming (Optional)	Light Sensor			
Environment	Operating Temperature	-20 to 70°C	-20 to 70°C	-30 to 70°C	0 to 60°C
	Storage Temperature	-30 to 80°C	-30 to 70°C	-30 to 85°C	-20 to 60°C
	Relative Humidity	5 to 90% RH (non-condensing)			



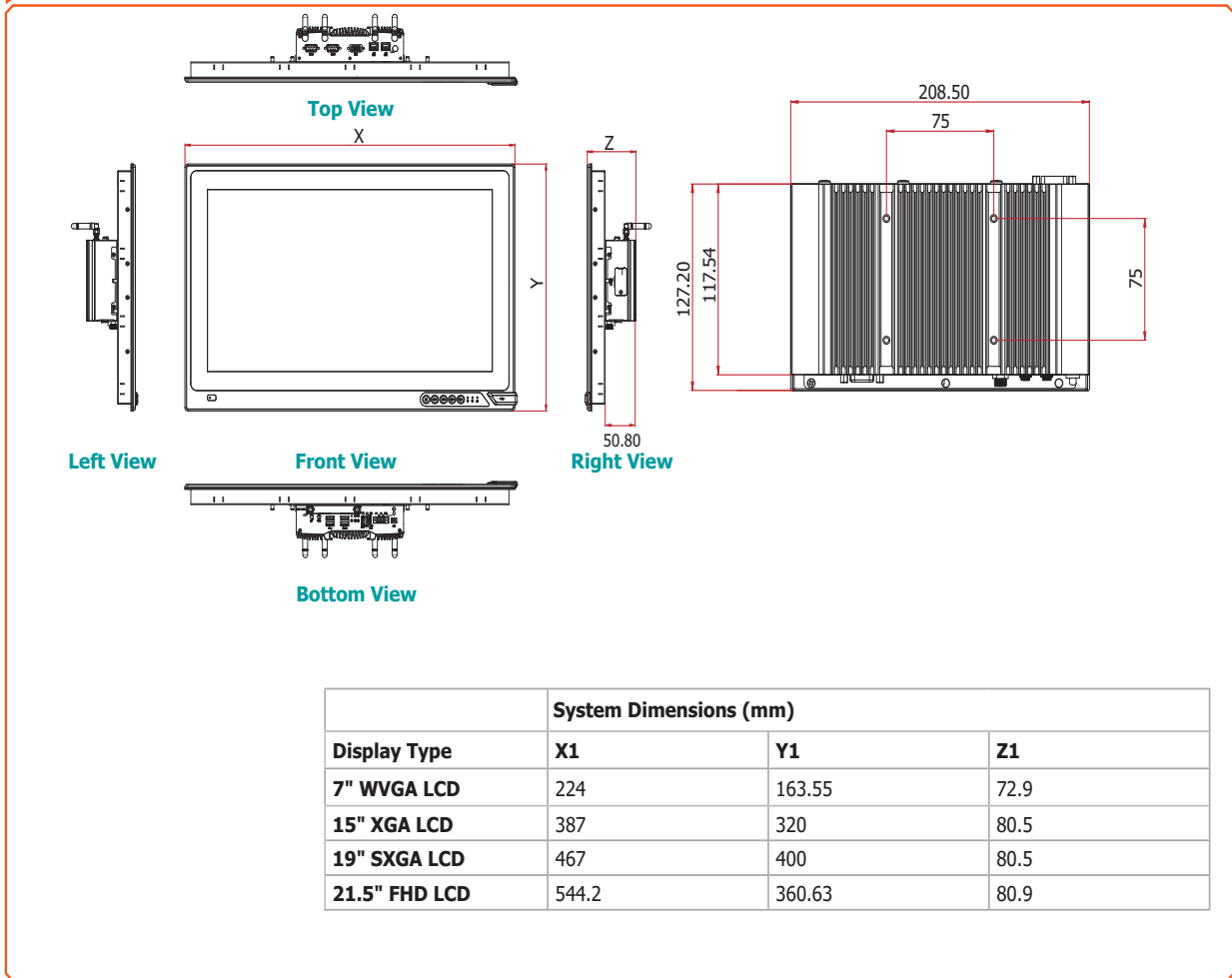
System Specifications

SYSTEM	Processor	Intel Atom® Processor E3900 Series, BGA 1296 Intel Atom® x5-E3940 Processor, Quad Core, 2M Cache, 1.6GHz (1.8GHz), 9.5W Intel® Celeron® Processor N3350, Dual Core, 2M Cache, 1.1GHz (2.4GHz), 6W			
	Memory	One 204-pin SODIMM up to 8GB Single Channel DDR3L 1866MHz			
	BIOS	Insyde SPI 128Mbit (supports UEFI boot only)			
GRAPHICS	Controller	Intel® HD Graphics			
	Feature	OpenGL 4.2, Direct X 11.1, OpenCL 1.2, OGL ES 3.0 HW Decode: H.264, MPEG2, VC1, VP8, H.265, MPEG4 HW Encode: H.264, MPEG2, MPEG4			
	Display	1 x DP++ 1 x VGA or DVI-D (DVI-D available upon request)		DP++: resolution up to 4096x2160 @ 60Hz VGA: resolution up to 2560x1600 @ 60Hz DVI-D: resolution up to 1920x1200 @ 60Hz	
	Triple Displays	Panel Module, DP++, VGA or DVI-D			
STORAGE	External	1 x 2.5" SATA 3.0 Drive Bay (accessible) 1 x mSATA (shared by Half-size Mini-PCIe Socket)			
EXPANSION	Interface	1 x Full-size Mini PCIe (USB/PCIe) 1 x Half-size Mini PCIe (USB/PCIe/mSATA) 1 x SIM Slot			
AUDIO	Audio Codec	Realtek ALC262			
ETHERNET	Controller	2 x Intel® I210AT PCIe (10/100/1000Mbps)			
LED	Indicators	1 x Power LED 1 x HDD LED			
TOP I/O	Serial	2 x RS-232/422/485 (DB9) 2 x RS-232/422/485 (available upon request) Support 5V/12V Power			
	Ethernet	2 x GbE (RJ-45) (10/100/1000Mbps) Support Jumbo Frame, IEEE1588v2, WOL, PXE 802.3 af PoE (PSE), Individual Port 15.4W (available upon request)			
	DIO	4 x DI / 4 x DO (10-pin terminal block) (available upon request)			
	Buttons	1 x Power Button			
	Wi-Fi Antennas	4 x Wi-Fi Module Antenna Hole			
BOTTOM I/O	USB	2 x USB 3.0 (type A) 2 x USB 2.0 (type A) 2 x USB 2.0 (available upon request)			
	Display	1 x DP++ 1 x VGA or DVI-D (DVI-D available upon request)			
	Audio	1 x Line-out 1 x Mic-in			
WATCHDOG TIMER	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds			
POWER	Type	24 VDC Input (available upon request) 9~48 VDC Input (available upon request) Power Management Includes Ignition On/Off and System On/Off Delay Time Control			
	Connector	3-pin Terminal Block			
OS SUPPORT (UEFI ONLY)		Windows 10 IoT Enterprise 64-bit Ubuntu 16.04.2			
MECHANISM	Construction	Aluminum Front Bezel			
	IP Rating	IP65 Front Panel Protection			
	Mounting	Panel/VESA Mount			
	Dimensions (W x H x D)	224 x 163.55 x 72.9 mm	387 x 320 x 80.5 mm	467 x 400 x 80.5 mm	544.2 x 360.63 x 80.9 mm
	Weight	TBD	TBD	TBD	TBD
STANDARDS AND CERTIFICATIONS	Shock	TBD			
	Vibration	TBD			
	Certifications	TBD			



KS-AL Series

Dimensions



Ordering Information

Model Name	Part Number	Description
KS070R-ALD24-N50	TBD	7" Panel PC, Intel® Celeron® N3350, Resistive Touch, DC Input 24V Terminal
KS070R-ALD24-E40	TBD	7" Panel PC, Intel Atom® x5-E3940, Resistive Touch, DC Input 24V Terminal
KS070P-ALD24-N50	TBD	7" Panel PC, Intel® Celeron® N3350, Projected Capacitive Touch, DC Input 24V Terminal
KS070P-ALD24-E40	TBD	7" Panel PC, Intel Atom® x5-E3940, Projected Capacitive Touch, DC Input 24V Terminal
KS070R-ALW48-N50	TBD	7" Panel PC, Intel® Celeron® N3350, Resistive Touch, DC Input 9~48V Terminal
KS070R-ALW48-E40	TBD	7" Panel PC, Intel Atom® x5-E3940, Resistive Touch, DC Input 9~48V Terminal
KS070P-ALW48-N50	TBD	7" Panel PC, Intel® Celeron® N3350, Projected Capacitive Touch, DC Input 9~48V Terminal
KS070P-ALW48-E40	TBD	7" Panel PC, Intel Atom® x5-E3940, Projected Capacitive Touch, DC Input 9~48V Terminal
KS150R-ALD24-N50	TBD	15" Panel PC, Intel® Celeron® N3350, Resistive Touch, DC Input 24V Terminal
KS150R-ALD24-E40	TBD	15" Panel PC, Intel Atom® x5-E3940, Resistive Touch, DC Input 24V Terminal
KS150P-ALD24-N50	TBD	15" Panel PC, Intel® Celeron® N3350, Projected Capacitive Touch, DC Input 24V Terminal
KS150P-ALD24-E40	TBD	15" Panel PC, Intel Atom® x5-E3940, Projected Capacitive Touch, DC Input 24V Terminal
KS150R-ALW48-N50	TBD	15" Panel PC, Intel® Celeron® N3350, Resistive Touch, DC Input 9~48V Terminal
KS150R-ALW48-E40	TBD	15" Panel PC, Intel Atom® x5-E3940, Resistive Touch, DC Input 9~48V Terminal
KS150P-ALW48-N50	TBD	15" Panel PC, Intel® Celeron® N3350, Projected Capacitive Touch, DC Input 9~48V Terminal
KS150P-ALW48-E40	TBD	15" Panel PC, Intel Atom® x5-E3940, Projected Capacitive Touch, DC Input 9~48V Terminal



Model Name	Part Number	Description
KS190R-ALD24-N50	TBD	19" Panel PC, Intel® Celeron® N3350, Resistive Touch, DC Input 24V Terminal
KS190R-ALD24-E40	TBD	19" Panel PC, Intel Atom® x5-E3940, Resistive Touch, DC Input 24V Terminal
KS190P-ALD24-N50	TBD	19" Panel PC, Intel® Celeron® N3350, Projected Capacitive Touch, DC Input 24V Terminal
KS190P-ALD24-E40	TBD	19" Panel PC, Intel Atom® x5-E3940, Projected Capacitive Touch, DC Input 24V Terminal
KS190R-ALW48-N50	TBD	19" Panel PC, Intel® Celeron® N3350, Resistive Touch, DC Input 9~48V Terminal
KS190R-ALW48-E40	TBD	19" Panel PC, Intel Atom® x5-E3940, Resistive Touch, DC Input 9~48V Terminal
KS190P-ALW48-N50	TBD	19" Panel PC, Intel® Celeron® N3350, Projected Capacitive Touch, DC Input 9~48V Terminal
KS190P-ALW48-E40	TBD	19" Panel PC, Intel Atom® x5-E3940, Projected Capacitive Touch, DC Input 9~48V Terminal
KS215R-ALD24-N50	TBD	21.5" Panel PC, Intel® Celeron® N3350, Resistive Touch, DC Input 24V Terminal
KS215R-ALD24-E40	TBD	21.5" Panel PC, Intel Atom® x5-E3940, Resistive Touch, DC Input 24V Terminal
KS215P-ALD24-N50	TBD	21.5" Panel PC, Intel® Celeron® N3350, Projected Capacitive Touch, DC Input 24V Terminal
KS215P-ALD24-E40	TBD	21.5" Panel PC, Intel Atom® x5-E3940, Projected Capacitive Touch, DC Input 24V Terminal
KS215R-ALW48-N50	TBD	21.5" Panel PC, Intel® Celeron® N3350, Resistive Touch, DC Input 9~48V Terminal
KS215R-ALW48-E40	TBD	21.5" Panel PC, Intel Atom® x5-E3940, Resistive Touch, DC Input 9~48V Terminal
KS215P-ALW48-N50	TBD	21.5" Panel PC, Intel® Celeron® N3350, Projected Capacitive Touch, DC Input 9~48V Terminal
KS215P-ALW48-E40	TBD	21.5" Panel PC, Intel Atom® x5-E3940, Projected Capacitive Touch, DC Input 9~48V Terminal

► **Optional Items**

Optional Items	Part Number	Description
HDD	785-H25500G	2.5" SATA HDD, 500GB, RoHS
	785-H25320G	2.5" SATA HDD, 320GB, RoHS
	785-S25512G	2.5" SATA SSD, 512GB MLC, RoHS
	785-S25256G	2.5" SATA SSD, 256GB MLC, RoHS
	785-S25128G	2.5" SATA SSD, 128GB MLC, RoHS
	785-S25064G	2.5" SATA SSD, 64GB MLC, RoHS
	785-S25032G	2.5" SATA SSD, 32GB MLC, RoHS
mSATA	TBD	mSATA mini Card, 128GB MLC, RoHS
	TBD	mSATA mini Card, 64GB MLC, RoHS
	TBD	mSATA mini Card, 32GB MLC, RoHS
	TBD	mSATA mini Card, 16GB MLC, RoHS
	TBD	mSATA mini Card, 8GB MLC, RoHS
Wi-Fi	761-110091-000G	Wi-Fi kit, RoHS
Power Cord	785-PWRD	Power cord, Standards (USA/EUR/CH), 1.8m, RoHS
Power Adapter	671-106017-000G	Power Adapter Input:90~264VAC; Output:12VDC/5A; 125x50x31.5mm L=1000mm;Terminal Block 3Pin,Pitch 5mm; LV6; GST60A12-DFIZ (MEAN WELL) RoHS
	671-112007-100G	POWER ADAPTER Input:85~264VAC; Output:24VDC/5A; 167x67x35mm L=1200mm;Terminal Block 3Pin,Pitch 5mm; LV6; GST120A24-DFIZ (MEAN WELL) RoHS

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

► **Packing List**

• 1 Single Box
• 1 3 pin Terminal Block Connector
• 1 2 pin Terminal Block Connector
• 2 Mini PCIe Screw
• 1 SATA Screw
• 1 Driver CD

Assured Systems

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