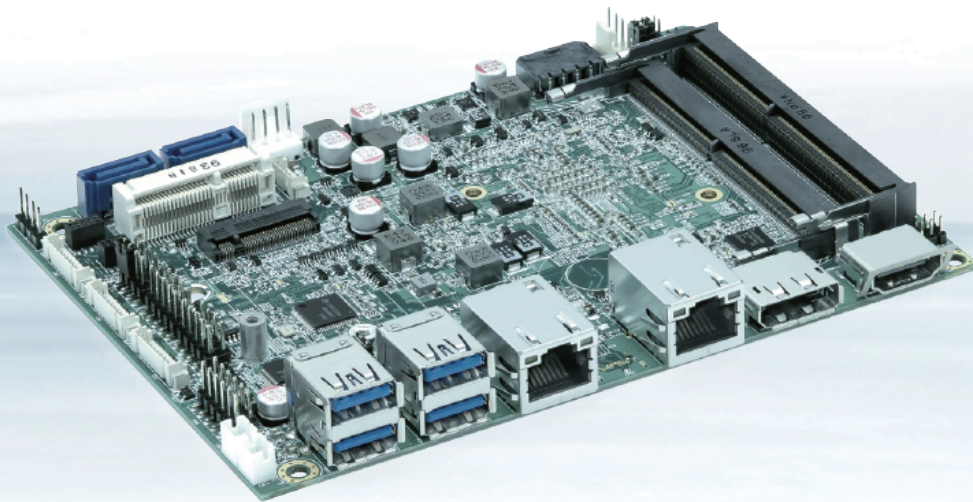


# 3.5"-SBC-SKL

## 4K ULTRA HD SUPPORT

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### 3.5" SINGLE BOARD COMPUTER WITH 6TH GEN INTEL® CORE™ U-SERIES PROCESSORS

- ▶ 1x LVDS, 1x DP, 1x HDMI 2.0 for triple display support
- ▶ 2x GbE LAN for Ethernet
- ▶ 4x USB 3.2 Gen 1, 2x USB 2.0, 2x RS232/422/485, 8x DIO for peripherals
- ▶ 2x SATA 3.0 for storage
- ▶ 1x mPCIe, 1x M.2 for expansion

## 3.5"-SBC-SKL

### 3.5" SINGLE BOARD COMPUTER WITH 6TH GENERATION INTEL® CORE™ U-SERIES PROCESSORS

Kontron 3.5"-SBC-SKL is a 3.5" single board computer based on 6th Generation Intel® Core™ U-Series Processors, providing system integrators with a high performance upgrade option.

Three valuable features which distinguishes the 3.5"-SBC-SKL from its counterparts are:

► **Faster read and write speeds:**

2x SATA 3.0 doubles the read and write speeds.

► **Supporting 4K UHD resolutions:**

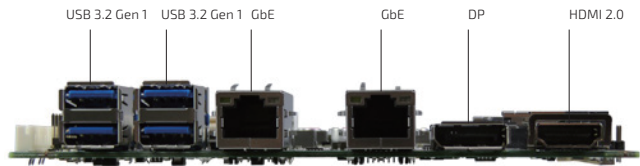
Intel® HD Graphics 520 integrated GPU + 1x DP + 1x HDMI 2.0 supporting 4K Ultra HD resolutions.

► **Multi-functional integration:**

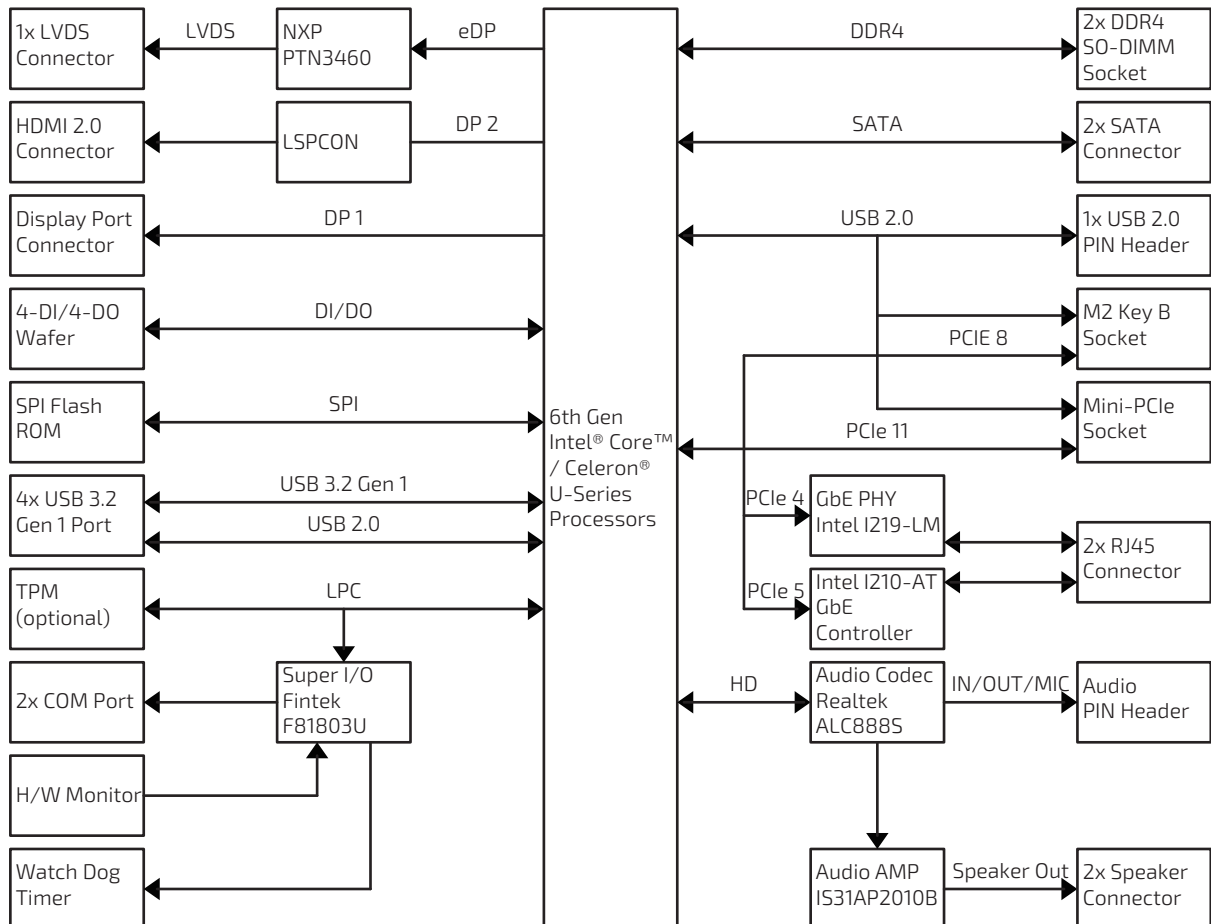
1x M.2 (Key B) provides more expansion possibilities, such as USB, WWAN (3G, 4G ...), GNSS (GPS ...) and SSDs.

#### ► PRODUCT HIGHLIGHTS

- 6th Generation Intel® Core™ U-Series Processors
- 2x DDR4 SO-DIMM memory socket
- 1x LVDS, 1x DP, 1x HDMI 2.0 for triple display support
- 2x GbE LAN for Ethernet
- 4x USB 3.2 Gen 1, 2x USB 2.0 for USB device connection
- 2x RS232/422/485 for serial device connection
- 8x DIO for device / signal control
- 2x SATA 3.0 for storage
- 1x mPCIe, 1x M.2 Key B for expansion
- Extended temperature model available: -20 °C – 70 °C



#### ► BLOCK DIAGRAM



► TECHNICAL INFORMATION

<b>SYSTEM</b>	<b>PROCESSOR</b> <b>MEMORY</b>	Intel® Core™ i5-6300U (Dual Core, 3M Cache, 2.40 / 3.00 GHz, FCBGA1356, 15 W TDP) 2x DDR4 2133 SO-DIMM up to 32 GByte
<b>VIDEO</b>	<b>GRAPHICS</b> <b>DISPLAY INTERFACE</b>  <b>MULTIPLE DISPLAY</b>	Intel® HD Graphics 520 1x LVDS (24-bit, 2-ch) 1x DP (on rear, 4096 x 2304 @ 60 Hz) 1x HDMI 2.0 (on rear, 3840 x 2160 @ 60 Hz) Triple Display
<b>AUDIO</b>	<b>AUDIO CODEC</b> <b>AUDIO INTERFACE</b>	Realtek ALC8885 1x Speaker-out (Stereo, 3 W, by header) 1x Line-in (by header) 1x Line-out (by header) 1x Mic-in (by header)
<b>NETWORK CONNECTION</b>	<b>ETHERNET</b>	2x GbE LAN (RJ45 on rear, 1x Intel® I219-LM, 1x Intel® I210-AT)
<b>PERIPHERAL CONNECTION</b>	<b>USB</b>  <b>SERIAL PORT</b> <b>OTHER I/Os</b>	4x USB 3.2 Gen 1 (Type A on rear) 2x USB 2.0 (by header) 2x RS232/422/485 (by header, w/ auto flow control for RS485) 1x 8-bit DIO (by header)
<b>STORAGE &amp; EXPANSION</b>	<b>SATA</b> <b>mPCIe</b> <b>M.2</b> <b>SIM CARD HOLDER</b>	2x SATA 3.0 1x mPCIe (full size) 1x M.2 Key B Socket (Type 2242, w/ SATA 3.0 / USB 2.0) 1x SIM Card Cage (by wafer, switchable for mPCIe or M.2)
<b>POWER</b>	<b>INPUT VOLTAGE</b> <b>CONNECTOR</b>	DC 12 V 1x 4-pin Wafer (Straight & Right Angle dual-footprint)
<b>FIRMWARE</b>	<b>BIOS</b> <b>WATCHDOG</b> <b>H/W MONITOR</b> <b>REAL TIME CLOCK</b> <b>SECURITY</b> <b>iAMT</b>	AMI uEFI BIOS w/ 128 Mb SPI Flash Programmable WDT to generate system reset event Voltages, Temperatures Processor integrated RTC TPM 1.2 (Infineon SLB 9660) Yes
<b>SYSTEM CONTROL &amp; MONITORING</b>	<b>FRONT PANEL HEADER</b>	1x Header for Reset button, HDD LED & External Speaker 1x Header for Power button, Power LED & SM bus 1x Header for mPCIe activity LED 1x Header for M.2 activity LED
<b>COOLING</b>	<b>FAN</b>	1x Header for System Fan
<b>SOFTWARE</b>	<b>OS SUPPORT</b>	Windows 7, Windows 8, Windows 10, Linux
<b>MECHANICAL</b>	<b>DIMENSION (L x W)</b>	ECX (146 mm x 105 mm / 5.75" x 4.13")
<b>ENVIRONMENTAL</b>	<b>OPERATION TEMPERATURE</b>  <b>STORAGE TEMPERATURE</b>  <b>HUMIDITY</b>	0 °C ~ 60 °C / 32 °F ~ 140 °F (Standard) -20 °C ~ 70 °C / -4 °F ~ 158 °F (Extended) -20 °C ~ 80 °C / -4 °F ~ 176 °F (Standard) -40 °C ~ 85 °C / -40 °F ~ 185 °F (Extended) 0 % ~ 95 %
<b>COMPLIANCE</b>	<b>EMC &amp; SAFETY</b>	CE Class B, FCC Class B

## ▶ ORDERING INFORMATION

ARTICLE	ORDERING CODE*	DESCRIPTION
	EMEA / AMERICA	
3.5"-SBC-SKL-2-i5-6300U	43013-0000-23-2	Intel® Core™ i5-6300U, w/ TPM, Operating temperature: 0 °C ~ 60 °C
3.5"-SBC-SKL-2-i5-6300U-ET	43013-0000-24-2EXT	Intel® Core™ i5-6300U, w/ TPM, Operating temperature: -20 °C ~ 70 °C

(\* For ordering code for APAC, contact your local account manager.)

## ACCESSORIES

ARTICLE	ORDERING CODE		DESCRIPTION
	EMEA / AMERICA	APAC	
DC IN CABLE	1064-2433	0C5020000004220L	2.5 DC Jack w/ nut & washer to H-300F-XX 1x4P 3.0 pitch, L = 30 cm
COM PORT CABLE*	1064-2427	0C5020000005130L	10-pin pitch = 1.25 mm to DB-9 connector, L = 35 cm
DIO CABLE*	1065-3137	0C5020000003360L	D-SUB-9P (Female) to MX51021-10P 1x10P 1.25 pitch, L = 20 cm
USB CABLE (2 PORT)*	1064-2429	0C5020000005700L	2.54 mm 2x5P to 2x USB connectors, L = 25 cm
SATA POWER CABLE*	1069-3058	0C5020000005260L	PH 2.54 HSG 1x4P to SATA 1x15P Pitch: 1.27 mm, L = 46 cm
SATA CABLE*	1064-2431	0C5020000004240L	7-pin connector with lock, L = 46 cm
AUDIO CABLE*	1064-2432	0C5020000002050L	WL6008H 2x6P 2.54 pitch to EAR phone jack x3 pitch: 3.5 mm, L = 35 cm
SIM CARD HOLDER KIT*	1064-2434	0ZHK12003GSIM003	1x Mini SIM card holder board, 1x SIM card cable, 4x screw
ACTIVE COOLER*	TBD	0ZHKECXKLU000003	63.5 x 50 x 13 mm, w/ thermal pad, w/ 2x M3x5 screw, Max. 15 W TDP support
HEATSINK KIT*	1065-3232	0ZHKOECXKLU000002	148x105x15.8 mm, w/ thermal pad, 4x M3x5 & 2x M2.5x4 screw, Max. 15W TDP
HEATSPREADER KIT*	TBD	0ZHKECXKLU000002	43.3 x 30 x 7.3 mm, w/ thermal pad on both sides, w/ 2x M2.5x4 screw

(\*: Optional)

## ▶ GLOBAL HEADQUARTERS

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