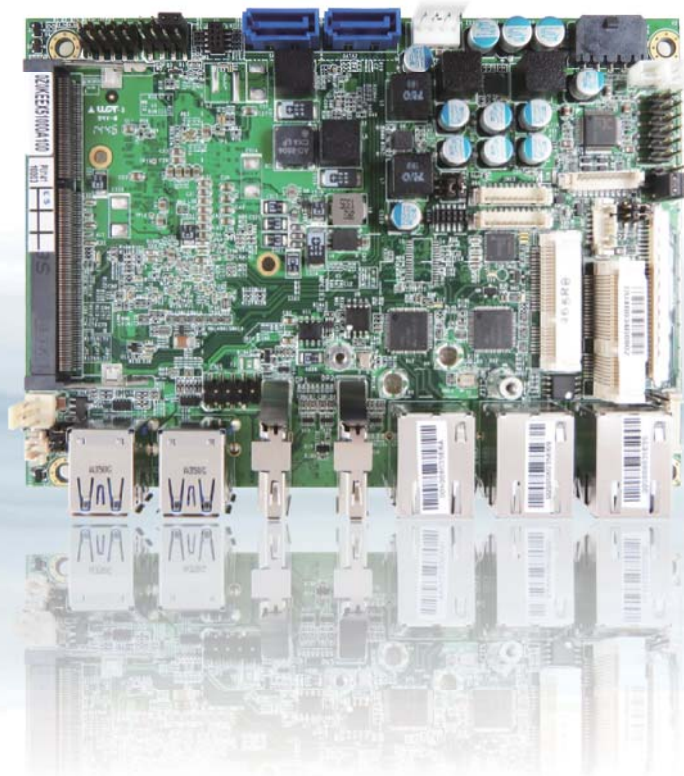


ECX-BDW-U

GREATER FLEXIBILITY IN ETHERNET CONNECTIVITY



Ordered & Served at
Kontron Asia

3.5" SINGLE BOARD COMPUTER WITH 5TH GEN INTEL® CORE™ / CELERON® U-SERIES PROCESSORS

- ▶ 1x LVDS, 2x DP for display output
- ▶ 3x GbE LAN for Ethernet
- ▶ 4x USB 3.0, 2x USB 2.0, 2x RS232/422/485, 8-bit DIO for peripherals
- ▶ 2x SATA 3.0, up to 1x mSATA for storage
- ▶ Up to 2x mPCIe for expansion

ECX-BDW-U

3.5" SINGLE BOARD COMPUTER WITH 5TH GEN INTEL® CORE™ / CELERON® U-SERIES PROCESSORS

ECX-BDW-U is a 3.5" single board computer powered by 5th Generation Intel® Core™ / Celeron® U-Series ultra-low-power processors. Featured are 1x DDR3L SO-DIMM, 2x DP, 3x GbE LAN, 2x SATA 3.0, 8-bit DIO, 4x USB 3.0 and 2x USB 2.0.

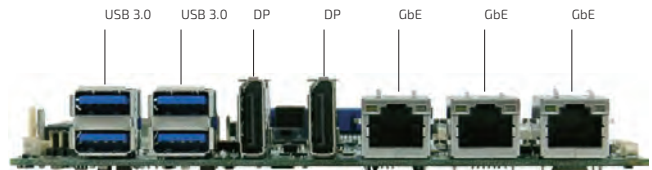
users to extend SSD storage, wireless network or other possible applications.

It reserves two mPCIe slots (one is shared with mSATA) and allows

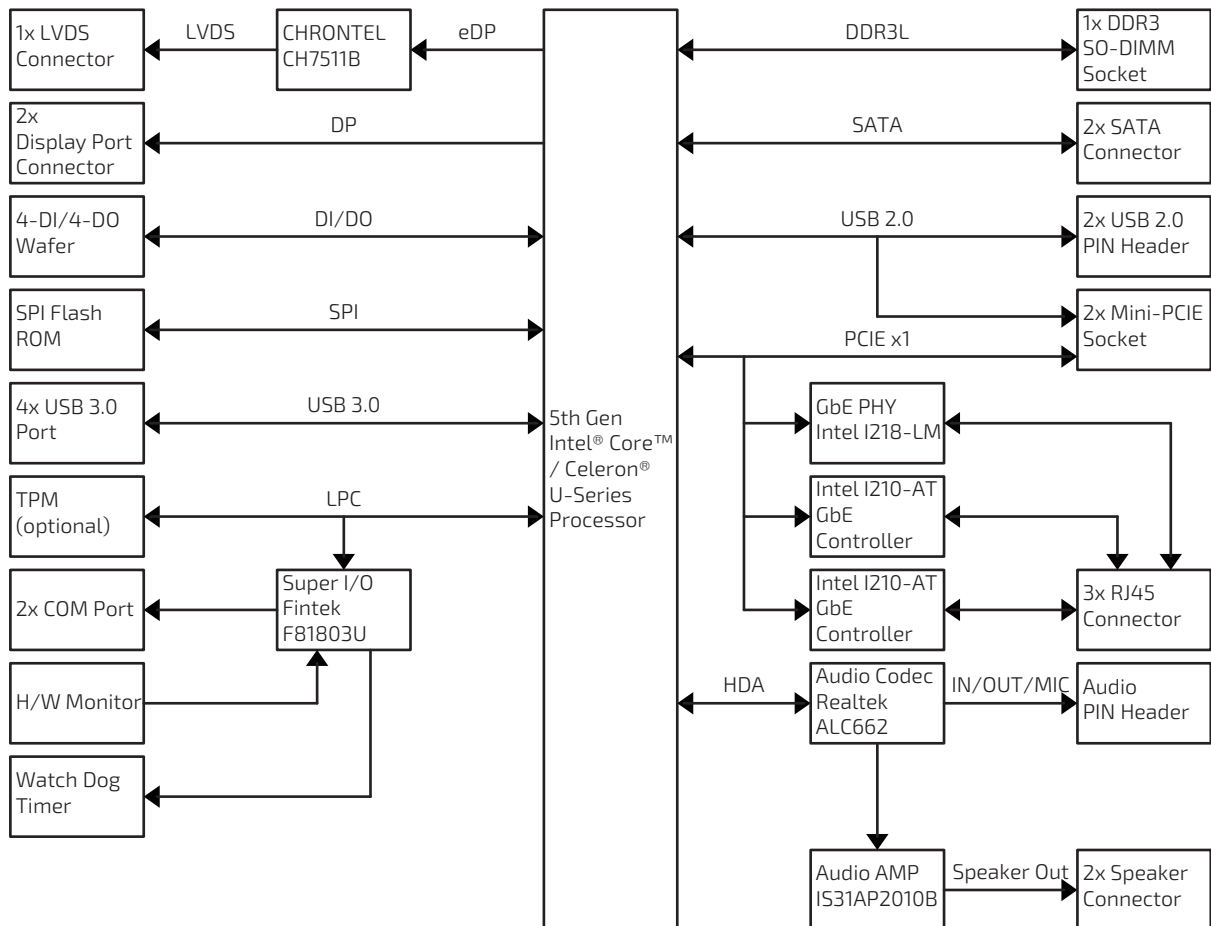
In addition, extended temperature models are available and allow for operation under extreme high, low or radically fluctuating temperatures, which is common in industrial environments.

▶ PRODUCT HIGHLIGHTS

- ▶ 5th Generation Intel® Core™ / Celeron® U-Series Processors
- ▶ 1x DDR3L SO-DIMM
- ▶ 1x LVDS, 2x DP for triple display support
- ▶ 3x GbE LAN for Ethernet
- ▶ 4x USB 3.0, 2x USB 2.0 for USB device connection
- ▶ 2x RS232/422/485 for serial device connection
- ▶ 8-bit DIO for device / signal control
- ▶ 2x SATA 3.0, up to 1x mSATA for storage
- ▶ Up to 2x mPCIe for WLAN / Bluetooth / WWAN expansion
- ▶ Extended temperature model available: -20 °C ~ 70 °C



▶ BLOCK DIAGRAM



► TECHNICAL INFORMATION

SYSTEM	PROCESSOR	Intel® Core™ i7-5650U (Dual Core, 4M Cache, up to 3.20 GHz, FCBGA1168, 15 W TDP) Intel® Core™ i5-5350U (Dual Core, 3M Cache, up to 2.90 GHz, FCBGA1168, 15 W TDP) Intel® Core™ i3-5010U (Dual Core, 3M Cache, 2.10 GHz, FCBGA1168, 15 W TDP) Intel® Celeron® 3765U (Dual Core, 2M Cache, 1.90 GHz, FCBGA1168, 15 W TDP)
	MEMORY	1x DDR3L 1333/1600 SO-DIMM up to 8 GByte
VIDEO	GRAPHICS	Intel® HD Graphics 6000 (for model w/ Core™ i7 / i5) Intel® HD Graphics 5500 (for model w/ Core™ i3)
	DISPLAY INTERFACE	Intel® HD Graphics (for model w/ Celeron®) 1x LVDS (18-bit/24-bit, 1/2-ch, 1920 x 1200 @ 60 Hz)
	MULTIPLE DISPLAY	2x DP (on rear, 3840 x 2160 @ 60 Hz) Triple Display
AUDIO	AUDIO CODEC AUDIO INTERFACE	Realtek ALC662 2x Speaker-out (3 W, ISSI IS31AP2010B) 1x Line-in (by header) 1x Line-out (by header) 1x Mic-in (by header)
NETWORK CONNECTION	ETHERNET	3x GbE LAN (RJ45 on rear, 2x Intel® I210-AT, 1x Intel® I218-LM) (LAN1 shared with half-sized mPCIe and enabled by default)
PERIPHERAL CONNECTION	USB	4x USB 3.0 (Type A on rear)
	SERIAL PORT	2x RS232/422/485 (by header)
	OTHER I/Os	1x 8-bit DIO (by header)
STORAGE & EXPANSION		2x SATA 3.0 1x mSATA / mPCIe (full size) 1x mPCIe (half size, shared with LAN1 and disabled by default) 1x SIM Card Cage (by wafer)
POWER	CONNECTOR INPUT VOLTAGE	1x4-pin pitch 3.0 mm wafer DC 12 V
FIRMWARE	BIOS WATCHDOG H/W MONITOR REAL TIME CLOCK TPM iAMT	AMI uEFI BIOS w/ 128 Mb SPI Flash Programmable WDT to generate system reset event Voltages, Temperatures Processor integrated RTC Supported for models w/ Core™ i7 / i5 (Infineon SLB 9635 TPM 1.2) Supported for models w/ Core™ i7 / i5
SYSTEM CONTROL & MONITORING	FRONT PANEL HEADER	1x Header for Reset button, HDD LED & External Speaker 1x Header for Power button, Power LED & SM bus 1x Header for mPCIe activity LED
COOLING	FAN	1x Wafer for CPU Smart Fan
SOFTWARE	OS SUPPORT	Windows 7, Windows 8, Linux
MECHANICAL	DIMENSION (L x W)	ECX (146 mm x 105 mm / 5.75" x 4.13")
ENVIRONMENTAL	OPERATION TEMPERATURE	0 °C ~ 60 °C / 32 °F ~ 140 °F (Standard) -20 °C ~ 70 °C / -4 °F ~ 158 °F (Extended)
	STORAGE TEMPERATURE	-20 °C ~ 80 °C / -4 °F ~ 176 °F (Standard) -40 °C ~ 85 °C / -40 °F ~ 185 °F (Extended)
	HUMIDITY	0 % ~ 95 %
CERTIFICATION	EMC & SAFETY	CE Class A, FCC Class A

► ORDERING INFORMATION

ARTICLE	DESCRIPTION
ECX-BDW-U-5650U	Intel® Core™ i7-5650U, with TPM & iAMT, Op. temp.: 0°C ~ 60°C
ECX-BDW-U-5350U	Intel® Core™ i5-5350U, with TPM & iAMT, Op. temp.: 0°C ~ 60°C
ECX-BDW-U-5010U	Intel® Core™ i3-5010U, without TPM & iAMT, Op. temp.: 0°C ~ 60°C
ECX-BDW-U-3765U	Intel® Celeron® 3765U, without TPM & iAMT, Op. temp.: 0°C ~ 60°C
ECX-BDW-U-5650U-ET	Intel® Core™ i7-5650U, with TPM & iAMT, Op. temp.: -20°C ~ 70°C
ECX-BDW-U-5350U-ET	Intel® Core™ i5-5350U, with TPM & iAMT, Op. temp.: -20°C ~ 70°C
ECX-BDW-U-5010U-ET	Intel® Core™ i3-5010U, without TPM & iAMT, Op. temp.: -20°C ~ 70°C
ECX-BDW-U-3765U-ET	Intel® Celeron® 3765U, without TPM & iAMT, Op. temp.: -20°C ~ 70°C

OPTIONAL ACCESSORIES - CABLING

COM PORT CABLE	10-pin pitch = 1.25 mm to DB-9 connector, L = 35 cm
DIO CABLE	WL1025H-10P (51021) 1x10P 1.25 pitch to F83N-3.81-10P 1x10P + F736-3.81-10P 1x10P, L = 100 mm
USB CABLE (2 PORT)	2.54 mm 2x5P to 2x USB connectors, L = 34 cm
SATA POWER CABLE	SATA 1x15P Pitch: 1.27 mm, L = 460 mm
SATA CABLE	7-pin connector with lock, L = 46 cm
AUDIO CABLE	WL6008H 2x6P 2.54 pitch to EAR phone jack x3 pitch: 3.5 mm, L = 35 cm
DC IN CABLE	2.5 DC Jack w/ 2 mm nut, 0.5 mm washer to H-300F-XX 1x4P 3.0 pitch, L = 30 cm
3G MINI SIM CARD HOLDER KIT	W/ SIM card holder x1, 3G SIM card cable x1