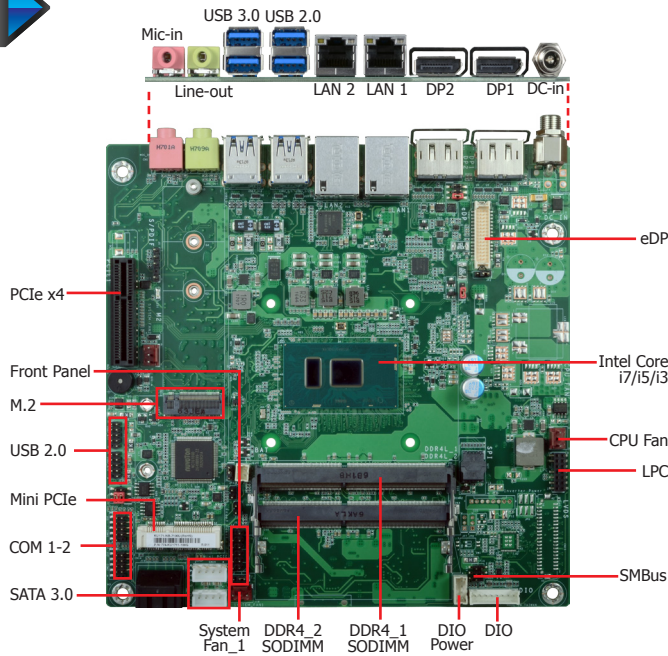


KU171/KU173

ULT



* The photos above refer to KU171.

Features

- 2 DDR4 1866/2133MHz SODIMM up to 32GB
- Three independent displays: LVDS*/eDP + DP++ + DP++
- DP++ resolution supports up to 4096x2304 @ 60Hz
- Multiple expansion: 1 PCIe x4, 1 M.2 (SATA/PCIe)
- Storage: 2 SATA 3.0, 1 Mini PCIe
- Rich I/O: 2 Intel GbE, 2 COM, 4 USB 3.0, 4 USB 2.0

* Populated by default

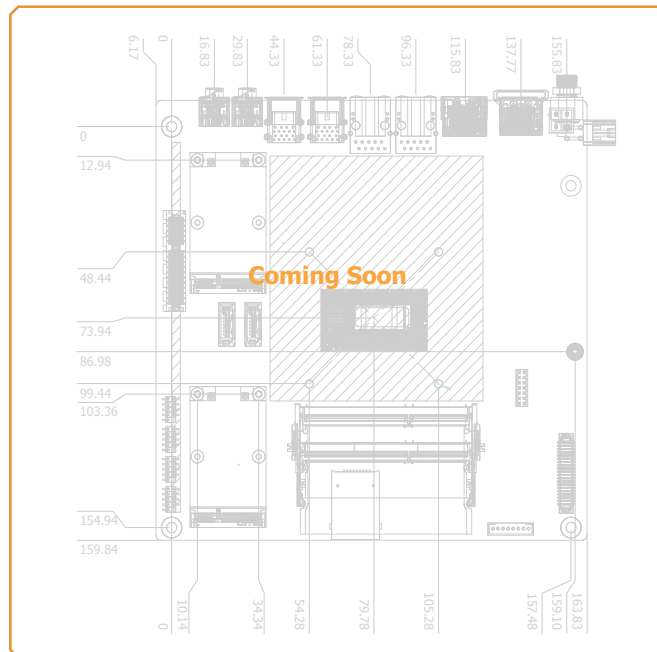


Ordering Information

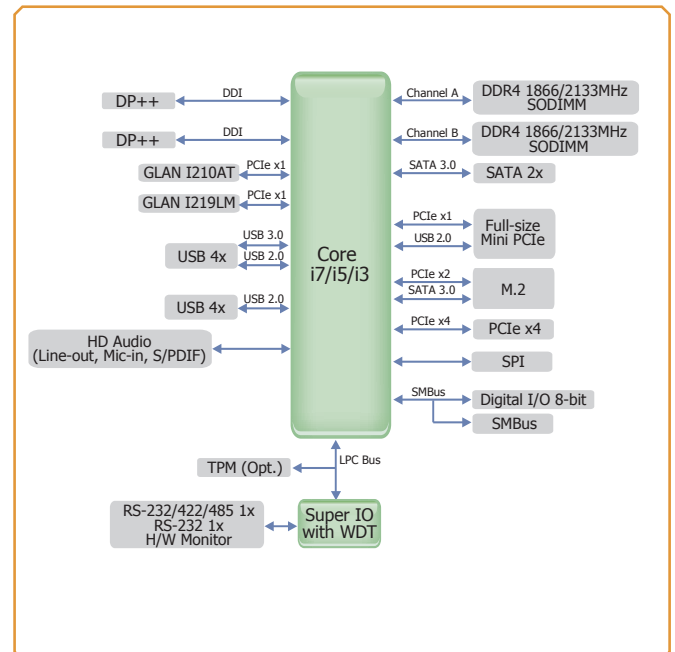
Model Name	P/N	Processor	Memory	LVDS/eDP	HDMI/DP++	GbE	RS-232/422/485	RS-232	USB 3.0	USB 2.0	SATA 3.0	TPM	Power	Thermal	Temp.
KU171-N	TBD	i5-7300U	2 SODIMM	LVDS	DP++	2	1	1	4	4	2	2.0	12V DC	Fanless	-20 to 70°C
KU171-N	TBD	i3-7100U	2 SODIMM	eDP	DP++	2	1	1	4	4	2	1.2	12V DC	Fanless	0 to 60°C
KU173-N	TBD	i7-7600U	2 SODIMM	LVDS	DP++	2	1	1	4	4	2	2.0	15-36V DC	Fanless	-20 to 70°C
KU173-N	TBD	3965U	2 SODIMM	eDP	DP++	2	1	1	4	4	2	1.2	15-36V DC	Fanless	0 to 60°C

Note: If you would like to have the CPU configuration which is not listed on our ordering, please contact our sales representative.

Mechanical Drawing



Block Diagram



Specifications

SYSTEM	Processor	7th Generation Intel® Core™ Processors, BGA 1366 Socket Intel® Core™ i7-7600U Processor, Dual Core, 4M Cache, 2.80 GHz (3.90 GHz), 15W Intel® Core™ i5-7300U Processor, Dual Core, 3M Cache, 2.60 GHz (3.50 GHz), 15W Intel® Core™ i3-7100U Processor, Dual Core, 3M Cache, 2.40 GHz, 15W Intel® Celeron® Processor 3965U, Dual Core, 2M Cache, 2.20 GHz, 15W		
	Memory	Two 260-pin SODIMM up to 32GB	Dual Channel DDR4 1866/2133MHz	
	BIOS	Insyde SPI 128Mbit		
	GRAPHICS	Controller	Intel® HD Graphics GT Series	
	Feature	OpenGL 4.4, DirectX 12, OpenCL 2.1 HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H265, VP8, VP9 HW Encode: AVC/H.264, MPEG2, JPEG, HEVC/H265, VP8, VP9		
	Display	1 x LVDS/eDP (eDP available upon request) 2 x DP++	LVDS: dual channel 48-bit, resolution up to 1920x1200 @ 60Hz DP: resolution up to 4096x2304 @ 60Hz eDP: resolution up to 4096x2304 @ 60Hz	
	Triple Displays	LVDS + DP++ + DP++	eDP + DP++ + DP ++	
EXPANSION	Interface	1 x PCIe x4 (Gen 3) 1 x Full-size Mini PCIe (PCIe/USB)	1 x M.2 (PCIe/SATA)	
AUDIO	Audio Codec	Realtek ALC888S-VD2-GR		
ETHERNET	Controller	1 x Intel® I210AT PCIe (10/100/1000Mbps) 1 x Intel® I219LM PCIe with iAMT11.6 (10/100/1000Mbps) (only Core i7/i5 supports iAMT)		
REAR I/O	Ethernet	2 x GbE (RJ-45)		
	USB	4 x USB 3.0		
	Display	2 x DP++		
	Audio	1 x Line-out	1 x Mic-in	
INTERNAL I/O	Serial	1 x RS-232/422/485 (RS-232 w/ power) (2.0mm pitch) 1 x RS-232 (2.0mm pitch)		
	USB	4 x USB 2.0 (2.0mm pitch)		
	Display	1 x LVDS LCD Panel Connector 1 x LCD/Inverter Power	1 x eDP LCD Panel Connector (available upon request)	
	Audio	1 x S/PDIF	1 x Front Audio	
	SATA	2 x SATA 3.0 (up to 6Gb/s) 2 x SATA Power 1 x SATA Connector (right angle)	RAID 0/1/5	
	DIO	1 x 8-bit DIO		
	LPC	1 x LPC		
	SMBus	1 x SMBus		
	WATCHDOG TIMER	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds	
	SECURITY	TPM	Available Upon Request	
POWER	Type	Single 12V +/-10% DC (KU171)	Wide Range 9~36V (KU173)	
	Connector	DC-in Jack	Right Angle Connector (4-pin) (available upon request) Vertical Type Connector (4-pin) (available upon request)	
	RTC Battery	CR2032 Coin Cell		
OS SUPPORT	Microsoft/Linux	Windows 10 IoT Enterprise 64-bit	Debian 8 (with VESA graphic driver) CentOS 7 (with VESA graphic driver) Ubuntu 15.10 (Intel graphic driver available)	
ENVIRONMENT	Temperature	Operating: 0 to 60°C / -20 to 70°C	Storage: -40 to 85°C	
	Humidity	Operating: 5 to 90% RH	Storage: 5 to 90% RH	
MECHANICAL	Dimensions	Mini-ITX Form Factor	170mm (6.7") x 170mm (6.7")	
	Height	PCB: 1.6mm	Top Side: 16.5mm, Bottom Side: 3.5mm	

Packing List

• 1 KU171/KU173 motherboard	
• 1 COM port cable (Length: 250mm, 1 x COM ports)	TBD
• 1 Serial ATA data with power cable (Length: 300mm)	TBD
• 1 DVD	
• 1 Heat sink (Height: 25mm)	TBD

Optional Items

• USB port cable (Length: 200mm)	TBD
• COM port cable (Length: 250mm, 1 x COM ports)	TBD
• Serial ATA data with power cable (Length: 300mm)	TBD
• Power adapter (100W, 12V, Level 6)	TBD
• Power adapter (120W, 19V)	TBD
• I/O shield	TBD
• DT122 Chassis	TBD