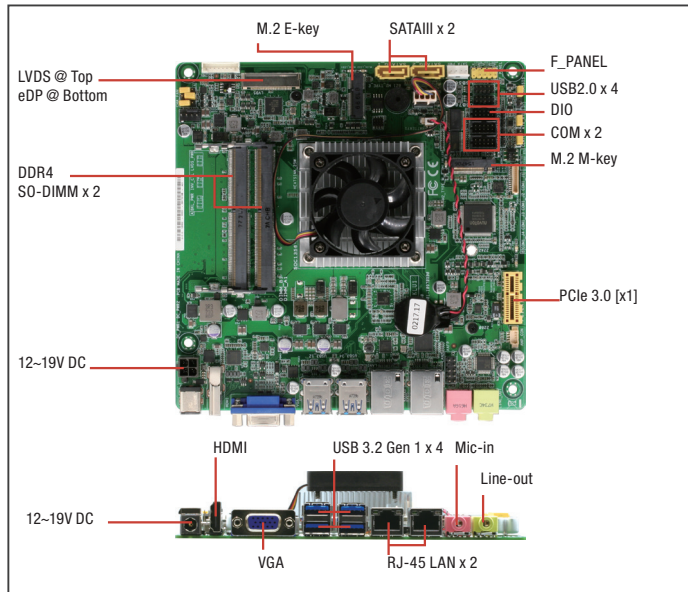


# MIX-KLUW1

Mini-ITX, 14nm, FCBGA1356 7th Gen Intel® Core™ processor family, 15~25W TDP



## Specifications

System	
Processor	14nm 7th Gen. Intel® Core™ (formerly Kaby Lake-U), FCBGA1356 Core i7-7600U, 2C/4C, 2.8/3.9(turbo)GHz, 4M, 300MHz/1.15GHz (Turbo) GFX, ~15W TDP (Optional) Core i5-7300U, 2C/4C, 2.6/3.5(turbo)GHz, 3M, 300MHz/1.10GHz (Turbo) GFX, ~15W TDP (Optional) Core i3-7100U, 2C/4C, 2.4GHz, 3M, 300MHz/1.00GHz (Turbo) GFX, ~15W TDP Celeron 3965U, 2C, 2.2GHz, 2M, 300MHz/900MHz (Turbo) GFX, ~15W TDP
Chipset	—
Memory	SODIMM x 2, max. 32GB, DDR4-2133 non-ECC, un-buffered memory
I/O Chipset	NCT6793D
Ethernet	Intel® PCIe Gb LAN 219LM for vPro (i7-7600U/i5-7300U) x 1 Intel® PCIe Gb LAN 211AT x 1
Audio	Realtek® ALC887
TPM	Nuvoton NPCT650ABBYX TPM2.0 onboard (default: No)
Expansion Slots	PCIe 3.0 [x1] x 1 M.2 M key (22 x 80mm) x 1, SATA & PCIe [x4] M.2 E key (22 x 30mm) x 1 for Wireless-wifi module (PCIe+USB)
BIOS	128Mbit Flash ROM, AMI BIOS
H/W Monitor	Temperature Monitor on CPU/System, Voltage Monitor on Vcore/5V/3.3V/12V, Fan Monitor on Chassis
WatchDog Timer	1~255 steps by software program
Smart Fan Control	CPU Fan/Chassis Fan
Wake On LAN/ PXE	Yes (WOL/PXE)
Power State	S3, S4, S5
Graphics	
Graphics Chipset	Intel® UHD Graphics
Graphics Multi Display	Supports three display of LVDS+eDP+VGA or LVDS+eDP+HDMI (by SKU selection)
VGA	Up to 1920 x 1200 @60 Hz coloy with HDMI (default: VGA)
DVI	—
HDMI	HDMI 1.4 up to 4096 x 2340 @24Hz coloy with VGA (default: VGA)
Display Port	—
LVDS	LVDS Up to 1920 x 1200 @60Hz, dual-channel 18/24 bit (via CH7511)
eDP	eDP UP to 4096 x 2304 @ 60Hz
Backlight Control	Voltage/PWM; Max 1A
Environment & Power & ME	
Battery	Lithium battery
Power Requirement	12(-5%)~19V(+5%) DC
Operating Temperature	32°F ~ 131°F (0°C ~ 55°C)
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Operating Humidity	0% ~ 90% R/H, non-condensing
Certificate	CE & FCC (Class A)
Form Factor	Mini-ITX: 6.7" x 6.7" (170mm x 170mm)

## Features

- DDR4 SODIMM x 2, Up to 32GB
- Three Independent Display: eDP x 1, LVDS x 1, VGA (Default) or HDMI
- Intel® LAN i211AT x 1, 219LM for iAMT 12.0 x 1
- M.2 Slot (M-key) x 1
- M.2 Slot (E-key) x 1
- PCIe3.0 [x1] x 1
- 12-19V DC wide range voltage power input
- USB 3.2 Gen 1x 4, USB2.0 x 4



Weight	1.1 lb (0.5 Kg)
MTBF (Hours):	275,650
Rear Panel I/O Ports	
USB	USB 3.2 Gen 1 (5 Gbps) x 4
Display I/O	VGA x 1, HMDI Coloy (default: VGA x 1)
Audio I/O	Mic-in x 1, Line out x 1
LAN I/O	LAN (RJ45) port x 2
Serial Port	—
PS/2 Port	—
Others	DC Power Jack x 1
Internal I/O Connectors	
Storage	M.2 M key (22 x 80mm) for PCIe [x4]/SATA storage x 1, SATA 6.0Gb/s x 2, 4-pin SATA power x 1
USB	USB 2.0 pin header x 2 support additional 4 USB ports
Display I/O	40-pin LVDS connector x 1, 40-pin eDP connector x 1, LCD backlight connector (inverter) x 1
Audio I/O	Speaker for 2W@4Ω x 1, AAFFP follow ASUS pin out x 1
Serial Port	Boxer header x 2 for COM (COM1: RS-232/422/485 supports 5V/12V/RI)
PS/2 Port	—
Parallel Port	—
DIO	8-bit programmable (4-in/4-out) x 1
FAN	4-pin Chassis Fan connector x 1, 4-pin CPU Fan connector x 1
Power	2 x 2 Pin DC-in 12~19V(-5%~+5%) x 1
Others	Clear CMOS jumper x 1, AT/ATX mode select jumper x 1
OS	
OS Support	Windows 10 64 bit, Ubuntu 16.04.LTS

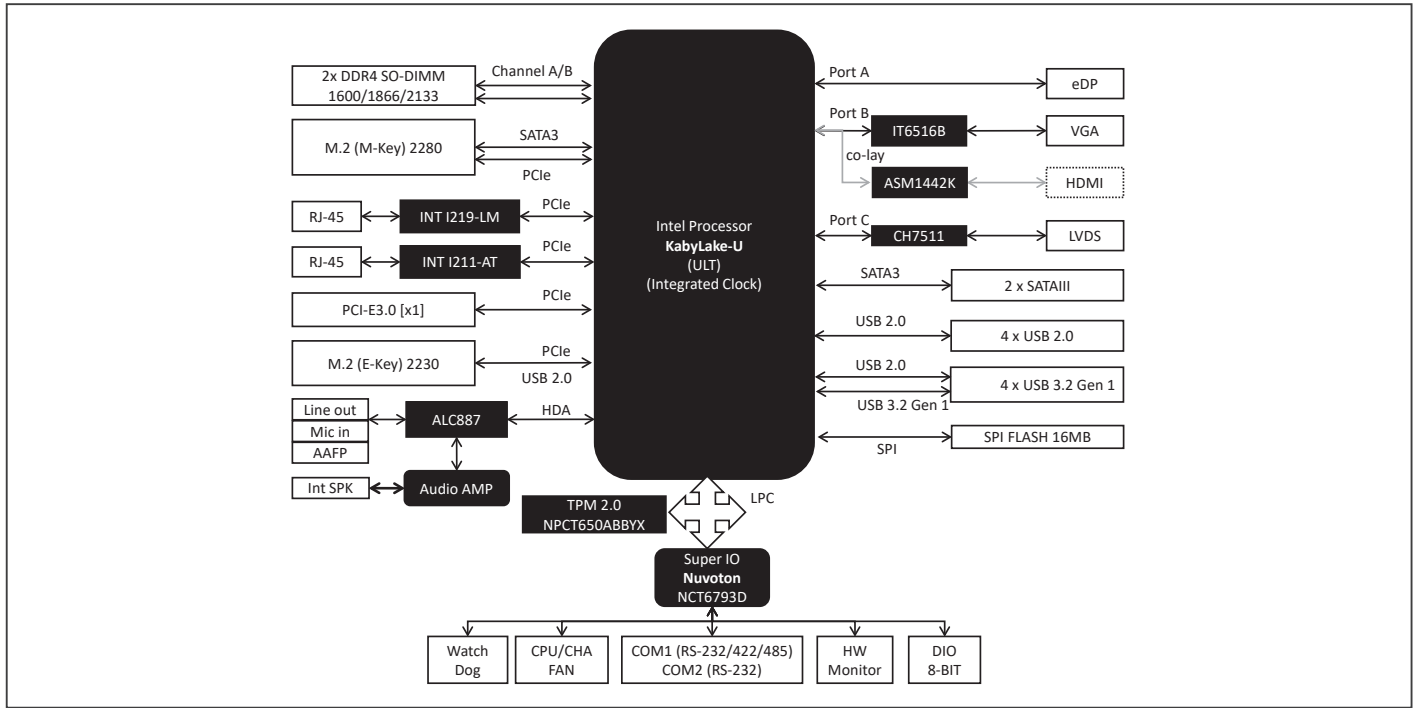
## Packing List

- Heatsink/CPU Fan
- SATA Cable
- SATA Power Cable
- I/O Shield
- MIX-KLUW1

## Optional Accessories

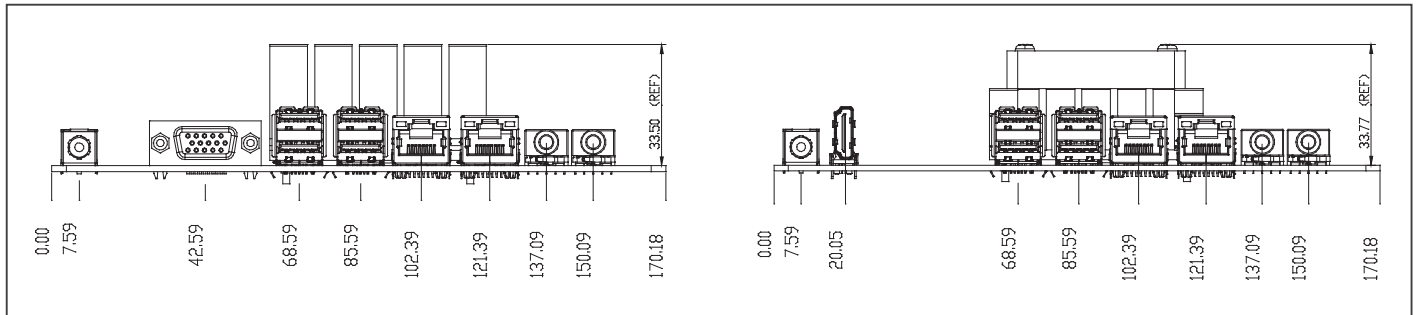
Part Number	Description
1709100201	USB 2.0 Cable (10P, 200MM, p=2.00mm, w/bracket)
1700100491	USB 2.0 Cable (2 x 5P, 490mm, p=2.00mm)
1709050201	USB 2.0 Cable (5P, 220mm, p=2.00mm)
1701100206	COM Cable (200MM, p=2.00mm)
1702150300	SATA Power Cable (4P, 300MM p=2.54mm)
1702151201	SATA Power Cable (4P, 120MM, p=2.5mm)

### Block Diagram



### Dimension

Unit: mm



### Ordering Information

PART NUMBER	CPU	RAM	FAN/ FANLESS	DISPLAY	STORAGE	LVDS	LAN	USB	RS-232	RS- 232/422/485	EXPANSION SLOT	POWER	TPM	TEMP.
MIX-KLUW1-A10-3965V	Celeron® 3965U	SODIMM x 2	Fanless	VGA, LVDS, eDP	SATA3 x 2, M.2 (M-key)	Dual Channel 18/24 bit	GbE x 2	USB2.0 x 4, USB 3.2 Gen 1 x 4	1	1	PCIe[x1] x 1, M.2(M-key) x 1, M.2(E-Key) x 1	12-19V DC	—	32°F – 131°F (0°C – 55°C)
MIX-KLUW1-A10-3965H	Celeron® 3965U	SODIMM x 2	Fanless	HDMI, LVDS, eDP	SATA3 x 2, M.2 (M-key)	Dual Channel 18/24 bit	GbE x 2	USB2.0 x 4, USB 3.2 Gen 1 x 4	1	1	PCIe[x1] x 1, M.2(M-key) x 1, M.2(E-Key) x 1	12-19V DC	—	32°F – 131°F (0°C – 55°C)
MIX-KLUW1-A10-7100H	i3-7100U	SODIMM x 2	Fanless	HDMI, LVDS, eDP	SATA3 x 2, M.2 (M-key)	Dual Channel 18/24 bit	GbE x 2	USB2.0 x 4, USB 3.2 Gen 1 x 4	1	1	PCIe[x1] x 1, M.2(M-key) x 1, M.2(E-Key) x 1	12-19V DC	—	32°F – 131°F (0°C – 55°C)