

# tKINO-ULT6

Thin Mini-ITX SBC supports 11th Gen. Intel® Core™ Processor Family (Tiger Lake-UP3), 9~36V DC input, Quadruple Independent Display, SATA 6Gb/s, Dual Intel® 2.5GbE, USB4, M.2, HD audio and RoHS



## Features

- » Thin Mini-ITX form factor with Intel® Tigerlake-UP3 processor support DDR4-3200 memory
- » Wide range 9~36V DC Input
- » Support quadruple independent displays (HDMI™, DP, eDP/LVDS, Type-C DP)
- » Dual Intel® GbE LAN with Intel® AMT 11.0 supported
- » M.2 A key for WIFI+Bluetooth (PCIe x1/USB 2.0), M.2 M key for Storage (PCIe x2/SATA)
- » PCIe x8 slot (x4 signal)

## Specifications

Form Factor	
Form Factor	Mini-ITX Motherboard
System	
CPU	11th Gen. Intel® mobile Tiger Lake-UP3 on-board processor
	Intel® Core™ i7-1185G7E (up to 4.4GHz, quad-core, 12M Cache, TDP=28/15/12W)
	Intel® Core™ i5-1145G7E (up to 4.1GHz, quad-core, 8M Cache, TDP=28/15/12W)
	Intel® Core™ i3-1115G4E (up to 3.9GHz, dual-core, 6M Cache, TDP=28/15/12W)
	Intel® Celeron® 6305E (up to 1.8GHz, dual-core, 4M Cache, TDP=15W)
Memory	2 x SO-DIMM DDR4 3200MHz, system maximum up to 64GB
Memory Max.	Up to 64GB
Cooling method / System Fan	1 x CPU Cooler
Physical Characteristics	
Dimensions (LxWxH) (mm)	170mm x 170mm
Net Weight	GW:900g / NW:400g
Storage	
Storage	2 x SATA
	1 x M.2(NGFF)
I/O Interface	
Display Output	1 x HDMI™ 2.0b (up to 4096 x 2160 @60Hz)
	1 x Display Port 1.4a (up to 4096 x 2160 @60Hz)
	1 x LVDS Single/Dual channel 18/24-bit (up to 1920 x 1200 @60Hz) (select by switch)
	1 x eDP 4 lane (up to 4096 x 2304 @60Hz) (select by switch)
Ethernet	2 x LAN : 2.5GbE LAN (Intel® I225-V)
Audio	1 x Line out
	1 x Mic
	1 x Front Audio (2x5-pin)
	HD Audio : Realtek ALC888S HD audio codec

I/O Interface	4 x Internal RS-232 (2x5 pin, P=2.0)
	1 x Internal RS-422/485 (2x5 pin, P=2.0) (RS-485 support AFC)
	1 x Internal RS-232/422/485 (2x5 pin, P=2.0) (RS-485 support AFC)
	4 x Internal USB 2.0 (2x4 pin, P=2.0)
	1 x PS/2 (1x6 pin)
	1 x DIO : 8-bit digital I/O (2x5 pin)
	4 x External USB 3.2 Gen2x2
	1 x External USB 4 Gen2x2
Expansion	1 x PCIe x8 : Open-ended Slot(with x4 signal)
	2 x M.2(NGFF) : 1 x M.2 2230 A key (PCIe x1/USB 2.0), 1 x M.2 2242/2280 M key (PCIe x2/SATA)
<b>Other Features</b>	
TPM	1 x TPM 2.0 connector (2x10 pin) (SPI interface)
<b>Power</b>	
Input	9~36V DC input
	1 x Internal power connector (2x2 pin)
	1 x External DC power Jack (Ø5.5mm)
Power Consumption	12V@6.48A (Intel® Core™ i7-1185G7E up to 4.4GHz CPU with 16GB (8GB x 2) DDR4-3200 memory running in 2.8GHz)
<b>Environment</b>	
Operating Temperature	-20°C ~ 60°C
Storage Temperature	-30°C ~ 70°C
Humidity	5% ~ 95%, non-condensing
<b>Certifications</b>	
Safety & EMC	CE/FCC compliant

## Ordering Information

tKINO-ULT6-i7-R10	Thin Mini-ITX SBC supports Intel® 11th Gen Tigerlake-UP3 Mobile Core™ i7-1185G7E Processor, 9~36V DC input, Quadruple Independent Display, HDMI™, DP, eDP, SATA 6Gb/s, Dual Intel® 2.5GbE, USB 3.2 Gen 2, M.2, HD audio and RoHS
tKINO-ULT6-i5-R10	Thin Mini-ITX SBC supports Intel® 11th Gen Tigerlake-UP3 Mobile Core™ i5-1145G7E Processor, 9~36V DC input, Quadruple Independent Display, HDMI™, DP, eDP, SATA 6Gb/s, Dual Intel® 2.5GbE, USB 3.2 Gen 2, M.2, HD audio and RoHS
tKINO-ULT6-i3-R10	Thin Mini-ITX SBC supports Intel® 11th Gen Tigerlake-UP3 Mobile Core™ i3-1115G4E Processor, 9~36V DC input, Quadruple Independent Display, HDMI™, DP, eDP, SATA 6Gb/s, Dual Intel® 2.5GbE, USB 3.2 Gen 2, M.2, HD audio and RoHS
tKINO-ULT6-C-R10	Thin Mini-ITX SBC supports Intel® 11th Gen Tigerlake-UP3 Mobile Celeron® 6305E Processor, 9~36V DC input, Quadruple Independent Display, HDMI™, DP, eDP, SATA 6Gb/s, Dual Intel® 2.5GbE, USB 3.2 Gen 2, M.2, HD audio and RoHS

## Packing List

1 x tKINO-ULT6 SBC with CPU cooler	1 x SATA cable
1 x I/O shielding	1 x QIG