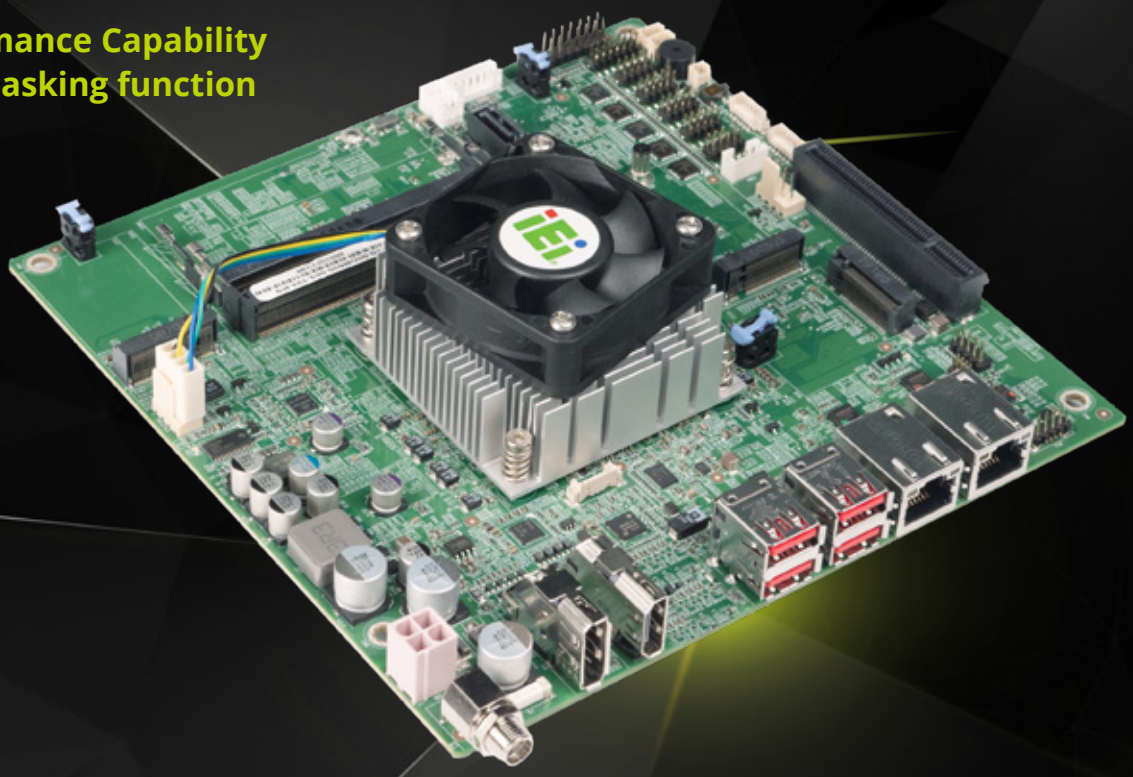
KINO-TGL-U

Mini-ITX SBC supports Intel® Tiger Lake-UP3 Processor

- Support 2 x 260-pin 3200MHz DDR4 (up to 64GB)
- Wide range 9~36V DC power input
- Support Triple independent display via HDMI, DP, iDPM
- Dual Intel® 2.5GbE LAN
- Support one PCIe Gen4 x8 slot(x 4 signal), M.2 A key, M.2 M key expansions

High Performance Capability with multi-tasking function



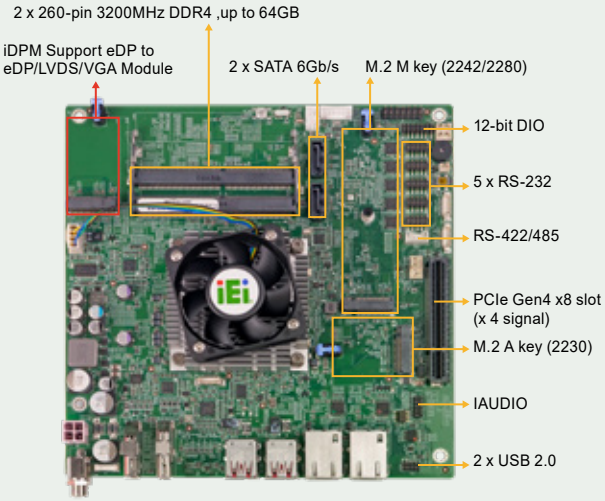
iEi®

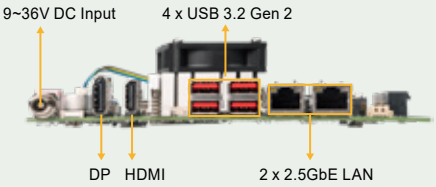
www.ieiworld.com

KINO-TGL-U

Mini-ITX SBC supports Intel® Tiger Lake-UP3 Processor, 9~36V DC input, triple independent displays, HDMI, DP, iDPM SATA 6Gb/s, dual Intel® 2.5GbE, USB 3.2, M.2 and RoHS









Support Intel® Tiger Lake-UP3 Processors

Equipped with 11th Gen. Intel® Core™ i7/i5/i3, Celeron® UP3 processor, the KINO-TGL features high performance, and can handle multitasking efficiently.

Support Intel®I226-V 2.5GbE Network Controller

Two network ports are provided via Intel® I226-V 2.5GbE network controller to achieve up to 2.5GbE network transmission rate.

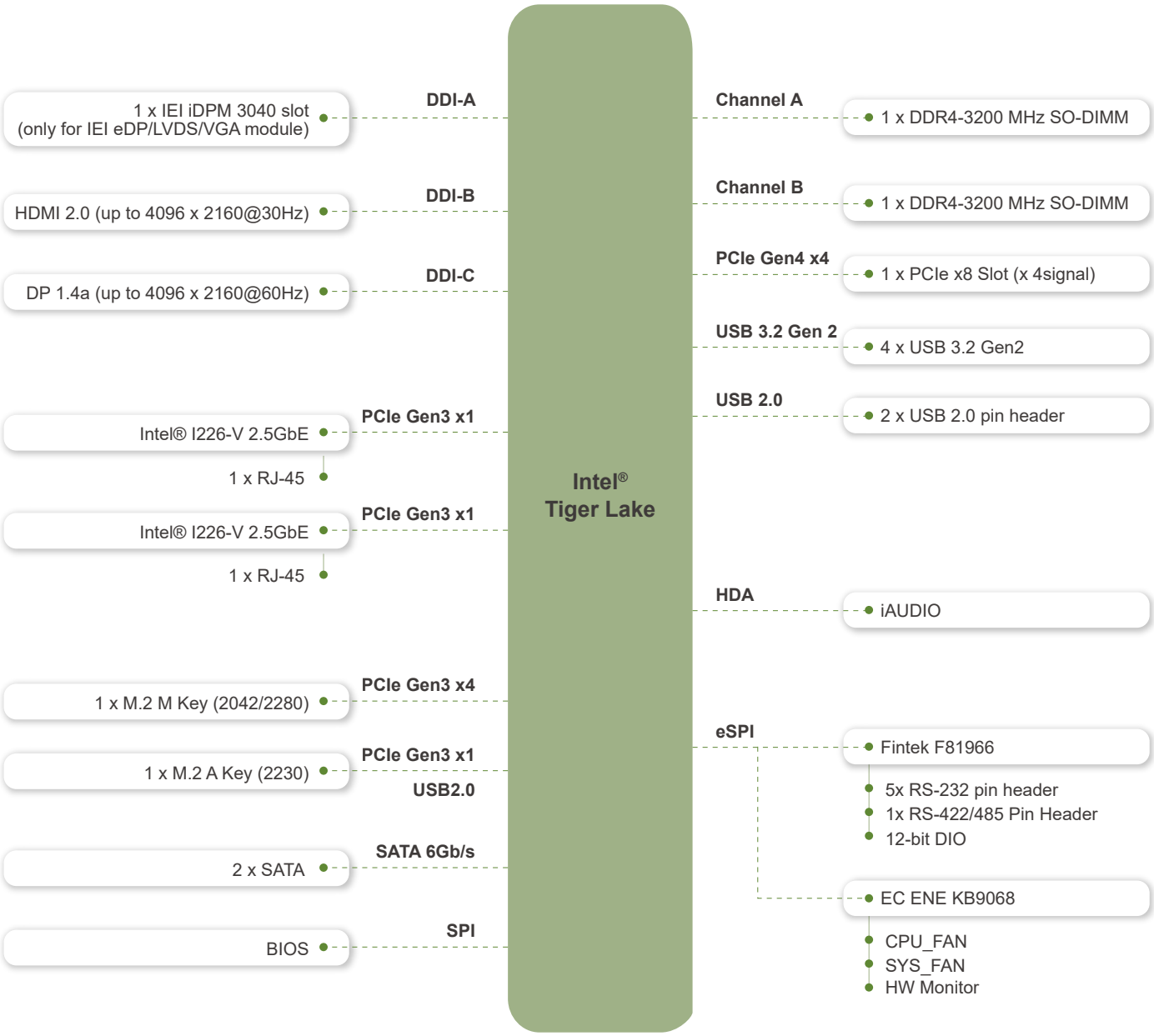
Abundant Expansion Slots

The KINO-TGL provides PCIe x8 (x 4 signal) for expansion, M.2 A key for Bluetooth and Wi-Fi modules, M.2 M key for NVME storage.

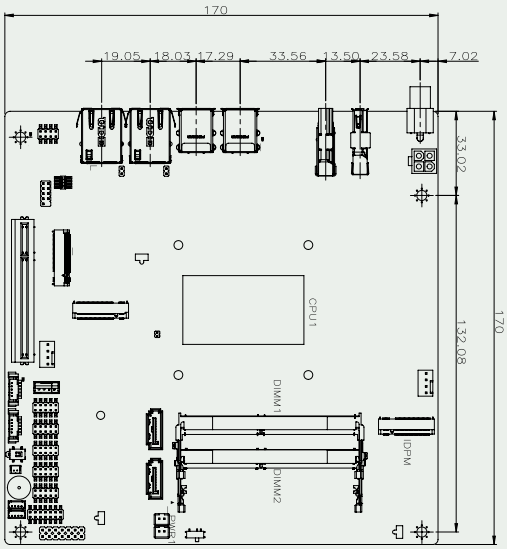
IEI-specific iDPM Interface

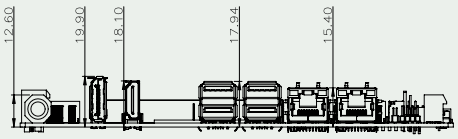
IEI uniquely designs a iDPM interface that can connect to display modules, enabling users to add LVDS/eDP/VGA display interface upon requirements.

KINO-TGL-U Block Diagram



Dimensions





Optional accessories

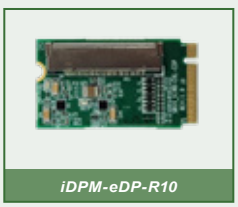

CB-USB02A-RS

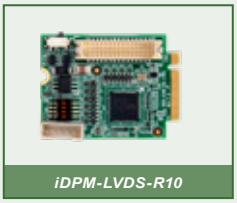

AC-KIT-888S-R10

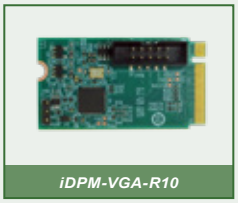

32102-000100-200-RS


32205-002700-200-RS

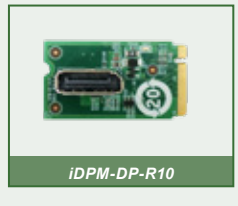

32205-003800-200-RS


iDPM-eDP-R10


iDPM-LVDS-R10


iDPM-VGA-R10


iDPM-VBO-R10


iDPM-DP-R10

Specifications

Model	KINO-TGL-U
CPU	11th Gen. Intel® mobile Tiger Lake-UP3 SoC 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, quad-core, 6M Cache, TDP=28/15/12W) Intel® Celeron® 6305 (up to 1.8GHz, dual-core, 4M Cache, TDP=15W) Intel® Celeron® 6305 E(up to 1.8GHz, dual-core, 4M Cache, TDP=15W))
BIOS	AMI UEFI BIOS
Memory	2 x 260-pin 3200MHz DDR4, system max. up to 64GB
Graphics Engine	Intel® Gen11 UHD Graphics for Core™ i3-1115G4E and Celeron® 6305E, Intel® Iris® Xe Graphics for i5-1145G7E and i7-1185G7E
Display Output	Triple independent display 1 x HDMI 1.4 (up to 4096 x 2160@30Hz) 1 x DP 1.4 (up to 4096 x 2160 @60Hz) 1 x IEI iDPM 3040 slot (only for IEI eDP/LVDS/VGA module)
Ethernet	LAN1: Intel@ I226-V controller LAN2: Intel@ I226-V controller
External I/O Interface	4 x USB 3.2 Gen 2 (10Gb/s)
Internal I/O Interface	2 x SATA 6Gb/s with 5V SATA power connector 1 x RS-422/485 (1x4 pin, P=2.0) (RS-485 support AFC) 2 x USB 2.0 (2x4 pin, P=2.0) 5 x RS-232 (2x5 pin, P=2.0)
SMBus	1 x SMBus (1x4 pin)
I²C	1 x I²C (1x4 pin)
Audio	1 x iAUDIO, support IEI AC-KIT-888S Audio Module (2x5 pin)
Front Panel	1 x Front Panel (2x7 pin, power LED, HDD LED, power button, reset button)
LAN LED	2 x LAN LED (1x2 pin)
Expansion	1 x M.2 A key 2230 (PCIe Gen3 x1 & USB 2.0 signal) 1 x M.2 M key 2242/2280 (PCIe Gen3 x2 signal)
Digital I/O	1 x 12-bit digital I/O (2x7 pin, P=2.0)
TPM	Support Intel® PTT (TPM 2.0)
Fan Connector	1 x CPU fan connector (1x4 pin) 1 x System fan connector (1x4 pin)
Power Supply	9~36V DC input 1 x Internal power connector (2x2 pin) 1 x External DC power jack (Ø5.5mm) ErP/EuP Compliant
Watchdog Timer	Software programmable, support 1~255 sec. system reset
Power Consumption	9V@9.19A, 12V@7.768A, 28V@3.119A, 36V@2.459A (Intel® Core™ i7-1185G7E CPU and one 8 GB 2933 MHz DDR4 SO-DIMM)
Operating Temperature	0°C ~ 60°C
Storage Temperature	-30°C ~ 70°C
Operating Humidity	5% ~95%, non-condensing
Dimension	170 mm x 170 mm
Weight	GW:900g / NW:400g
Certification	CE/FCC Compliant

Packing List

1 x KINO-TGL-U single board computer with Cooler Module	1 x SATA cable (PN: 32801-000201-300-RS)
1 x I/O shielding (PN: 45014-0092C0-00-HF)	1 x QIG

Ordering Information

KINO-TGL-U-CE-R11	Mini-ITX SBC with Intel® Tiger Lake-UP3 Celeron® 6305E Proccessor,DDR4 SO-DIMM, 9~36V DC input, Triple Display,SATA,Dual Intel® 2.5GbE, USB3.2, M.2, SoC,RoHS
KINO-TGL-U-i3-R11	Mini-ITX SBC with Intel® Tiger Lake-UP3 Core™ i3-1115G4E Proccessor, DDR4 SO-DIMM, 9~36V DC input, Triple Display, SATA, dual Intel® 2.5GbE, USB 3.2, M.2, SoC, 0ºC~60ºC, RoHS
KINO-TGL-U-i5-R11	Mini-ITX SBC with Intel® Tiger Lake-UP3 Core™ i5-1145G7E Proccessor, DDR4 SO-DIMM, 9~36V DC input, Triple Display, SATA, dual Intel® 2.5GbE, USB 3.2, M.2, SoC, 0ºC~50ºC, RoHS
KINO-TGL-U-i7-R11	Mini-ITX SBC with Intel® Tiger Lake-UP3 Core™ i7-1185G7E Proccessor, DDR4 SO-DIMM, 9~36V DC input, Triple Display, SATA, dual Intel® 2.5GbE, USB 3.2, M.2, SoC, 0ºC~50ºC, RoHS

Optional Accessories

CB-USB02A-RS	Dual port USB cable with bracket, 300mm, P=2.00
AC-KIT-888S-R10	Realtek ALC888S 7.1 Channel HD Audio peripheral board,RoHS
32102-000100-200-RS	SATA power cable, MOLEX 5264-4P to SATA15P
32205-002700-200-RS	RS-232 cable, 200mm, P=2.0
32205-003800-200-RS	RS-232/422/485, 200mm, P=2.0
iDPM-eDP-R10	eDP to eDP converter board (for IEI iDPM connector)
iDPM-LVDS-R10	eDP to LVDS converter board (for IEI iDPM connector)
iDPM-VGA-R10	eDP to VGA Connetor converter board (For IEI Display Module)
iDPM-VBO-R10	eDP to VBO DisplayPort converter board (for IEI iDPM connector)
iDPM-DP-R10	eDP to DP DisplayPort converter board (for IEI iDPM connector)