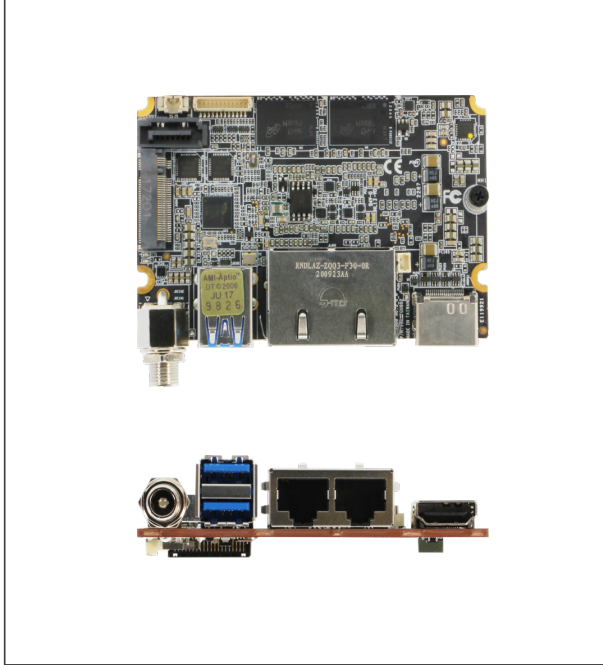


# de next-TGU8

86 x 55mm Single Board with 11th Generation Intel® Core™ i7/i5/i3 Processor

de next



## Features

- Onboard 11th Gen. Intel Core Series Processor (Formerly Tiger Lake-UP3)
- Onboard LPDDR4x 3733 up to 16GB
- HDMI 1.4b x 1. eDP x 1
- 2.5 GbE RJ45 x 1 , 1 GbE RJ45 x 1
- USB 3.2 Gen2 x 2 , USB 2.0 x 4
- M.2 M key 2280 (PCIe[x2] x 1 , PCIe[x4] Gen3 x 1 (by FPC)
- SATA 3 x 1
- DC Jack. 12V in

## Specifications

SYSTEM	
FORM FACTOR	86mm x 55mm, Single board computer
CPU	Onboard 11th Gen. Intel® Core™ Processor i7-1185G7E (4C/8T, 1.80GHz, up to 4.40GHz) i5-1145G7E (4C/8T, 1.50GHz, up to 4.10GHz) i3-1115G4E (2C/4T, 2.20GHz, up to 3.90GHz)
CPU TDP	15W, (TDP up to 28W)
CHIPSET	Integrated with Intel® SoC
MEMORY TYPE	Onboard LPDDR4x, 3733, up to 16GB
BIOS	UEFI
WAKE ON LAN	Yes
WATCHDOG TIMER	255 Levels
SECURITY	fTPM
RTC Battery	Lithium Battery 3V/240mAh
DIMENSION (L X W)	3.38" x 2.17" (86 mm x 55 mm)
POWER	
POWER REQUIREMENT	DC in +12V
POWER SUPPLY TYPE	AT/ATX
CONNECTOR	DC Jack (Optional: 2 Pin Phoenix Connector)
POWER CONSUMPTION	With i7-1185G7E + LPDDR4x 16GB : 12V@7A, 84W (Peak during full loading) With i7-1185G7E + LPDDR4x 16GB : 12V@4.58A, 55W (steady state during full loading)
DISPLAY	
CONTROLLER	Intel® UHD Graphics for 11th Gen Intel® Processors
LVDS/eDP	eDP only, up to 3840 X 2160 Resolution
Display Interface	eDP x 1 HDMI 1.4b x 1
Multiple Display	Up to 2 Simultaneous Displays
AUDIO	
CODEC	—
AUDIO INTERFACE	—
Speaker	—
EXTERNAL I/O	
ETHERNET	Intel® i219LM, 10/100/1000Base, RJ-45 x1 Intel® i225LM, 10/100/2500Base, RJ-45 x1
USB	USB3.2 Gen 2 x 2 (Type A)
SERIAL PORT	—
VIDEO	HDMI 1.4b x 1

INTERNAL I/O	
USB	USB2.0 x 4 (pin header) Note : USB2.0 x 2 shared with adapter card
SERIAL PORT	COM Port (RS232/422/485) x 2 (pin header)
VIDEO	eDP x 1
SATA	SATA3 x 1 +5V SATA Power Connector x 1
AUDIO	—
DIO/GPIO	8-Bit (pin header)
SMBus/I2C	Optional
Touch	—
FAN	Smart Fan x1
SIM	—
Front Panel	HDD LED, PWR LED, Power Button, Buzzer, Reset
Others	—
EXPANSION	
Mini PCI-E/mSATA	—
M.2	M-Key 2280 x 1 (PCIe[x2])
Others	PCIe[x4] Gen3 x 1 (by FPC Connector)
ENVIRONMENT & CERTIFICATION	
OPERATING TEMP	32°F ~ 140°F (0°C ~ 60°C)
STORAGE TEMP	-40°F ~ 176°F (-40°C ~ 80°C)
OPERATING HUMIDITY	0% ~ 90% relative humidity, non-condensing
MTBF (HOURS)	594,420
EMC	CE/FCC Class A

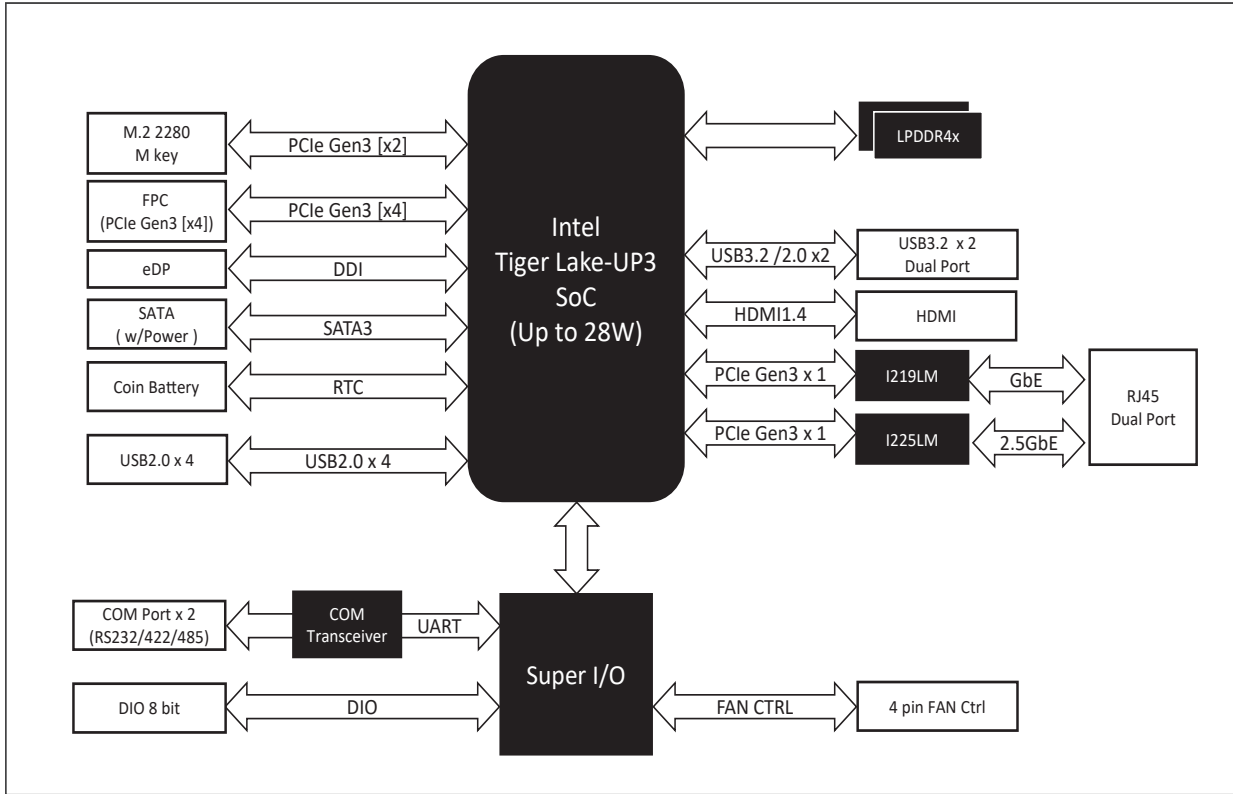
## Optional Accessories

- **PER-T642-A03-0001**  
M.2 M 2280 adapter card.to M.2 B key 2242 & M.2 E key 2230
- **PER-T643-A01-0001**  
M.2 M 2280 adapter card.to M.2 B key 2242 & M.2 B key 3052
- **170X000512**  
de next 40 pin cable for USB2.0 x 4, COM Port x 2, DIO 8 bit
- **170X000577**  
de next cable for USB 2.0 x 2, COM Port x 2, DIO 8 bit, adapter card connector
- **170X000603**  
Front Panel Cable for de next use
- **de next-FAN01**  
CPU cooler for de next

## Packing List

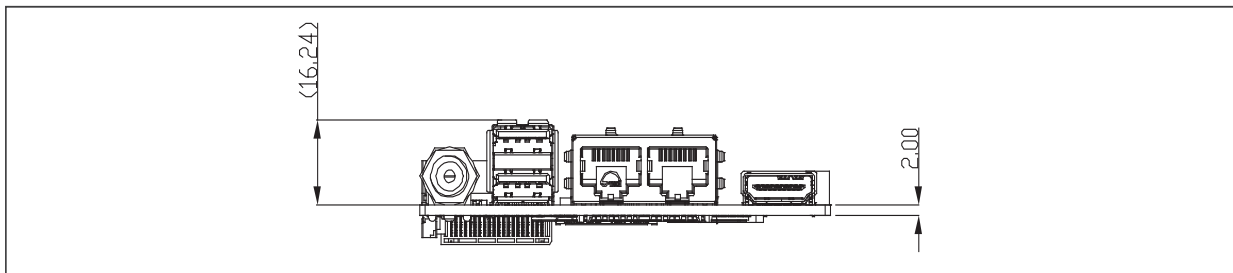
- de next-TGU8 x 1
- Copper stud.M2.5mm.19mm x 4

**Block Diagram**



**Dimension**

Unit: mm



**Ordering Information**

PART NUMBER	CPU	MEMORY	THERMAL	DISPLAY	STORAGE	LAN	USB	RS-232	RS-232/422/485	EXPANSION SLOT	POWER	OPERATING TEMP	OTHERS
DENEXT-TGU8-A10-0001	i7-1185G7E	Onboard LPDDR4x 16GB	Fan	eDP x 1, HDMI x 1	SATA3 x 1	2.5GbE x 1, GbE x 1	USB 3.2 Gen 2 x 2, USB 2.0 x 4	—	2	M.2 M key 2280 x 1 FPC Connector x 1	+12V in (DC Jack)	0°C – 60°C	DIO 8 bit
DENEXT-TGU8-A10-0002	i5-1145G7E	Onboard LPDDR4x 16GB	Fan	eDP x 1, HDMI x 1	SATA3 x 1	2.5GbE x 1, GbE x 1	USB 3.2 Gen 2 x 2, USB 2.0 x 4	—	2	M.2 M key 2280 x 1 FPC Connector x 1	+12V in (DC Jack)	0°C – 60°C	DIO 8 bit
DENEXT-TGU8-A10-0003	i3-1115G4E	Onboard LPDDR4x 16GB	Fan	eDP x 1, HDMI x 1	SATA3 x 1	2.5GbE x 1, GbE x 1	USB 3.2 Gen 2 x 2, USB 2.0 x 4	—	2	M.2 M key 2280 x 1 FPC Connector x 1	+12V in (DC Jack)	0°C – 60°C	DIO 8 bit

Note: All specifications are subject to change without notice.

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

### US

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +1 347 719 4508

Support: +1 347 719 4508

1309 Coffeen Ave  
Ste 1200  
Sheridan  
WY 82801  
USA

### EMEA

[sales@assured-systems.com](mailto:sales@assured-systems.com)

Sales: +44 (0)1785 879 050

Support: +44 (0)1785 879 050

Unit A5 Douglas Park  
Stone Business Park  
Stone  
ST15 0YJ  
United Kingdom

VAT Number: 120 9546 28

Business Registration Number: 07699660