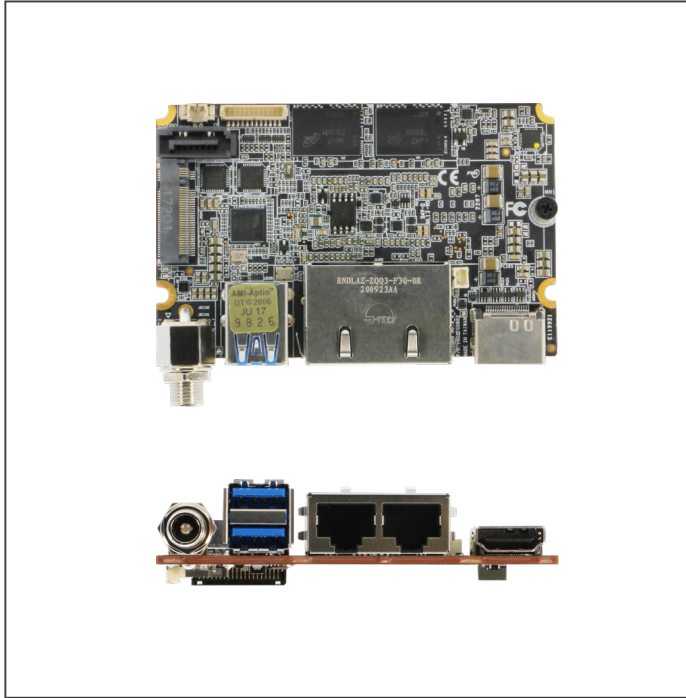


de next-TGU8

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



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 |

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

| 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 |

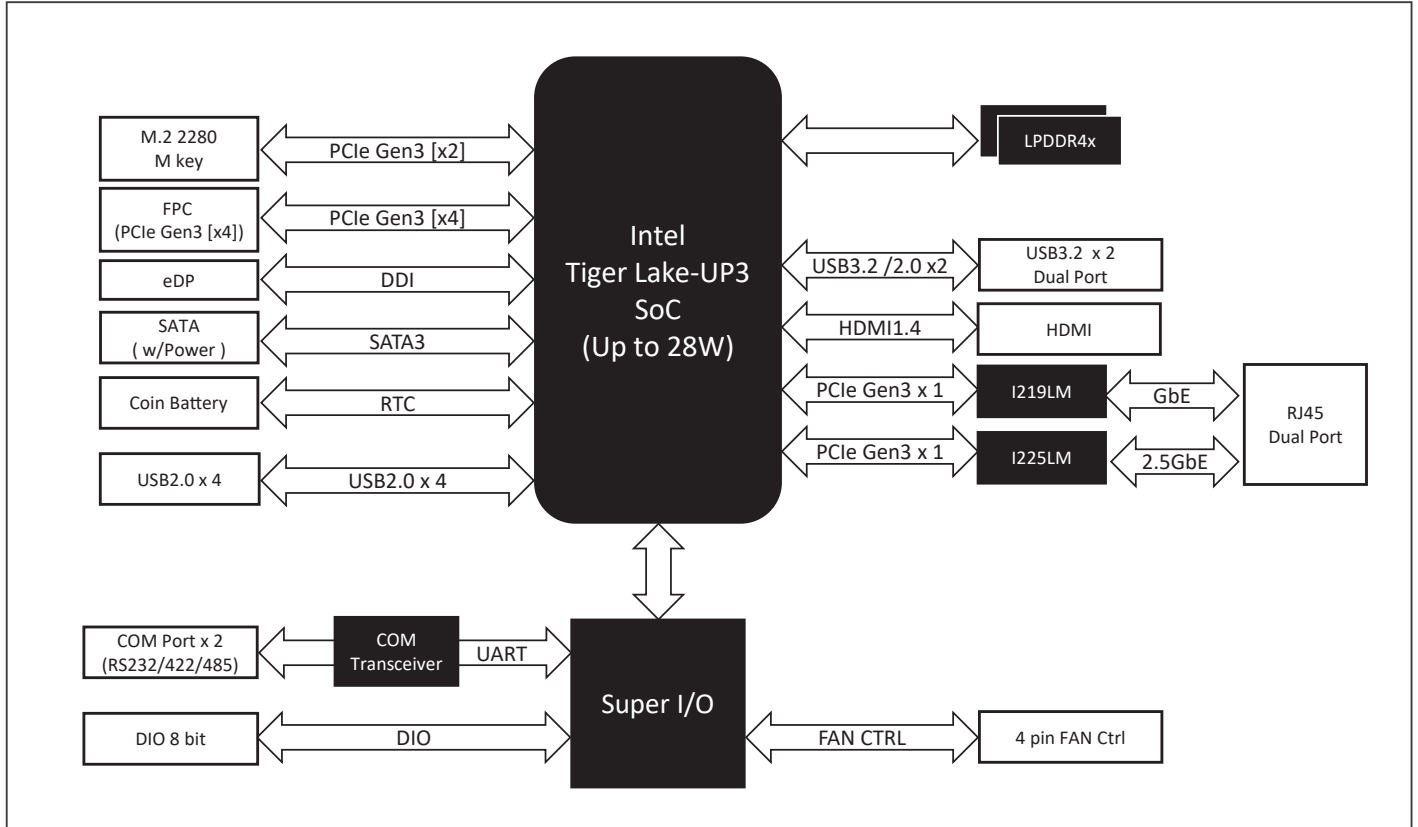
Optional Accessories

- **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

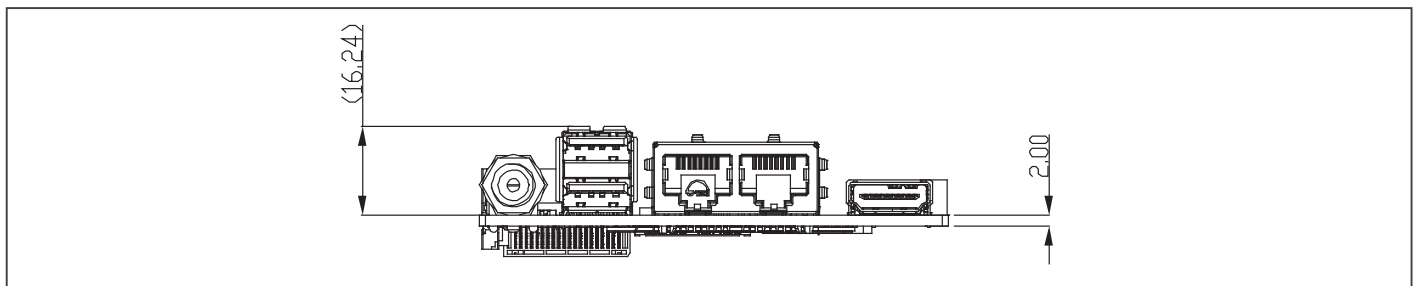
- de next-TGU8 x 1
- Copper stud.M2.5mm.19mm x 4

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 |