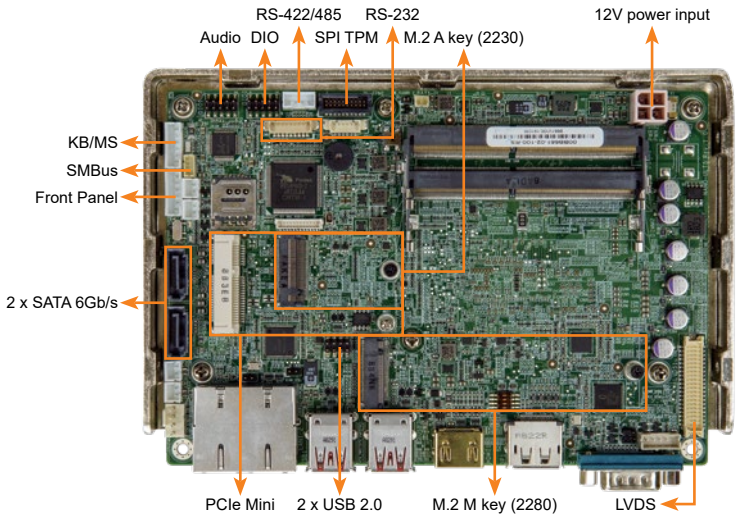
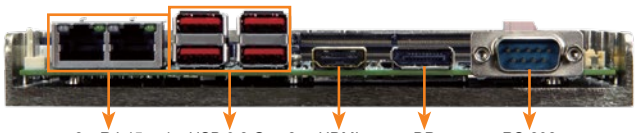
NANO-ULT5

EPIC SBC supports Intel® 14nm 8th Generation Mobile Core™ i3/i5/i7 and Celeron® on-board processor (ULT) with HDMI, DP LVDS, mPCIE, M.2 A key M key, USB 3.2 Gen 2, SATA 6Gb/s, COM, Audio and RoHS, -20°C ~ 60°C



Multiple Expansion for Diverse Applications

New



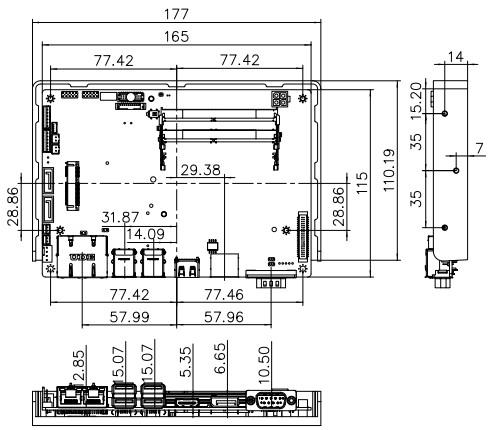
Specifications

- SoC
  Intel® Celeron® processor 4305UE (2.0 GHz Dual Core, 2MB cache, TDP=15W)
  Intel® Core™ i3-8145UE (2.2 GHz Dual Core, 4MB cache, TDP=15W)
  Intel® Core™ i5-8365UE (1.6 GHz, Quad Core, 6MB cache, TDP=15W)
  Intel® Core™ i7-8665UE (1.7 GHz Quad Core, 8MB cache, TDP=15W)
- BIOS:
  AMI UEFI BIOS
- Memory
  Dual 260-pin 2400MHz Dual-channel DDR4 SO-DIMMs support up to 32GB
- Graphics Engine
  Intel® HD Graphics Gen9 Low Power; 16 Execution Units
  4K Codec Decode
- Display Output
  Triple Independent Displays
  1 x HDMI up to 3840x2160@60Hz
  1 x DP up to 3840x2160@60Hz
  1 x Internal LVDS up to 1920x1200@60Hz
- Ethernet
  1 x PCIe GbE LAN Intel® i211 controller
  1 x PCIe GbE LAN Intel® i219 controller
- Embedded Controller
  iWDD IT8587VG
- External I/O Interface
  4 x USB 3.2 Gen 2
  1 x RS-232
- Internal I/O Interface
  1 x 32 GB eMMC 5.1 (optional) 2 x SATA 6G/s with 5V SATA power connector
  1 x TPM (2x10 pin, p=0.5) 2 x USB 2.0 (2x4 pin, P=2.0)
  1 x RS-422/485 (1x4 pin, P=2.0) (Support Auto Flow Control over RS-485)
  1 x RS-232 (1x9 pin, P=1.25)
- SMBus/I²C
  1 x 4-pin connector (1x4)
- Audio
  Realtek ALC662
  1 x Analog audio (2x5 pin)
- Front Panel
  1 x Power LED & HDD LED (1x6 pin)
  1 x Power button (1x2 pin)
  1 x Reset button (1x2 pin)
- LAN LED
  2 x LAN LED (1x2 pin)
- Expansion
  1 x M.2 slot with 2230 A key 1 x Full-size PCIe Mini slot
  1 x M.2 slot with 2280 M key 1 x SIM card
- Digital I/O
  1 x 8-bit digital I/O (2x5 pin)
- Fan Connector
  1 x Smart fan connector (1x4 pin)
- Power Supply
  12V DC input
  1 x Internal power connector (2x2 pin)
  Support AT/ATX mode
- Watchdog Timer: Software programmable support 1~255 sec. system reset
- Power Consumption: TBD
- Operating Temperature: -20°C ~ 60°C
- Storage Temperature: -30°C ~ 70°C
- Operating Humidity: 5% ~ 95%, non-condensing
- Dimensions: 115mm x 165mm
- Weight: GW:850g / NW:350g

Features

- EPIC SBC supports Intel® 8th Generation ULT processor or Celeron® on-board SoC supports dual-channel DDR4 SO-DIMMs
- Triple independent display support
- 12V DC input design
- M.2 slot with A key, M.2 M Key PCIe Mini slot with SIM holder
- COM, USB 3.2 Gen 2, SATA 6Gb/s, eMMC 5.1 and audio support
- Support temperature operation: -20°C ~ 60°C
- Support Auto Flow Control over RS-485

Dimensions (Unit: mm)



Packing List

1 x NANO-ULT5 single board computer with heatspreader	1 x Power cable
1 x Audio cable	2 x RS-232 cable
1 x SATA with power cable kit	1 x QIG

Ordering Information

Part No.	Description
NANO-ULT5-C-R10**	EPIC SBC supports Intel® 14nm 8th Generation Mobile Celeron™4305UE (15W) on-board Processor (ULT) with HDMI/ LVDS/DP, Dual PCIe GbE, USB 3.2 Gen 2, PCIe Mini, M.2 A & M Key, SATA 6Gb/s, SPI TPM, COM, Audio and RoHS
NANO-ULT5-i3-R10	EPIC SBC supports Intel® 14nm 8th Generation Mobile Core™ i3-8145UE (15W) on-board Processor (ULT) with HDMI/LVDS/ DP, Dual PCIe GbE, USB 3.2 Gen 2, PCIe Mini, M.2 A & M Key, SATA 6Gb/s, SPI TPM, COM, Audio and RoHS
NANO-ULT5-i5-R10	EPIC SBC supports Intel® 14nm 8th Generation Mobile Core™ i5-8365UE (15W) on-board Processor (ULT) with HDMI/LVDS/ DP, Dual PCIe GbE, USB 3.2 Gen 2, PCIe Mini, M.2 A & M Key, SATA 6Gb/s, COM, SPI TPM, Audio and RoHS
NANO-ULT5-i7-R10	EPIC SBC supports Intel® 14nm 8th Generation Mobile Core™ i7-8665UE (15W) on-board Processor (ULT) with HDMI/LVDS/ DP, Dual PCIe GbE, USB 3.2 Gen 2, PCIe Mini, M.2 A & M Key, SATA 6Gb/s, COM, SPI TPM, Audio and RoHS

** Without full functions support, please refer to user manual