WAFER–JL

NEW
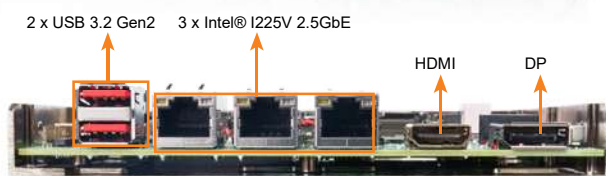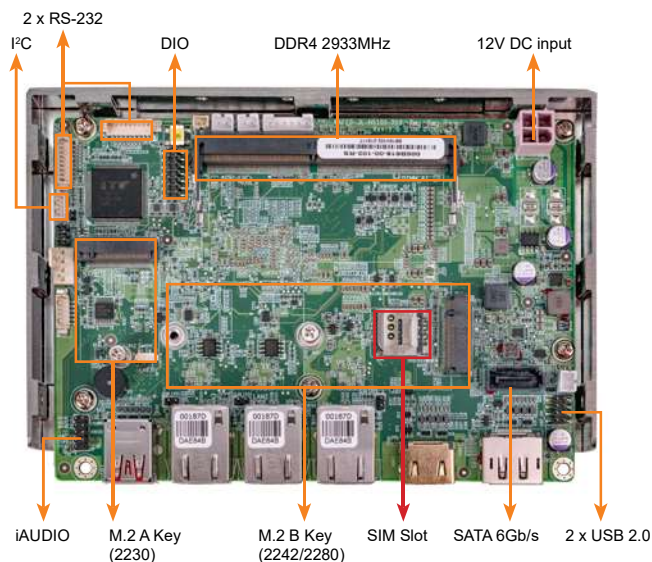
ATX motherboard supports 10th/11th Generation Intel® Core™ i9/i7/i5/i3, Celeron® and Pentium® processor, DDR4 memory, triple independent display, dual 2.5GbE LAN, M.2, USB 3.2, SATA 6Gb/s, HD Audio and RoHS

I²C — 2 x RS-232 — DIO — DDR4 2933MHz — 12V DC input

iAUDIO — M.2 A Key (2230) — M.2 B Key (2242/2280) — SIM Slot — SATA 6Gb/s — 2 x USB 2.0

2 x USB 3.2 Gen2 — 3 x Intel® I225V 2.5GbE — HDMI — DP

DDR4 2400 | Jumper-less | Fanless | Gigabit Ethernet PCI-E PCIe 2.5 GbE | SUPERSPEED USB USB 3.2 | SERIAL ATA SATA 6Gb/s

Structure Solution

IEI has developed a highly efficient thermal solution for the 3.5" motherboard - IEI Heat Conduction Casing (IHCC). With its well-design structure, the IHCC can effectively improve heat transfer performance and cut time-to-market.

Completely joint with CPU for better heat transfer in 0ºC~60ºC operating temperature with the active cooling (PN:CM-WAFER-WF-R10), and in 0°C~45°C operating temperature with the passive cooling (PN:CM-WAFER-WOF-R10).

IEI Heat Conduction Casing (IHCC)

The DRPC-W-JL-R10 is a compact embedded system and designed for 3.5" single board computers . With the two-dimensional heat conduction and low wind resistance design on the surfaced which means you don't need extra thermal solution to form the heat dissipation part. You can get higher hardness, and benefit from the reduced production cost resulting from shortening manufacturing time .Furthermore, the height of aluminum extrusion can therefore be downsized to make the product light weight.

Features

Advanced Jasper Lake Platform
The new generation of Intel ultra-low power processor, the Jasper Lake series, is built with the new 10nm process and Tremont architecture, and integrated with 11th gen Intel® UHD Graphics.

10W Low-power Intel® Celeron® N5105 CPU
10nm Intel® Celeron® N5105 on-board SoC features 4 cores, 4 threads, 2.0GHz base frequency, up to 2.9GHz turbo frequency and 4MB cache.

Supporting Intel® I225V 2.5GbE Controllers
Three RJ45 network interfaces are supported via Intel® I225V 2.5GbE controllers, achieving up to 2.5GbE network transmission rate
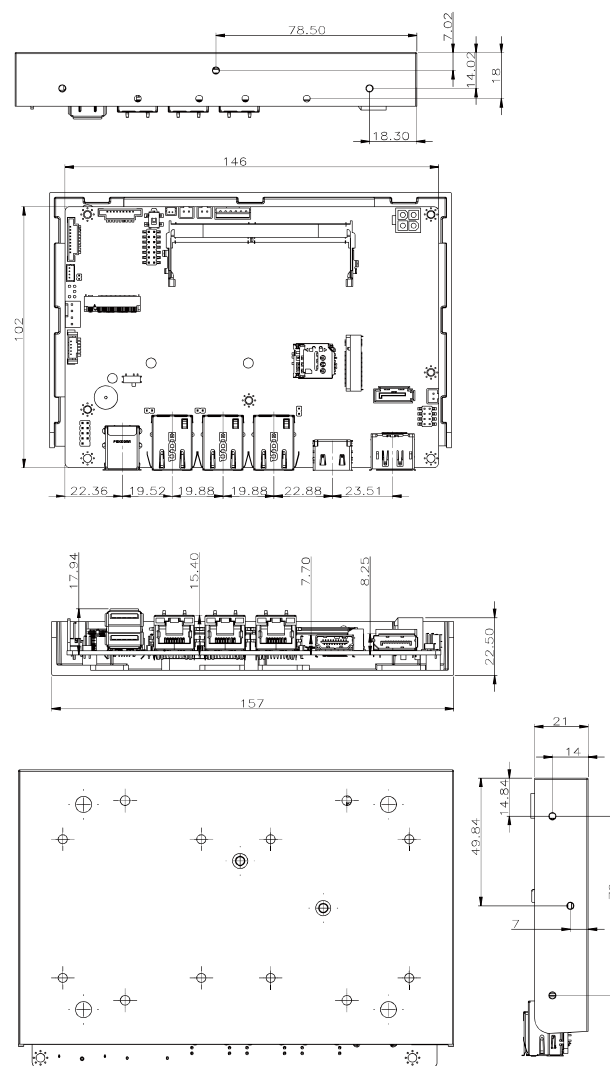
Rich I/O Interface
The WAFER-JL supports two external USB 3.2 Gen 2 (10Gb/s) ports, providing lightning-fast data transfer rate. The internal USB 2.0 ports, M.2 A key slot and M.2 B key slot can be used for function expansion.

Specifications

◆ CPU
Intel® Celeron® N5105 on-board SoC (up to 2.90GHz, Quad-core, 4M Cache, TDP=10W)
◆ BIOS
AMI UEFI BIOS
◆ Memory
1 x 260-pin 2933 MHz DDR4 SO-DIMM (system max. 16GB)
◆ Graphics Engine
Intel® Gen11 UHD Graphics
◆ Display Output
Dual independent display
1 x DP 1.4 (up to 4096 x 2160 @60Hz)
1 x HDMI 1.4 (up to 4096 x 2160@30Hz)
◆ Ethernet
3 x Intel® I225V 2.5GbE controller (colay with I225-LM)
◆ External I/O Interface
2 x USB 3.2 Gen 2
◆ Internal I/O Interface
1 x SATA 6Gb/s
2 x USB 2.0 (2x4 pin, P=2.0)
2 x RS-232 (1x9 pin, P=1.25)
◆ SMBus / I²C
1 x SMBus (1x4 pin)
◆ Audio
1 x iAUDIO supports IEI AC-KIT-888S Audio Kit (2x5 pin)
◆ Front Panel
1 x Front panel connector
Power LED & HDD LED (1x6 pin); power button (1x2 pin); reset button (1x2 pin)
◆ LAN LED
3 x LAN LED (1x2 pin)
◆ Expansions
1 x M.2 2230 A key (PCIe Gen3 x1, USB 2.0)
1 x M.2 3042/2280 B key w/ SIM holder (PCIe Gen3 x2, USB 2.0)
◆ Digital I/O
1 x 12-bit digital I/O (2x7 pin)
◆ TPM
Intel® PTT (TPM 2.0)
◆ Fan Connector
1 x System fan connector (1x4 pin)
◆ Power Supply
12V DC power input (AT/ATX mode)
◆ Watchdog Timer
Software programmable, support 1~255 sec. system reset
◆ Power Consumption
12V@2.45A (Intel® Pentium® Silver N6000 3.30 GHz TDP 6W with one 16GB 2933MHz DDR4 SO-DIMM)
◆ Operating Temperature
0°C ~ 60°C
◆ Storage Temperature
-30°C ~ 70°C
◆ Operating Humidity
5% ~ 95%, non-condensing
◆ Dimensions
146mm x 102mm
◆ Weight
GW:850g / NW:350g
◆ Certification
CE/FCC compliant

Dimensions (Unit: mm)

Optional Accessories

Part No.	Description
CB-USB02A-RS	Dual-port USB 2.0 cable, 210mm, P=2.0
AC-KIT-888S-R10	Realtek ALC888S 7.1 Channel HD Audio peripheral board, RoHS
32005-003500-200-RS	RS-232/422/485 cable, 2, 250mm, 26AWG, (A) D-SUB 9P MALE+HEXAGONAL screw, (B) MOLEX 51021-0900 P=1.25
CM-WAFER-WF-R10	Cooler Module (W/FAN); Mechanical; for 3.5" WAFER series; RoHS
CM-WAFER-WOF-R10	Cooler Module (W/O FAN); Mechanical; for 3.5" WAFER series; RoHS

Packing List

1 x WAFER-JL single board computer with heatspreader	1 x SATA with power cable kit
1 x Power cable for P4	1 x QIG

Ordering Information

Part No.	Description
WAFER-JL-N5105-R10	3.5" SBC supports 10nm 11th Gen. Intel® Celeron® N5105 on-board SoC, dual HDMI, DP, triple 2.5GbE LAN ports, USB 3.2 Gen 2x1, M.2, SATA 6Gb/s, COM, RoHS, 0°C ~ 60°C

CB-USB02A-RS	AC-KIT-888S-R10	32005-003500-200-RS	CM-WAFER-WF-R10	CM-WAFER-WOF-R10