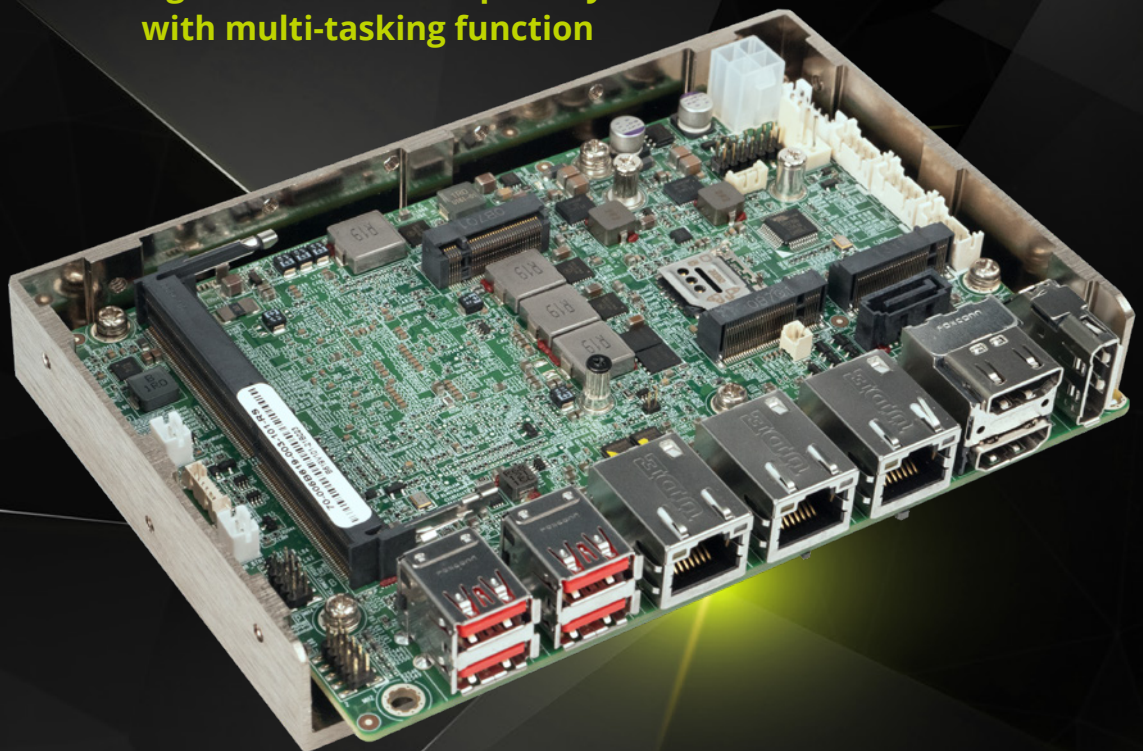


# WAFER-TGL-U

Intel® Tiger Lake powered 3.5" embedded board, equipped with Intel® 11th Gen. Core™ i7/i5/i3, Celeron® UP3 processor

- Support four independent displays with 2 x HDMI 1.4, 1 x DP 1.4, 1 x IEI iDPM module.
- Support 4 x USB 3.2 gen2 (10Gb/s), 2 x USB 2.0, 1 x SATA 6Gb/s, 1 x RS-232, 2 x RS-232/422/485
- Support triple Intel® I225V 2.5GbE LAN
- Support M.2 A Key, B key expansions

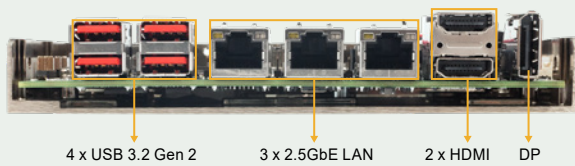
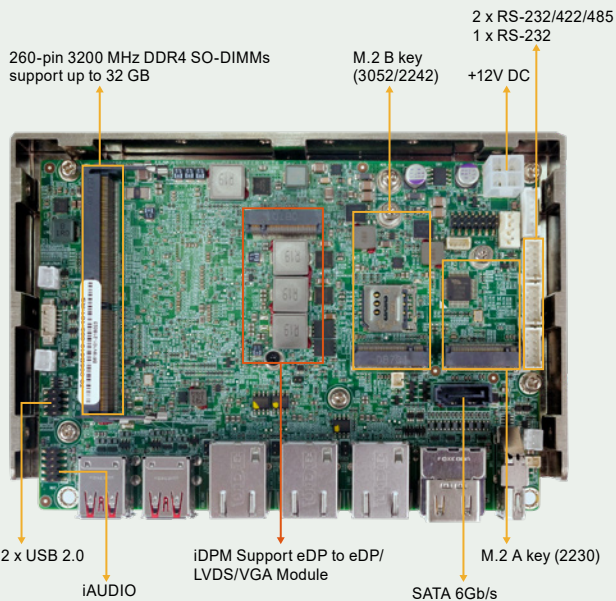
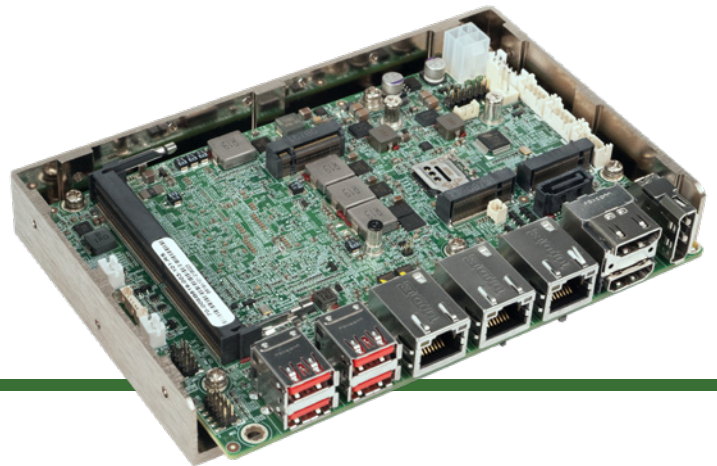
**High Performance Capability  
with multi-tasking function**



[www.ieiworld.com](http://www.ieiworld.com)

# WAFER-TGL-U

3.5" SBC with 10nm 11th Gen. Intel® Tiger Lake-UP3 Core™ i7/i5/i3 and Celeron® on-board SoC with HDMI, DP, iDPM, triple 2.5 GbE LAN , USB 3.2 Gen 2, M.2, SATA 6Gb/s, COM, iAUDIO, 0°C ~60°C and RoHS



## Support Intel® Tiger Lake-UP3 Processors

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



## Support Intel® I225V 2.5GbE Network Controller

Two Gigabit RJ45 network ports are provided via Intel® I225V 2.5GbE network controller to achieve up to 2.5GbE network transmission rate.



## Support USB 3.2 Gen 1 / Gen 2 up to 10Gb/s

The design of the motherboard is based on USB 3.2 protocol. Four USB 3.2 Gen 2 (10Gb/s) are provided through external I/O for efficient data transfer rate. The WAFER-TGL also supports two internal USB 2.0 ports for additional wiring options.



## 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.

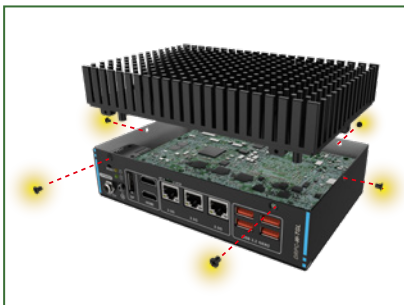
## Structure Solution



IEI Heat Conduction Casing (IHCC)

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 0°C~60°C 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).



DRPC-W-TGL-R10

The DRPC-W-TGL-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.

## WAFER-TGL Block Diagram

