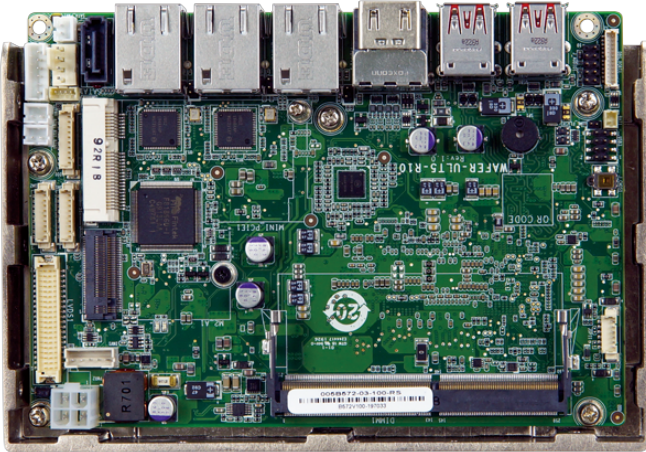


# WAFER-ULT5

3.5" SBC supports Intel® 8th Generation Whiskey Lake processor with DDR4 SO-DIMM, Triple display with dual HDMI™ 1.4, LVDS, Triple GbE, USB 3.1 Gen2, M.2 A key, mPCIe with mSATA support, SATA 6Gb/s, COM and RoHS



## Features

- » 3.5" SBC supports Intel® 8th generation Whiskey Lake processor with DDR4 SO-DIMMs
- » Triple display with dual HDMI™, LVDS selection
- » M.2 A Key, PCIe Mini slot with mSATA support
- » COM, USB 3.1 Gen2, SATA 6Gb/s support
- » Support temperature operation: -20°C ~ 60°C

## Specifications

System	
CPU	8th generation Intel® mobile ULT Processor
	Intel® Core™ i7-8665UE 1.7 GHz (up to 4.4GHz, Quad-core, 8MB cache, TDP=15W)
	Intel® Core™ i5-8365UE 1.6 GHz (up to 4.1GHz, Quad-core, 6MB cache, TDP=15W)
	Intel® Core™ i3-8145UE 2.2 GHz (up to 3.9GHz, Dual-core, 4MB cache, TDP=15W)
	Intel® Celeron® processor 4305UE (up to 2.0GHz, Dual-core, 2MB cache, TDP=15W)
	Intel® Celeron® processor 4205U (up to 1.8GHz, Dual-core, 2MB cache, TDP=15W)
Memory	1 x DDR4 2400MHz SO-DIMM
Memory Max.	32GB
Physical Characteristics	
Dimensions (LxWxH) (mm)	146 X 102
Net Weight	350g
Storage	
Storage	1 x SATA :with 5V SATA power connector
I/O Interface	
Display Output	2 x HDMI™ :1.4 (up to 4096x2160@30Hz)
	1 x LVDS :18/24-bit dual-channel LVDS by CH7511B DP to LVDS converter (up to 1920x1200@60Hz)
Ethernet	3 x LAN :2 x Intel I211AT (colay with I210);
	1 x PCIe GbE LAN Intel i219 Controller;
Audio	1 x HD Audio :2x5 pin, support 7.1 channel HD audio by AC-KIT-892HD-R10
I/O Interface	1 x Internal RS-232 :1x9 pin, P=1.25
	1 x Internal RS-232/422/485 :1x9 pin, P=1.25 (Support Auto Flow Control over RS-485)
	4 x External USB 3.2 Gen1x1
	2 x Internal USB 2.0 :2x4 pin, P=2.0
Expansion	1 x PCIe mini Card Slot :Full-size (w/ SATA signal, support mSATA)
	1 x M.2(NGFF) :with A Key 2230
Power	
Power Supply	12V DC input
	1 x Internal power connector (2x2 pin)
	Support AT/ATX mode
Environment	

Operating Temperature	-20°C ~ 60°C
Storage Temperature	-30°C ~ 70°C
Humidity	5% ~95%, non-condensing

## Ordering Information

WAFER-ULT5-i7-R10	3.5" SBC supports Intel® 14nm 8th Gen (ULT) Core™ i7-8665UE (15W) on-board CPU with DDR4 SO-DIMM , triple display with Dual HDMI™, LVDS, M.2 A key, PCIe mini with mSATA , SATA 6Gb/s, dual COM, support Audio and RoHS
WAFER-ULT5-i5-R10	3.5" SBC supports Intel® 14nm 8th Gen (ULT) Core™ i5-8365UE (15W) on-board CPU with DDR4 SO-DIMM support, triple display with Dual HDMI™, LVDS, M.2 A key, PCIe mini with mSATA support, SATA 6Gb/s, dual COM, Audio and RoHS
WAFER-ULT5-i3-R10	3.5" SBC supports Intel® 14nm 8th Gen (ULT) Core™ i3-8145UE (15W) on-board CPU with DDR4 SO-DIMM support, triple display with Dual HDMI™, LVDS, M.2 A key, PCIe mini with mSATA support, SATA 6Gb/s, dual COM, Audio and RoHS
WAFER-ULT5-CE-R10	3.5" SBC supports Intel® 14nm 8th Gen (ULT) Celeron™ 4205U (15W) on-board CPU with DDR4 SO-DIMM support, triple display with Dual HDMI™, LVDS, M.2 A key, PCIe mini with mSATA support, SATA 6Gb/s, dual COM, Audio and RoHS
WAFER-ULT5-C-R10	3.5" SBC supports Intel® 14nm 8th Gen (ULT) Celeron™ 4305UE (15W) on-board CPU with DDR4 SO-DIMM support, triple display with Dual HDMI™, LVDS, M.2 A key, PCIe mini with mSATA support, SATA 6Gb/s, dual COM, Audio and RoHS

## Packing List

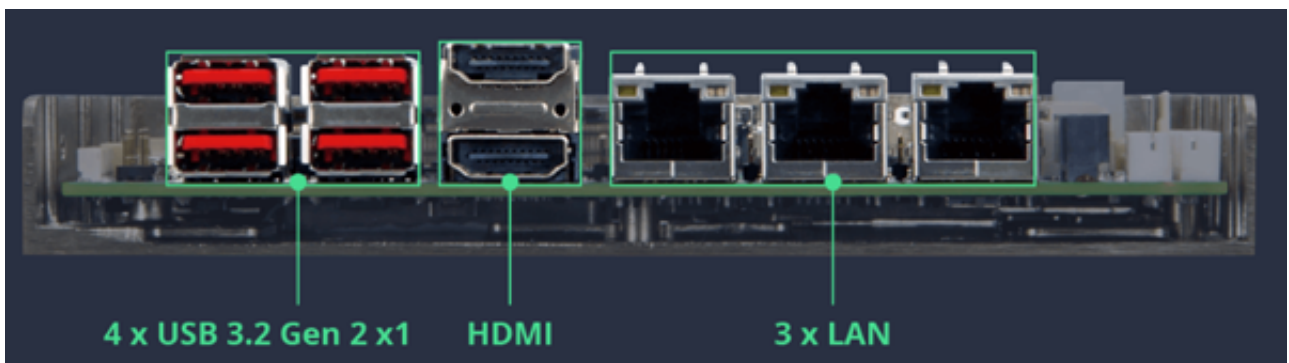
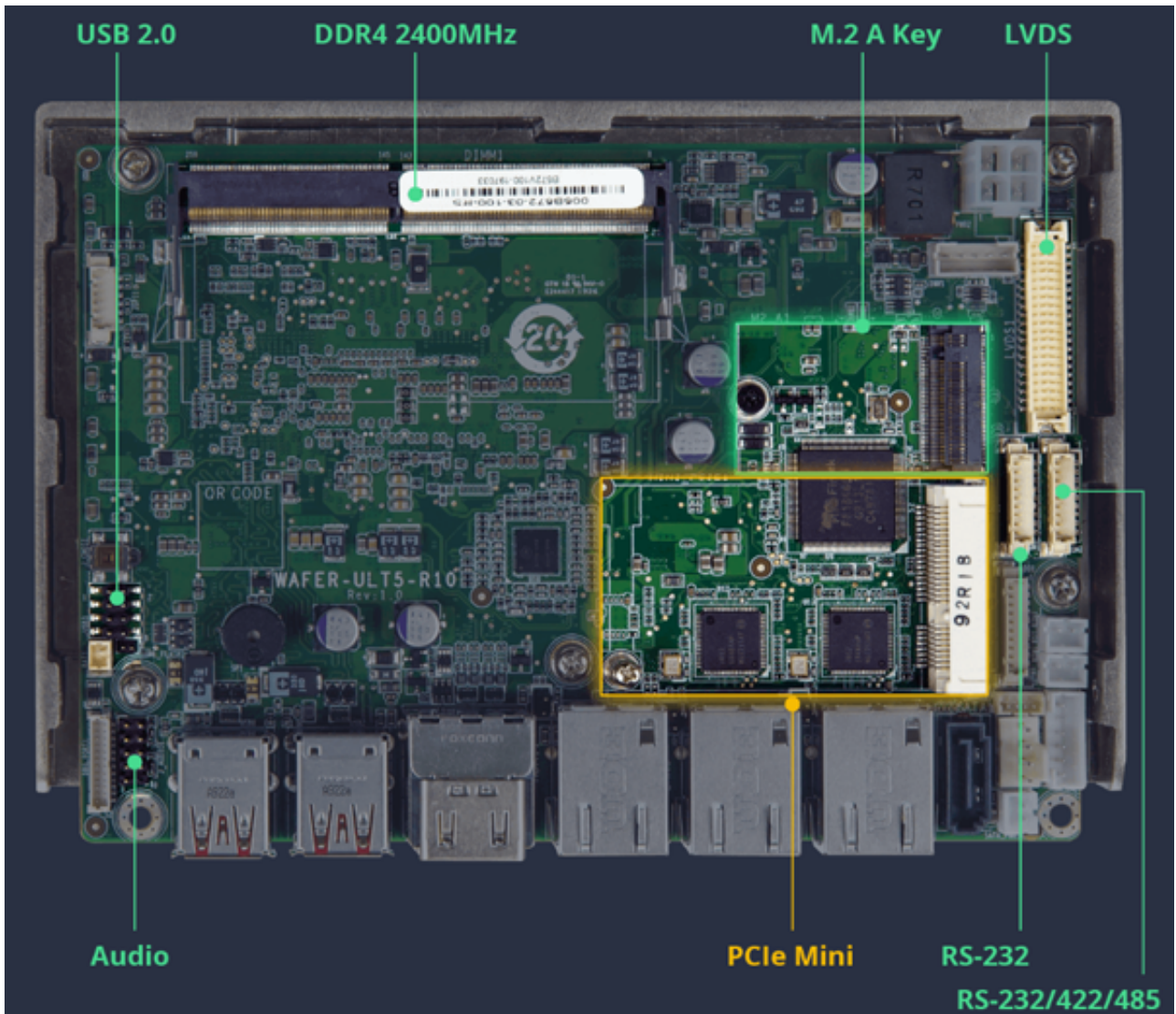
1 x WAFER-ULT5 single board computer with Heatspreader	1 x Power Cable
1 x SATA with power cable kit	2 x RS-232 cable
1 x QIG (Quick Installation Guide)	

## Intel's 8th Gen Core (Whiskey Lake-U) SoC

IEI's 3.5" WAFER-ULT5 based on Intel® Whiskey Lake-U 15W SoC, which is aimed at embedded applications. The 8th Gen Intel® Core™ processors with blazing-fast performance, which can meet the demand of high-speed data processing and transmission, and can also suit into various environment with no space limit.



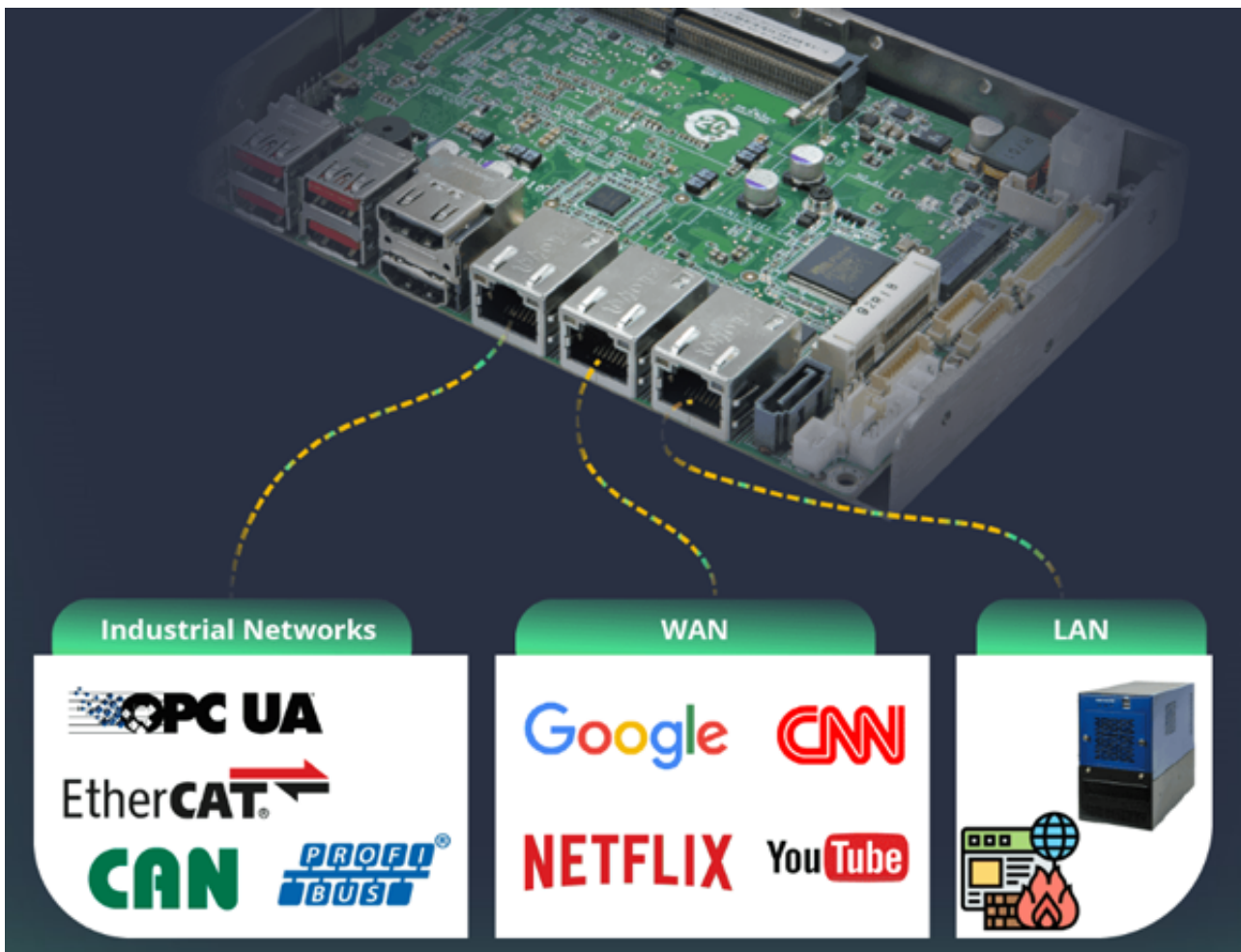
# Product Overview





## Triple GbE LAN Ports

The WAFER-ULT5's GbE ports design by intel LAN I211AT & I219LM controllers, which allows the system to offer diverse data communication applications



## Four USB 3.2 GEN 2 10Gbps Transmission

The WAFER-ULT5 is built with four high speed 10Gbps USB 3.2 GEN 2 ports, It's an ideal choice for external storage devices, digital cameras ,webcam ,video devices and all other USB electronic devices.



## Application Field

Due to the features of compact, reliable and flexible design, WAFER-ULT5 is suitable in the application field of autonomic guided vehicle, factory automation and transportation operator panel.

