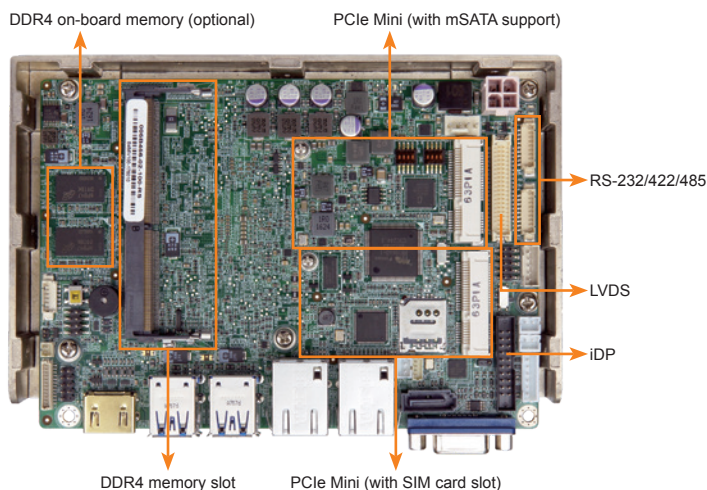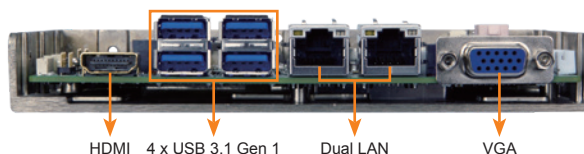# WAFER-ULT3/ULT4

3.5" SBC supports Intel® 6th/7th Generation ULT Processor with DDR4 SO-DIMM/On-board Memory Support, Triple Display, PCIe Mini with SIM Card Slot/mSATA Support, SATA 6Gb/s, COM, Audio, and RoHS

DDR4 on-board memory (optional)
PCIe Mini (with mSATA support)

RS-232/422/485
LVDS
iDP
DDR4 memory slot
PCIe Mini (with SIM card slot)

Passenger information system for transportation

34000-000673-RS
Fanless heatsink module (optional)

HDMI 4 x USB 3.1 Gen 1 Dual LAN VGA

One Key Recovery — IEi symantec.
DDR4 · Triple Display · USB 3.1 SUPERSPEED · Heat Spreader

Specifications

◆ **CPU**
7th generation Intel® mobile ULT processor
Intel® Core™ i7-7600U (up to 3.9GHz, dual-core, 4MB cache, TDP=15W)
Intel® Core™ i5-7300U (up to 3.5GHz, dual-core, 3MB cache, TDP=15W)
Intel® Core™ i3-7100U (up to 2.4GHz, dual-core, 3MB cache, TDP=15W)
6th generation Intel® mobile ULT processor
Intel® Core™ i7-6600U (up to 3.4GHz, dual-core, 4MB cache, TDP=15W)
Intel® Core™ i5-6300U (up to 3.0GHz, dual-core, 3MB cache, TDP=15W)
Intel® Core™ i3-6100U (up to 2.3GHz, dual-core, 3MB cache, TDP=15W)
Intel® Celeron® processor 3955U (up to 2.0GHz, dual-core, 2MB cache, TDP=15W)
Intel® Celeron® processor 3855U (up to 1.6GHz, dual-core, 2MB cache, TDP=15W)

◆ **BIOS**
AMI UEFI BIOS

◆ **Memory**
1 x 260-pin 2133MHz DDR4 SDRAM SO-DIMM (channel 1, supports up to 16GB)
On-board 4GB/8GB DDR4 memory (channel 2, optional support by request)

◆ **Graphics Engine**
Intel® HD Graphics

◆ **Display Output**
Triple independent display
1 x VGA (up to 1920x1200@60Hz)
1 x HDMI (up to 4096x2160@30Hz)
1 x 18/24-bit dual-channel LVDS (up to 1920x1200@60Hz)
1 x iDP interface for HDMI, LVDS, VGA, DVI, DP (co-layout with VGA)

◆ **Ethernet**
1 x Intel® I219LM
1 x Intel® I211AT

◆ **External I/O Interface**
4 x USB 3.1 Gen 1 (5Gb/s)

◆ **Internal I/O Interface**
1 x SATA 6Gb/s with 5V SATA power connector
2 x USB 2.0 (2x4 pin, P=2.0)
2 x RS-232/422/485 (1x9 pin, P=1.25)

◆ **SMBus**
1 x SMBus (1x4 pin, P=2.0)

◆ **Audio**
1 x HD audio (2x5 pin, supports 7.1-channel HD audio by AC-KIT-892HD-R10)

◆ **Front Panel**
1 x Power LED & HDD LED (1x6 pin)
1 x Power button (1x2 pin)
1 x Reset button (1x2 pin)

◆ **Expansion**
1 x Full-size PCIe Mini slot (w/ SATA signal, supports mSATA)
1 x Full-size PCIe Mini slot (w/ SIM card slot support)
3855U belongs to Skylake ULT Base series which supports PCIe Gen 2 signal only.

◆ **Digital I/O**
1 x 8-bit digital I/O (2x5 pin)

◆ **Fan Connector**
1 x System fan connector (1x4 pin)

◆ **Watchdog Timer**
Software programmable, supports 1~255 sec. system reset

◆ **Power Supply**
12V only DC input
1 x Internal power connector (2x2 pin, or optional terminal block)

◆ **Power Consumption**
12V@4.27A (Intel® Core™ i7-6600U up to 3.4GHz CPU with 16GB 2133MHz DDR4 memory running in 3.0GHz)

◆ Operating Temperature: -20°C ~ 60°C
◆ Storage Temperature: -30°C ~ 70°C
◆ Operating Humidity: 5% ~ 95%, non-condensing
◆ Dimensions: 146mm x 102mm
◆ Weight: GW: 600g / NW: 250g
◆ CE/FCC compliant

Features

● 3.5" SBC with Intel® 6th/7th Generation ULT processor supports DDR4 SO-DIMM (on-board memory support by request)
● Triple display with VGA/iDP, HDMI and LVDS selection
● Two PCIe Mini with mSATA/SIM card slot support
● Intel® GbE LAN with Intel® AMT 11.0 supported
● IEI One Key Recovery solution allows you to create rapid OS backup and recovery

Packing List

1 x WAFER-ULT3/ULT4 single board computer (heat spreader by default)	
1 x Power cable	1 x SATA with power cable kit
1 x RS-232/422/485 cable	1 x QIG

Ordering Information

Part No.	Description
WAFER-ULT3-i7-R10	3.5" SBC supports Intel® 6th Generation ULT Core™ i7-6600U processor with DDR4 SO-DIMM, triple display with VGA/iDP, HDMI, LVDS, Dual GbE, PCIe Mini with SIM card slot/mSATA support, SATA 6Gb/s, COM and RoHS
WAFER-ULT3-i5-R10	3.5" SBC supports Intel® 6th Generation ULT Core™ i5-6300U processor with DDR4 SO-DIMM, triple display with VGA/iDP, HDMI, LVDS, Dual GbE, PCIe Mini with SIM card slot/mSATA support, SATA 6Gb/s, COM and RoHS
WAFER-ULT3-i3-R10	3.5" SBC supports Intel® 6th Generation ULT Core™ i3-6100U processor with DDR4 SO-DIMM, triple display with VGA/iDP, HDMI, LVDS, Dual GbE, PCIe Mini with SIM card slot/mSATA support, SATA 6Gb/s, COM and RoHS
WAFER-ULT3-C-R10	3.5" SBC supports Intel® 6th Generation ULT Celeron® 3955U processor with DDR4 SO-DIMM, triple display with VGA/iDP, HDMI, LVDS, Dual GbE, PCIe Mini with SIM card slot/mSATA support, SATA 6Gb/s, COM and RoHS
WAFER-ULT3-CE-R10	3.5" SBC supports Intel® 6th Generation ULT Celeron® 3855U processor with DDR4 SO-DIMM, triple display with VGA/iDP, HDMI, LVDS, Dual GbE, PCIe Mini with SIM card slot/mSATA support, SATA 6Gb/s, COM and RoHS
WAFER-ULT4-i7-R10**	3.5" SBC supports Intel® 7th Generation ULT Core™ i7-7600U processor with DDR4 SO-DIMM, triple display with VGA/iDP, HDMI, LVDS, Dual GbE, PCIe Mini with SIM card slot/mSATA support, SATA 6Gb/s, COM and RoHS
WAFER-ULT4-i5-R10	3.5" SBC supports Intel® 7th Generation ULT Core™ i5-7300U processor with DDR4 SO-DIMM, triple display with VGA/iDP, HDMI, LVDS, Dual GbE, PCIe Mini with SIM card slot/mSATA support, SATA 6Gb/s, COM and RoHS
WAFER-ULT4-i3-R10**	3.5" SBC supports Intel® 7th Generation ULT Core™ i3-7100U processor with DDR4 SO-DIMM, triple display with VGA/iDP, HDMI, LVDS, Dual GbE, PCIe Mini with SIM card slot/mSATA support, SATA 6Gb/s, COM and RoHS
32001-008600-200-RS	Dual-port USB 2.0 cable, 210mm, P=2.0
32005-003500-200-RS	RS-232/422/485 cable, 250mm, P=1.25
34000-000673-RS	Optional fanless heatsink module, 146mm x 102mm x 16mm

**By order production, MOQ:100