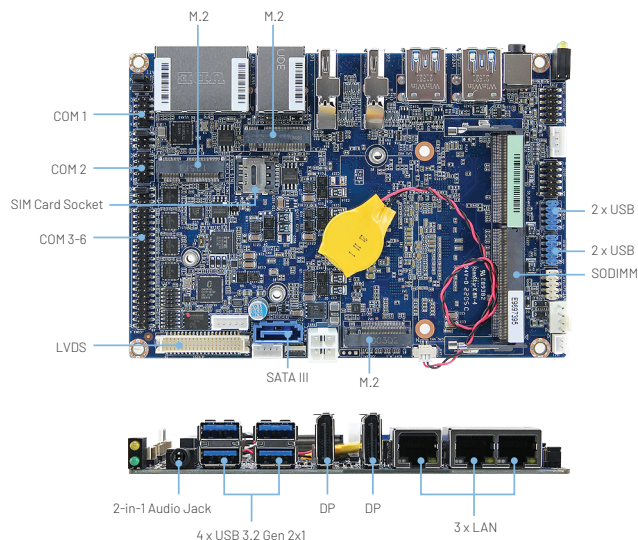


Features

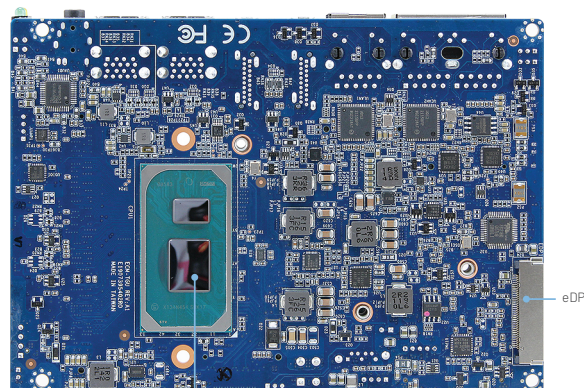
- 11th Gen Intel® Tiger Lake U Core™ SoC i7/i5/i3 & Celeron® BGA Processor Onboard
- 1 x SODIMM DRAM socket supports up to 32GB DDR4 3200MTs SDRAM non-ECC
- 3 x RJ45, Intel® I226-LM/IT Ethernet Controllers
- Supports 4 Independent Displays
- 2 x DP++, 1 x 2CH LVDS, 1 x eDP
- 4 x USB 3.1 Gen 2x1, 4 x USB 2.0
- 6 x COM Ports
- M.2 M-Key, M.2 B-Key, M.2 E-Key
- Onboard TPM 2.0
- 12-24V Wide Range DC

Specifications

System	
CPU	11th Gen Intel® Tiger Lake U Processors onboard. Intel® Core™ SoC i7/i5/i3 & Celeron® BGA Processor options: - Intel® Core™ i7-1185G7E (up to 4.4GHz, quad-core, 12M Cache, TDP: 15W) - Intel® Core™ i5-1145G7E (up to 4.1GHz, quad-core, 8M Cache, TDP: 15W) - Intel® Core™ i3-1115G4E (up to 3.9GHz, dual-core, 6M Cache, TDP: 15W) - Intel® Celeron® 6305E (up to 1.8GHz, dual-core, 4M Cache, TDP: 15W)
System Memory	1 x 260-pin DDR4 SODIMM Socket supports up to 32GB DDR4 3200MTs SDRAM (non ECC only)
BIOS	AMI BIOS, 256Mbit SPI Flash ROM
I/O Chipset	EC ITE IT8882
Expansion	1 x M.2 E-Key 2230 supports WiFi module (with PCIe x1 & USB 2.0 Signal) 1 x M.2 B-Key 3042/2242 (with PCIe x1, SATA and USB 2.0 signal, with 1 x SIM card slot) standard package with 52 to 42 bracket + screw set. Supports 4G, no 5G (no USB 3.0 signal). 1 x M.2 M-Key supports 2260/2242 (with 1 x PCIe Gen4 x4 signal), standard package with 60 to 42 bracket + screw set
Storage through	1 x M.2 (B-Key 2242), 1 x SATA III
Watchdog Timer	H/W Reset, 1sec. ~ 65535sec and 1sec. or 1min./step
H/W Status Monitor	CPU & system temperature monitoring Voltages monitoring
TPM	TPM 2.0
Supported OS	Win10, Linux
Display	
Chipset	Intel® Tiger Lake UP3 SoC Processor integrated Gen12 graphics
Resolution	DP++: 4096x2160 @ 60Hz Max LVDS: 1920 x 1080 Dual channel 18/24-bits Max eDP1.3: 4096x2160 @ 60Hz Max
Multi-Display	Supports up to 4 Independent Displays



Audio	
Audio Codec	Realtek HD Audio
Amplifier	3W Amplifier
Ethernet	
LAN Chipset	3 x Intel® I226-LM/IT Ethernet Controllers
Interface	3 x 10/100/1000/2500 Base-Tx GbE Compatible
Interface	3 x RJ45
External I/O	
Display	2 x DP++
USB	4 x USB 3.2 Gen 2x1
LAN Port	3 x RJ45
Audio	2-in-1 Audio Jack supports Line-out & Mic-in
Internal I/O	
Display	1 x LVDS, 1 x eDP
COM	2 x RS-232/422/485 4 x RS-232
USB	2 x USB 2.0 Headers (4 Ports)
GPIO	1 x 8-bit GPIO
SATA	1 x SATA III
Other	Front Panel, Front Audio, CPU Fan, LPC, BIOS SPI, LCD Inverter, Power Connector, Amp Connector for 3W x 2 Speakers, AT/ATX Selector



11th Gen Intel® BGA Processor

Mechanical & Environment

Power Requirement	DC in +12V ~ +24V
ACPI	Single power ATX Support S0, S3, S4, S5 ACPI 5.0 Compliant
Power Mode	AT/ATX (Default Setting: AT)
Operating Temp.	0°C ~ 60°C (-4~140°F) with 0.5m/s air flow
Storage Temp.	-40°C ~ 85°C (-40°F ~ 185°F)
Op. Humidity	40°C @ 95% Relative Humidity, Non-condensing
Vibration Test	1.5Grms, IEC 60068-2-64, Random, 5 ~ 500Hz, 30min/Axis, 3 Axis
Shock Test	10G, IEC 60068-2-27, Half Sine, 11ms, Z Axis
Form Factor	3.5" Single Board Computer (SBC)
Dimensions	5.7" x 4" (145mm x 101mm)
Weight	0.44lbs (0.2kg)
Certification Information	CE, FCC Class B, RoHS Compliant

Ordering Info

ECM-TGU-85	Intel® Core i7-1185G7E SoC Onboard, CPU Cooler, 1 x DDR4 SoDIMM, TPM, Heatsink, 15W, 3 x LAN, 6 x COM, 4 x USB3.0, 4 x USB2.0, 2 x DP++, 18-24LVDS, eDP, 1 x SATAIII, 1 x M.2, +12V~24V
ECM-TGU-45	Intel® Core i5-1145G7E SoC Onboard, CPU Cooler, 1 x DDR4 SoDIMM, TPM, Heatsink, 15W, 3 x LAN, 6 x COM, 4 x USB3.0, 4 x USB2.0, 2 x DP++, 18-24LVDS, eDP, 1 x SATAIII, 1 x M.2, +12V~24V
ECM-TGU-15	Intel® Core i3-1115G4E SoC Onboard, CPU Cooler, 1 x DDR4 SoDIMM, TPM, Heatsink, 15W, 3 x LAN, 6 x COM, 4 x USB3.0, 4 x USB2.0, 2 x DP++, 18-24LVDS, eDP, 1 x SATAIII, 1 x M.2, +12V~24V
ECM-TGU-6305	Intel® Celeron 6305E SoC Onboard, Heatsink, 15W, 1 x DDR4 SoDIMM, TPM, 3 x LAN, 6 x COM, 4 x USB3.0, 4 x USB2.0, 2 x DP++, 18-24LVDS, eDP, 1 x SATAIII, 1 x M.2, +12V~24V

* All product specifications and images are subject to change without notice. Last update: 02/17/2023



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