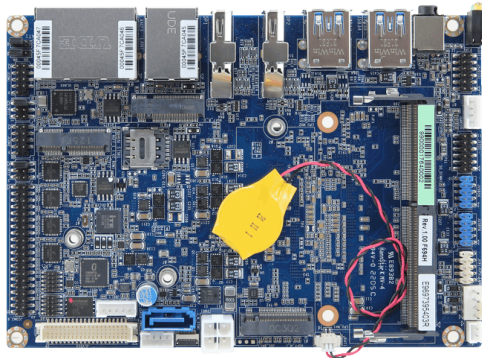




ECM-TGU

11th Gen Intel® Core™ SoC i7/i5/i3 & Celeron Processor 3.5" Micro Module

Bottom Layer Soldered Processor

Single 260-pin SO-DIMM DRAM Socket, Max, U DDR4 3200MTs (non-ECC Supported)

Four Display, 2 x DP++, 1 x 2CH LVDS, 1 x eDP

Expansion Slot, M.2 Key-B, M.2 Key-E, M.2 Key-

Three Gigabit Ethernet, 3 x 2.5GbE

Wide Temperature -20°C ~ 60°C sku supported

DC-Input, +12~+24VDC



Spec

System Information

Processor

Onboard 11th Gen. Intel® Core™ SoC i7/i5/i3 & Celeron® BGA Processor
Intel® Core™ i7-1185G7E, i7-1185GRE (up to 4.4GHz, quad-core, 12M Cache, TDP: 28/15W)
Intel® Core™ i5-1145G7E, i5-1145GRE (up to 4.1GHz, quad-core, 8M Cache, TDP: 28/15W)
Intel® Core™ i3-1115G4E, i3-1115GRE (up to 3.9GHz, dual-core, 6M Cache, TDP: 28/15W)
Intel® Celeron® 6305E (up to 1.8GHz, dual-core, 4M Cache, TDP: 15W)

System Memory

Single 260-pin DDR4 SODIMM Socket, Supports Up to 32GB DDR4 3200MTs SDRAM (non ECC only)

I/O Chipset

ITE IT8528E

BIOS Information

AMI BIOS, 256Mbit SPI Flash ROM

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 (Onboard NuvoTon NPCT754AADYX)

Expansion

Expansion

1 x M.2 Key E 2230 support WiFi module (with PCI-e x1 & USB 2.0 Signal)
1 x M.2 Key B 3042/2242 (with PCIe x1, SATA and USB2.0 signal, with 1 x SIM card slot) standard package with 52 t
Support 4G, no 5G (no USB3.0 signal).
1 x M.2 Key M support 2260/2242 (with 1 x PCI-e Gen4 x4 signal), standard package with 60 to 42 bracket + screw s

Storage

Storage

1 x M.2 (Key-B, 2242)
1 x M.2 (Key-M, 2260/2242)
1 x SATA III

I/O

USB Port

4 x USB 3.2 Gen 2x1
4 x USB 2.0

COM Port

2 x RS-232/422/485
4 x RS232

SATA

1 x SATA III

DIO

1 x 2 x 6 pin, pitch 2.00mm connector for GPIO: 8 bits & +3.3S Level

Other

3 x LAN

Display

Graphic Chipset

Intel® Tiger Lake UP3 SoC Processor integrated Gen12 graphics

Spec. & Resolution

DP++ Max resolution 4096x2160@60Hz
LVDS Max resolution 1920 x 1080 Dual channel 18/24-bits
eDP1.3 Max resolution 4096x2160@60Hz

Multiple Display

Four Display

LVDS

1 x LVDS: 1920 x 1080 Dual channel 18/24-bits LVDS (Chrontel CH7511B-BFI eDP to LVDS)

Audio

Audio Codec

Realtek ALC888S

Audio Interface

Mic-In, Line-In, Line-Out

Audio Amplifier

3W Amplifier

Certifications

Certification Information

CE
FCC Class B

Ethernet

LAN Chipset

Intel® I226LM for standard temperature
Intel® I226IT for extend temperature

Ethernet Interface

3 x Intel® I226LM/I226IT 2.5 Gigabit Ethernet (I226IT for Extend Temperature SKU)

LAN Port

3 x RJ-45

Mechanical & Environmental

Operating Temperature

Standard Temperature: 0°C ~ 60°C (-4~140°F) with 0.5m/s air flow
Wide Temperature: -20°C ~ 60°C(32~140°F) with 0.5m/s air flow for Wide Temp CPU SKU



Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Weight	0.44lbs (0.2kg)
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
Drop Test	ISTA 2A, IEC-60068-2-32 Test : Ed, 1 Corner, 3 Edges, 6 Faces
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)
Dimension (L x W)	5.7" x 4" (146mm x 101mm)
Software Support	
OS Information	Win 10 Linux
Ordering Information	
Ordering Information	ECM-TGU-85-B1R 3.5" W/i71185G7E/6COM/8USB/15W/I226/B1
	ECM-TGU-45-B1R 3.5" W/i51145G7E/6COM/8USB/15W/I226/B1
	ECM-TGU-15-B1R 3.5" W/i31115G4E/6COM/8USB/I226/15W/B1
	ECM-TGU-85W-B1R 3.5" W/i71185GRE/6COM/8USB/15W/I226/B1
	ECM-TGU-45W-B1R 3.5" W/i51145GRE/6COM/8USB/15W/I226/B1
	ECM-TGU-15W-B1R 3.5" W/i31115GRE/6COM/8USB/15W/I226/B1
	ECM-TGU-85W-B1-1R 3.5" W/i71185GRE/6COM/8USB/28W/I226/B1
	ECM-TGU-45W-B1-1R 3.5" W/i51145GRE/6COM/8USB/28W/I226/B1
	ECM-TGU-15W-B1-1R 3.5" W/i31115GRE/6COM/8USB/28W/I226/B1
	ECM-TGU-6305-B1R 3.5" W/6305E/6COM/8USB/I226/15W/B1