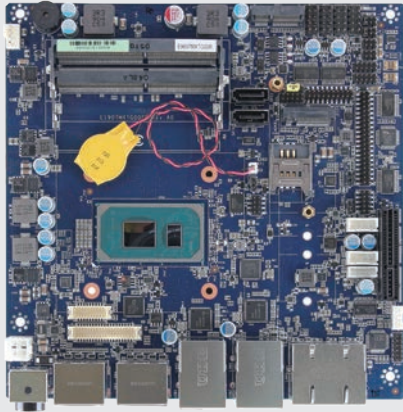




Features

- Onboard 11th Gen. Intel® Core™ SoC i7/i5/i3 & Celeron® BGA Processor
- 2 x 260-pin DDR4 3200 MHz SO-DIMM supports up to 64GB (non ECC only)
- 2 x DP++, 2 x DP, 1 x LVDS, 1 x eDP (Maximum: 6 for quadruple independent displays)
- 1 x Intel® I219LM, 1 x Intel® I226LM/IT, 2 x Intel® I210AT/IT
- 3 x USB 3.1 Gen2, 1 x USB 3.1 Gen1, 4 x USB2.0
- 1 x M.2 Type B 3042/3052/2242/2260/2280, 1 x M.2 Key E 2230
- 6 x COM
- DC in +12V~24V



11th Gen.
Intel® Core™
SoC i7/i5/i3
& Celeron
BGA
Processor



2 x 260-pin
DDR4
3200 MHz
SO-DIMM
supports up
to 64GB



4 x Intel®
LAN



Triple
Displays



Multiple
Expansion

Specifications

System Information

Processor	Intel® Core™ i7-1185G7E, i7-1185GRE (up to 4.4GHz, quad-core, 12M Cache, TDP: 28/15/12W)* Intel® Core™ i5-1145G7E, i5-1145GRE (up to 4.1GHz, quad-core, 8M Cache, TDP: 28/15/12W)* Intel® Core™ i3-1115G4E, i3-1115GRE (up to 3.9GHz, dual-core, 6M Cache, TDP: 28/15/12W)* Intel® Celeron® 6305E (up to 1.8GHz, dual-core, 4M Cache, TDP: 15W)
System Memory	2 x 260-Pin DDR4 3200MHz SO-DIMM Socket Supports Up to 64GB (non ECC only)
I/O Chipset	EC ITE IT8528E
Watchdog Timer	H/W Reset: 1Sec. ~ 65535Sec./Min. and 1 Sec. or 1Min./Step
BIOS	AMI uEFI BIOS, 256Mbit SPI Flash ROM
H/W Status Monitor	CPU Temperature Monitoring Voltage Monitoring CPU Fan Speed Control
TPM	Onboard nuvoTon NPCT754AADYX support TPM 2.0
Board	Mini ITX

Expansion

Expansion	1 x M.2 Type B 3042/3052/2242/2260/2280 (with 1 x PCIe x1 (Default) or SATA, USB 3.0 with 1 x SIM Card Slot, Support WWAN+GNSS or NVMe SSD) *SATA 2 Share with M.2 key B SATA 1 x M.2 Key E 2230 Support WiFi Module and CNVi (1 x PCIe x1 & USB 2.0 Signal)
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Display

Graphic Chipset	Intel® 12th Generation CPU Integrated
Spec. & Resolution	DP1+DP2 (DP1.4): Max: 7680 x 4329@60Hz DP3+DP4 (DP1.4): Max: 7680 x 4329@60Hz Single DP port (2021/2 Lab test): 5120 x 2160@60Hz, Check Max: 7680 x 4329@60Hz Intel resolution as below: 2 x DP++ : 1920 x 1080@60Hz 2 x DP: 4096 x 2304@60Hz LVDS: 1920 x 1080 Dual Channel 18/24-bits LVDS (Chrontel CH7511B eDP to LVDS) eDP 4096 x 2304@60Hz *2 x DP++, LVDS, eDP Default (Thin Mini ITX), Optional: DP3 and DP4 for Full Height (Maximum: 6 for Quadruple Independent Displays)
Multiple Display	2 x DP++/2 x DP++/1 x LVDS/1 x eDP (Maximum: 6 for Quadruple Independent Displays)
LVDS	Dual Channel 18/24-bits LVDS (Chrontel CH7511B eDP to LVDS) 1 x eDP

Audio

Audio Codec	Realtek ALC888S co-lay ALC897 & Tempo 92HD73 HD Audio Decoding Controller (Default ALC897)
Audio Interface	Support Line-out & Mic-in & Front Audio Pin-header
Audio Amplifier	2 x 6W 8Ω Amplifier

Ethernet

LAN Chipset	1 x Intel® I225IT 2.5 Gigabit Ethernet 1 x Intel® I219LM Gigabit Ethernet PHY 2 x Intel® I210IT Gigabit Ethernet (BOM optional)
Ethernet Interface	10/100/1000 Base-Tx GbE compatible & 2.5 Gigabit Ethernet
LAN Port	4 x RJ-45

Software Support

OS	Windows 10, Linux
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Certification

Certification Information	CE, FCC, RoHS Compliant
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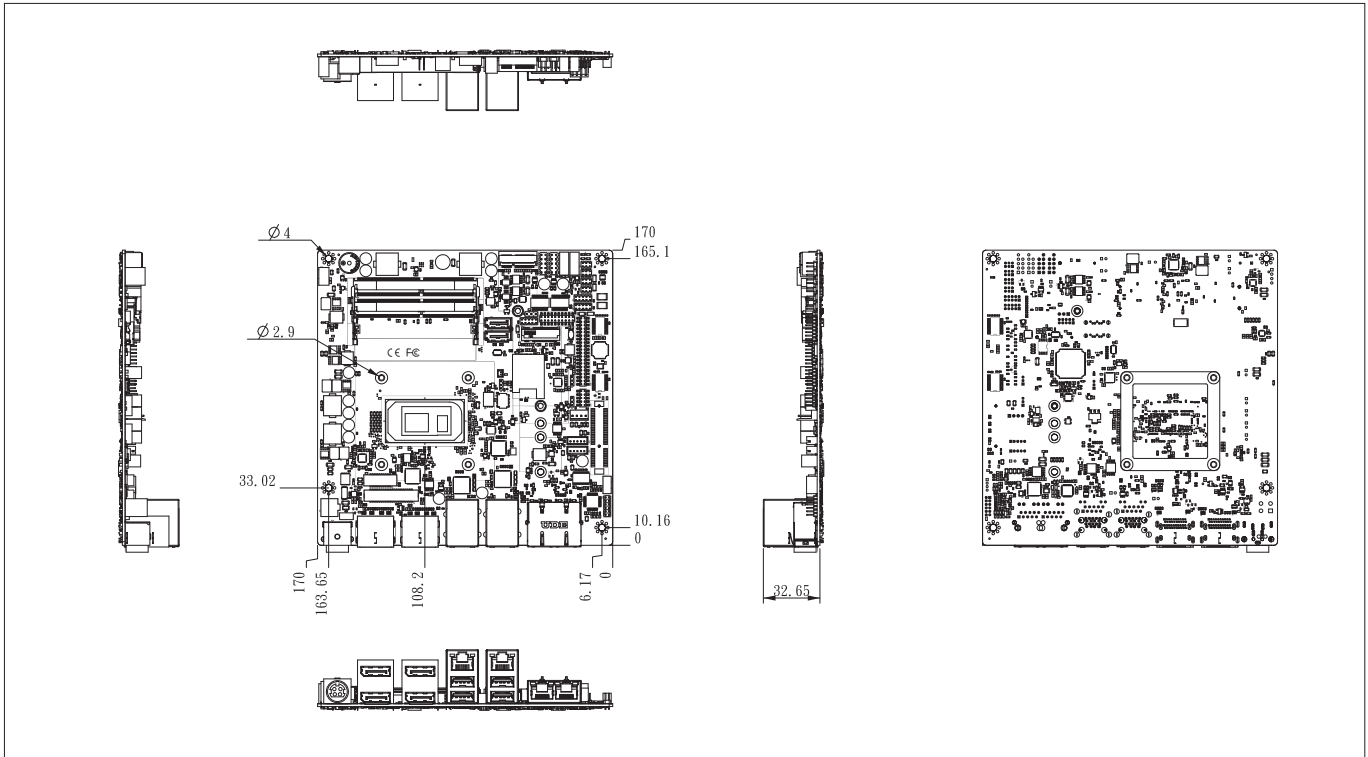
I/O

USB	3 x USB 3.1 Gen2 1 x USB 3.1 Gen1 4 x USB2.0
COM Port	4 x RS232 2 x RS232/422/485
SATA	2 x SATA III 1 x SATA Power
DIO	1 x 16-bit GPIO

Mechanical & Environmental

Operating Temp.	Intel® wide temperature CPU SKU Support: -20~60°C Intel® standard CPU SKU support: 0~60°C
Storage Temp.	-40 ~ 75°C (-40 ~ 167°F)
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Weight	0.88lbs (0.4Kgs)
Power Requirement	DC in +12V~24V
Power Mode	AT/ATX (Default Setting: ATX)
Dimension (L x W)	6.7" x 6.7" (170mm x 170mm)

Mechanical Drawing



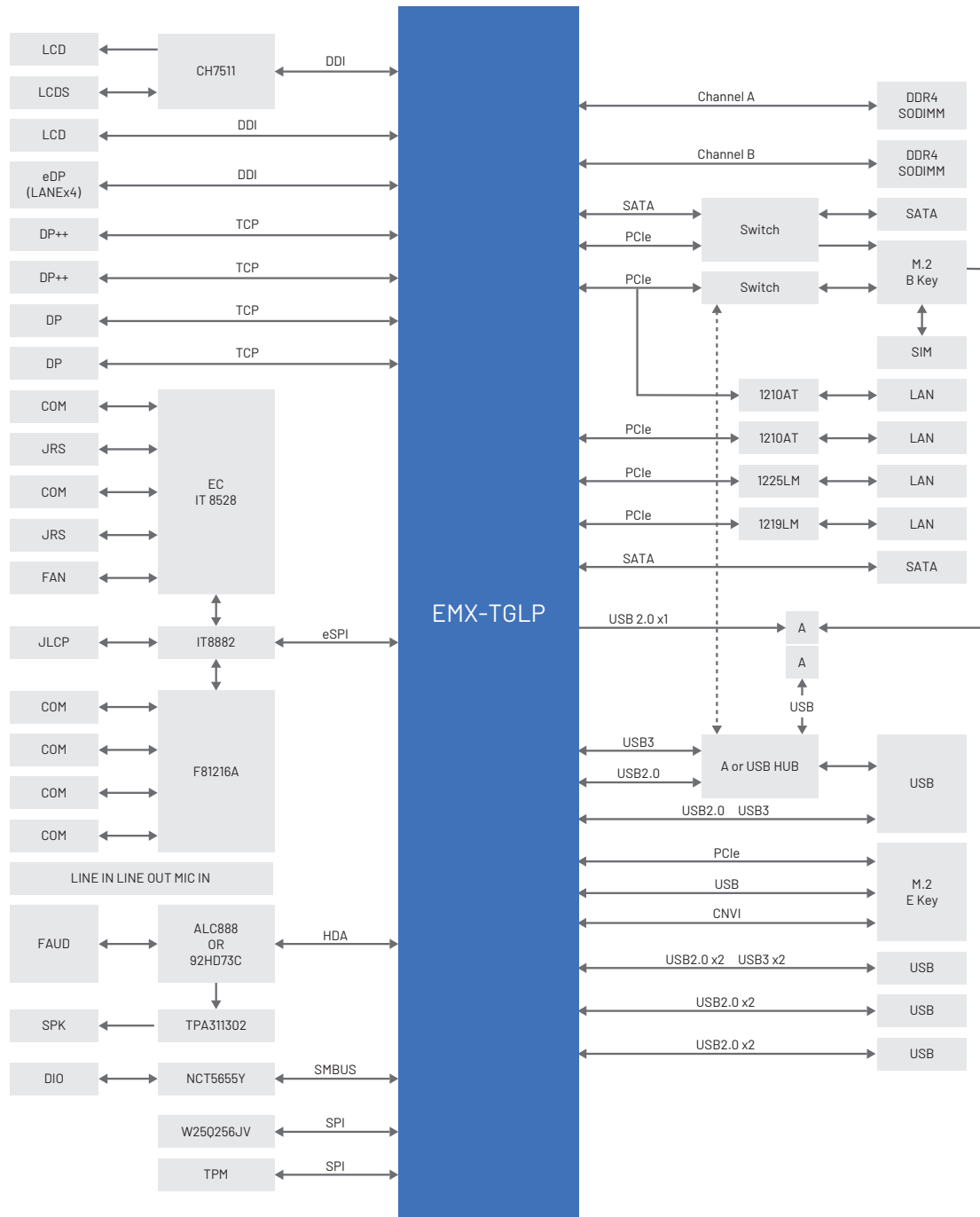
Ordering Information

P/N	Processor	Chipset	LAN	USB	COM	PCIe Slot	Power Input	Temp.
EMX-TGLP-S05-A2R	Intel® Celeron® 6305E	NA	2	8	6	0	DC in +12V ~ +24V	0°C ~ 60°C (32~140°F)
EMX-TGLP-S15-A2R	Intel® Core™ i3-1115G4E	NA	2	8	6	0	DC in +12V ~ +24V	0°C ~ 60°C (32~140°F)
EMX-TGLP-S45-A2R	Intel® Core™ i5-1145G7E	NA	2	8	6	0	DC in +12V ~ +24V	0°C ~ 60°C (32~140°F)
EMX-TGLP-S85-A2R	Intel® Core™ i7-1185G7E	NA	2	8	6	0	DC in +12V ~ +24V	0°C ~ 60°C (32~140°F)
EMX-TGLP-W15-A2-1R	Intel® Core™ i3-1115GRE	NA	2	8	6	0	DC in +12V ~ +24V	-20°C ~ 60°C (-4~140°F)
EMX-TGLP-W45-A2-1R	Intel® Core™ i5-1145GRE	NA	2	8	6	0	DC in +12V ~ +24V	-20°C ~ 60°C (-4~140°F)
EMX-TGLP-W85-A2-1R	Intel® Core™ i7-1185GRE	NA	2	8	6	0	DC in +12V ~ +24V	-20°C ~ 60°C (-4~140°F)
EMX-TGLP-W15-A2R	Intel® Core™ i3-1115GRE	NA	4	8	6	0	DC in +12V ~ +24V	-20°C ~ 60°C (-4~140°F)
EMX-TGLP-W45-A2R	Intel® Core™ i5-1145GRE	NA	4	8	6	0	DC in +12V ~ +24V	-20°C ~ 60°C (-4~140°F)
EMX-TGLP-W85-A2R	Intel® Core™ i7-1185GRE	NA	4	8	6	0	DC in +12V ~ +24V	-20°C ~ 60°C (-4~140°F)

Packing List

Item	P/N	Quantity
SATA Cable	-	1
SATA Power Cable	-	1
IO shield	-	1

Block Diagram



I/O Overview

