



EMX-TGLP

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

- > 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® I226LM/IT 2.5 Gigabit Ethernet
- > 1 x Intel® I219LM Gigabit Ethernet PHY
- > 2 x Intel® I210AT/IT Gigabit Ethernet (BOM optional)
- > Realtek ALC888S
- > TI TPA3113D2PWP Stereo Class-D 6W x 2 Audio Amplifier
- > 1 x M.2 Type B 3042/3052/2242/2260/2280 (with 1 x PCI-e 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 PCI-e x1 & USB 2.0 Signal)
- > GPIO 16bit
- > Onboard NuvoTon NPCT754AADYX support TPM 2.0
- > Support Line-out & Mic-in & Front audio pin-header
- > DC in +12V~24V

+ Spec

-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 3200 MHz SO-DIMM supports up to 64GB (non ECC only)
I/O Chipset	EC iTE IT8528E
BIOS Information	AMI uEFI BIOS, 256Mbit SPI Flash ROM
Watchdog Timer	H/W Reset: 1sec. ~ 65535sec./min. and 1sec. or 1min./step
H/W Status Monitor	CPU temperature monitoring Voltages monitoring CPU fan speed control
TPM	Onboard NuvoTon NPCT754AADYX support TPM 2.0

Expansion

Expansion	1 x M.2 Type B 3042/3052/2242/2260/2280 (with 1 x PCI-e 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 PCI-e x1 & USB 2.0 Signal)
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I/O

USB Port	3 x USB 3.2 Gen2, 1 x USB 3.2 Gen1 at I/O 4 x USB2.0 by pin header
COM Port	4 x RS232 2 x RS232/422/485
SATA	1 x SATA Power 2 x SATA III
DIO	1 x 16-bit GPIO

Display

Graphic Chipset	Intel® 12th Generation CPU integrated
Spec. & Resolution	DP1+DP2 (DP1.4): Max: 7680 x 4320@60 Hz DP3+DP4 (DP1.4): Max: 7680 x 4320@60 Hz Single DP port (2021/2 Lab test): 5120 x 2160 @60 Hz, check Max: 7680 x 4329@60 Hz Intel resolution as below: 2 x DP++ : 1920 x 1080@60 Hz 2 x DP: 4096 x 2304@60 Hz LVDS: 1920 x 1080 Dual channel 18/24-bits LVDS (Chrontel CH7511B eDP to LVDS) eDP 4096 x 2304@60 Hz *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	2CH 18/24bits LVDS 1920 x 1080 Chrontel. CH7511B eDP to LVDS Converter

Audio

Audio Codec	Realtek ALC888S
Audio Interface	Support Line-out & Mic-in & Front audio pin-header
Audio Amplifier	2 x Stereo Class-D 6W Audio Amplifier

Ethernet

LAN Chipset	1 x Intel® I226LM/IT 2.5 Gigabit Ethernet 1 x Intel® I219LM Gigabit Ethernet PHY 2 x Intel® I210AT/IT Gigabit Ethernet (BOM optional)
Ethernet Interface	10/100/1000 Base-Tx & 2.5 GbE compatible
LAN Port	4 x RJ45

Mechanical & Environmental

Operating Temperature	Intel® wide temperature CPU SKU Support: -20~60C
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Storage Temperature	-40 ~ 75°C (-40 ~ 167°F)
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Weight	0.88lbs (0.4Kgs)
Power Requirement	+12V~24V
Power Mode	AT/ATX
Dimension (L x W)	6.69" x 6.69" (170mm x 170mm)
Software Support	
OS Information	Win10 64bit Linux
Ordering Information	
Ordering Information	EMX-TGLP-S05-A2R (Celeron, Thin, 2DP/2LAN, Standard Temp.) EMX-TGLP-S15-A2R (Core i3, Thin, 2DP/2LAN, Standard Temp.) EMX-TGLP-S45-A2R (Core i5, Thin, 2DP/2LAN, Standard Temp.) EMX-TGLP-S85-A2R (Core i7, Thin, 2DP/2LAN, Standard Temp.) EMX-TGLP-W15-A2-1R (Core i3, Thin, 2DP/2LAN, Wide Temp.) EMX-TGLP-W45-A2-1R (Core i5, Thin, 2DP/2LAN, Wide Temp.) EMX-TGLP-W85-A2-1R (Core i7, Thin, 2DP/2LAN, Wide Temp.) EMX-TGLP-W15-A2R (Core i3, Full, 4DP/4LAN, Wide Temp.) EMX-TGLP-W45-A2R (Core i5, Full, 4DP/4LAN, Wide Temp.) EMX-TGLP-W85-A2R (Core i7, Full, 4DP/4LAN, Wide Temp.) Intel® 11th Gen. Core™ SoC i7/i5/i3 & Celeron® BGA Processor Mini ITX Motherboard