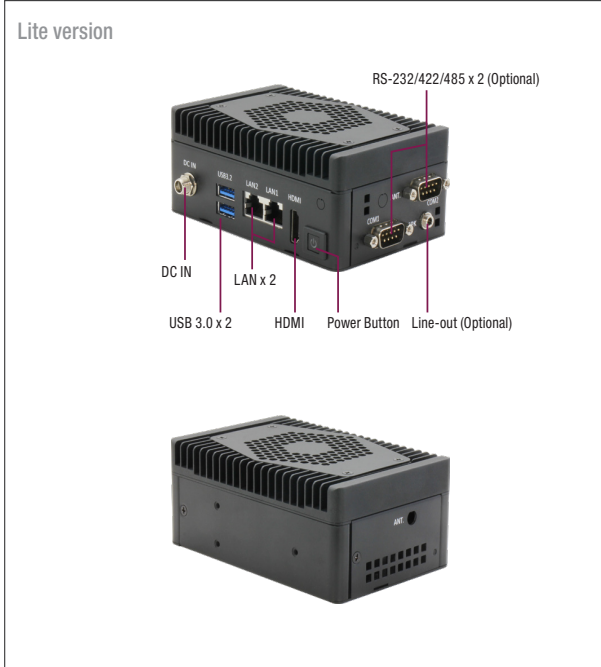


PICO-TGU4-SEMI

PICO-SEMI Embedded with 11th Generation Intel® Core™ i7/i5/i3/Celeron® U-Series Processor SoC

PICO-SEMI



Features

- 11th Gen Intel® Core™ i7/i5/i3/Celeron Processor SoC
- LPDDR4x onboard memory, up to 32 GB
- 2.5GbE Intel i225 + 1GbE Intel i219
- HDMI2.0b x 1, 4K x 2K
- M.2 2280 M key (PCIe Gen4 x 4 as default) x 1
- Full size mPCIe/mSATA x 1
- USB 3.2 Gen 2 x 2
- RS-232/422/485 x 2 (Optional)
- Line-out (Optional)



INTERNAL I/O	
USB	—
SERIAL PORT	COM1, COM2 (RS232/422/485, supports 5V/12V/RI)(Optional)
VIDEO	—
SATA	SATA III x 1 +5V SATA Power Connector x 1
AUDIO	Audio Header x 1 (Optional)
DIO/GPIO	—
SMBus/I2C	I2C/SMBus x 1 (SMBUS as default, I2C select by BOM)
Touch	—
FAN	4pins Smart Fan x 1
SIM	—
Front Panel	HDD LED, PWR LED, Power Button, Buzzer, Reset
Others	—
EXPANSION	
Mini PCI-E/mSATA	Full-size mSATA/mPCIe or USB2.0 x 1 (PCIe as default, select by BIOS option)
M.2	M.2 M Key 2280 x 1 (PCIe Gen 4 [x4] as default, SATA select by HW BOM)
Others	SMBUS/I2C/eSPI x 1
ENVIRONMENT & CERTIFICATION	
OPERATING TEMP	32°F ~ 122°F (0°C ~ 50°C)
STORAGE TEMP	-40°F ~ 185°F (-40°C ~ 85°C)
OPERATING HUMIDITY	0% ~ 90% relative humidity, non-condensing
MTBF (HOURS)	424,208
EMC	CE/FCC Class A

Specifications

SYSTEM	
FORM FACTOR	PICO-SEMI
CPU	Intel® Core™/ Celeron® Processor: i7-1185G7E (4C/8T, 1.8GHz, up to 4.4GHz, TDP up to 28W) i5-1145G7E (4C/8T, 1.5GHz, up to 4.1GHz, TDP up to 28W) i3-1115G4E (2C/4T, 2.2GHz, up to 3.9GHz, TDP up to 28W) Celeron® 6305E (2C/2T, 1.8GHz, TDP 15W)
CHIPSET	11th Generation Intel® Core™ i7/i5/i3/Celeron SoC
MEMORY TYPE	Onboard LPDDR4x 3200MHz, up to 32GB, In-Band ECC (select SKUs)
BIOS	UEFI
WAKE ON LAN	Yes
WATCHDOG TIMER	255 Levels
SECURITY	TPM2.0 (Optional)
RTC Battery	Lithium Battery 3V/240mAh
DIMENSION	4.80" x 3.18" x 1.98" (122mm x 80.8mm x 50.4 mm)
Gross Weight	0.84 lbs. (0.38 kg)
OS Support	Windows 10 (64bit) Linux Ubuntu 20.04.2/Kernel 5.8
POWER	
POWER REQUIREMENT	12V only
POWER SUPPLY TYPE	ATX
CONNECTOR	DC Jack Connector
POWER CONSUMPTION	Intel® i7-1185G7E, LPDDR4x onboard 32GB, 2.89A@ +12V (TYPICAL)
DISPLAY	
CONTROLLER	Intel® Iris® Xe (i5/i7 support) Intel® UHD Graphics (i3/Celeron support)
LVDS/eDP	—
Display Interface	HDMI2.0b x 1 (4K x 2K 60Hz)
Multiple Display	Up to 2 Simultaneous Displays
AUDIO	
CODEC	Realtek ALC269 (Optional)
AUDIO INTERFACE	Line-out (Optional)
Speaker	—
EXTERNAL I/O	
ETHERNET	Intel® i225, 10/100/1000/2500Base, RJ45 x 1 Intel® i219, 10/100/1000Base, RJ45 x 1
USB	USB3.2 Gen 2 x 2
SERIAL PORT	—
VIDEO	HDMI2.0b x 1 (4Kx2K 60Hz)

Packing List

Description	Qty.
PICO-TGU4-SEMI	1

Optional Accessories

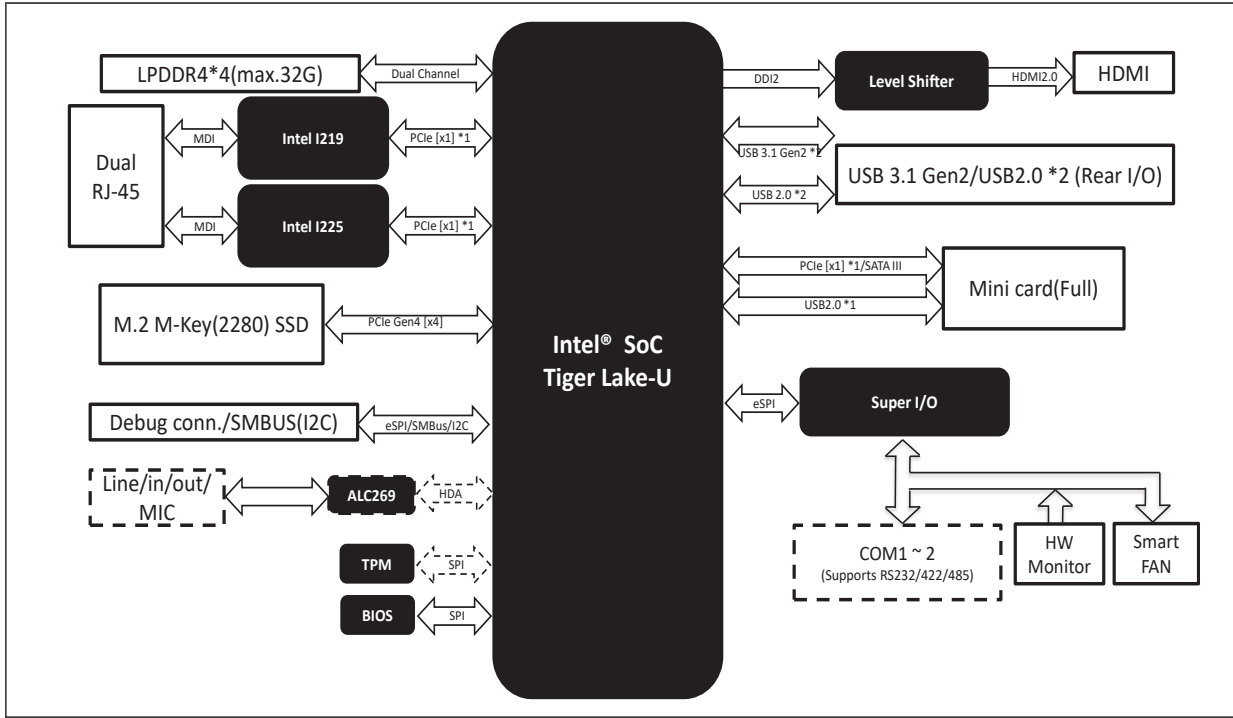
Part Number	Description	Qty.
1702031802	Power Cord (US Type)	1
1702031803	Power Cord (Europe Type)	1
170203180E	Power Cord (Japan)	1
1255201200	Power Adapter 12V/10A 120W FSP120-AHAN3/9NA1206701	1
170X000482	Line out cable	1
170X000483	Dual COM port cable	1
PICO-TGU4-SEMI-VESA1	PICO-TGU4-SEMI VESA bracket kit	1
PICO-TGU4-SEMI-WMT1	PICO-TGU4-SEMI Wallmount bracket kit	1
PICO-TGU4-SEMI-DIN1	Din rail kit	1

PICO-TGU4-SEMI

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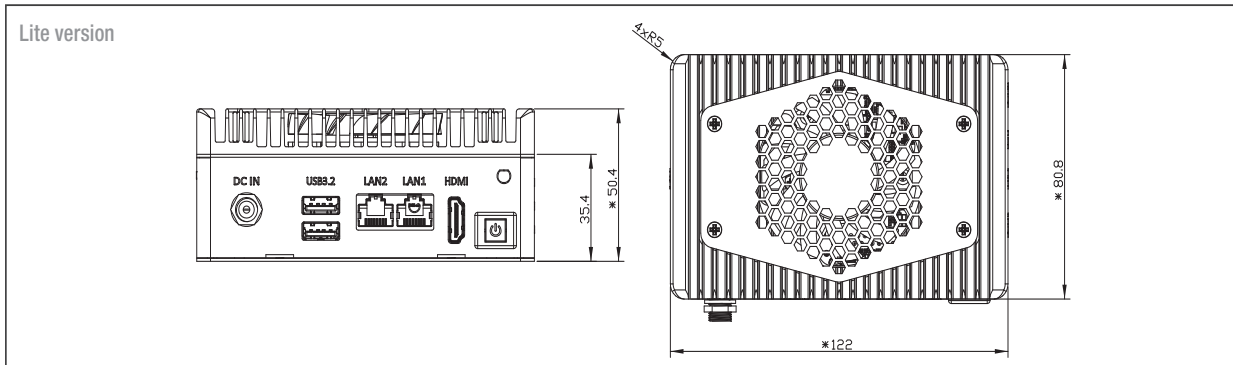
PICO-SEMI

Block Diagram



Dimension

Unit: mm



Ordering Information

Part number	CPU	Memory	Thermal	Display	LAN	USB	Expansion slot	Power	Operating Temp	Others
PICO-TGU4-SEMI-A10-0001	Celeron 6305E	4GB	Cooler	HDMI x 1	2.5GbE x 1, GbE x 1	USB3.2 Gen 2 x 2	M.2 2280 M-key x 1 mini-PCIe(Full) x 1	+12V ATX	0~50°C	SMBUS/eSPI x 1 (I2C Optional)
PICO-TGU4-SEMI-A10-0002	i3-1115G4E	8GB	Cooler	HDMI x 1	2.5GbE x 1, GbE x 1	USB3.2 Gen 2 x 2	M.2 2280 M-key x 1 mini-PCIe(Full) x 1	+12V ATX	0~50°C	SMBUS/eSPI x 1 (I2C Optional)
PICO-TGU4-SEMI-A10-0003	i5-1145G7E	8GB	Cooler	HDMI x 1	2.5GbE x 1, GbE x 1	USB3.2 Gen 2 x 2	M.2 2280 M-key x 1 mini-PCIe(Full) x 1	+12V ATX	0~50°C	SMBUS/eSPI x 1 (I2C Optional)
PICO-TGU4-SEMI-A10-0004	i7-1185G7E	8GB	Cooler	HDMI x 1	2.5GbE x 1, GbE x 1	USB3.2 Gen 2 x 2	M.2 2280 M-key x 1 mini-PCIe(Full) x 1	+12V ATX	0~50°C	SMBUS/eSPI x 1 (I2C Optional)

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