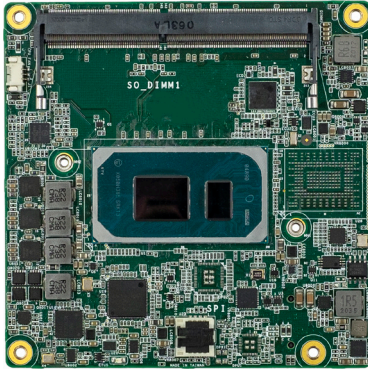
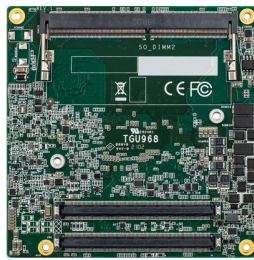


# TGU968

ULT



Front View

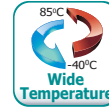


Bottom View

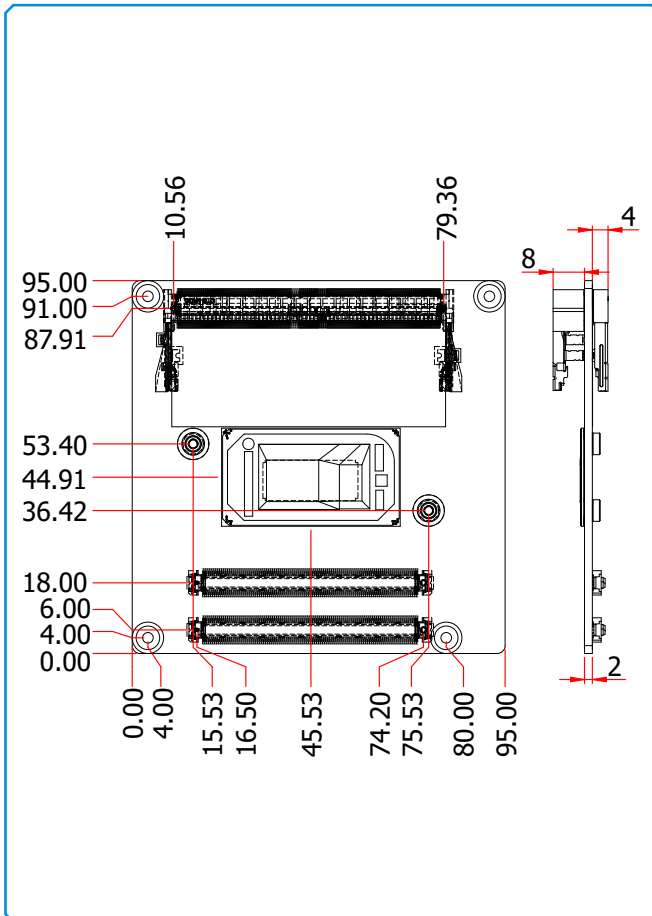
## Features

- Dual Channel DDR4 3200MHz SODIMM up to 64GB
- Three independent displays: VGA\* + LVDS\*/eDP + DDI
- DP++ supports 4K x 2K resolution
- Multiple expansion: Up to 8 PCIe x1, 1 I2C, 1 SMBus
- Rich I/O: 1 Intel 2.5GbE, 4 USB 3.2, 8 USB 2.0

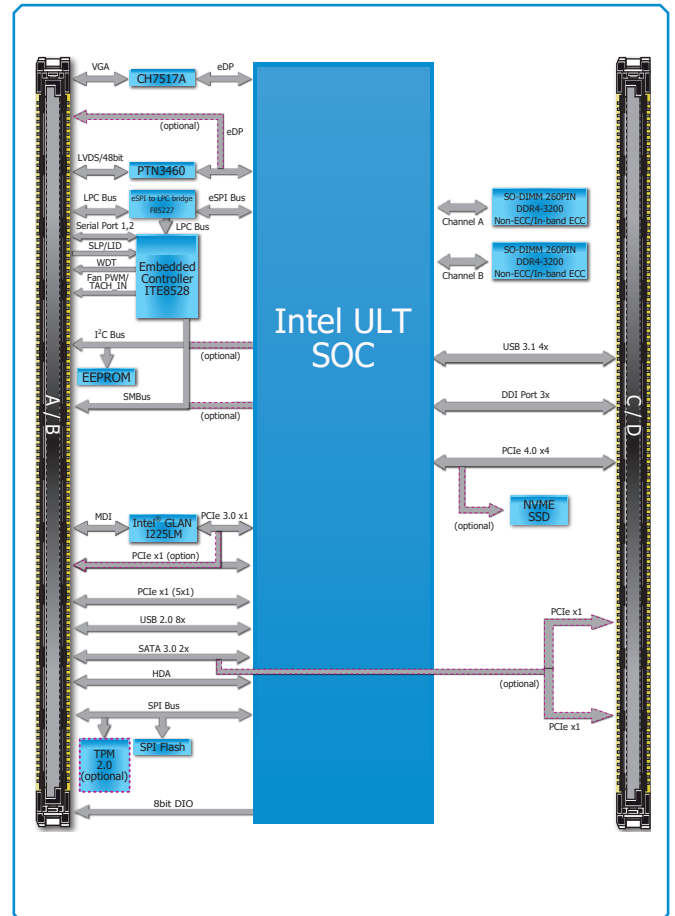
\* Populated by default



## Mechanical Drawing



## Block Diagram



## ► Specifications

<b>SYSTEM</b>	<b>Processor</b>	Intel® Core™ i7-1185G7E Processor (Core 4; Max speed 2.8 GHz; TDP 15-28W) Intel® Core™ i7-1185GRE Processor (Core 4; Max speed 2.8 GHz; TDP 15-28W) Support In-band ECC Intel® Core™ i5-1145G7E Processor (Core 4; Max speed 2.6 GHz; TDP 15-28W) Intel® Core™ i5-1145GRE Processor (Core 4; Max speed 2.6 GHz; TDP 15-28W) Support In-band ECC Intel® Core™ i3-1115G4E Processor (Core 2; Max speed 3.0 GHz; TDP 15-28W) Intel® Core™ i3-1115GRE Processor (Core 2; Max speed 3.0 GHz; TDP 15-28W) Support In-band ECC Intel® Celeron® 6305E Processor (Core 2; Max speed 1.8 GHz; TDP 15W)
	<b>Memory</b>	Two 260-Pin SO-DIMM up to 64GB, Dual Channel DDR4 3200MHz
	<b>BIOS</b>	AMI BIOS
<b>GRAPHICS</b>	<b>Controller</b>	Intel® Iris® Xe graphics
	<b>Feature</b>	OpenGL 5.0, DirectX 12, OpenCL 2.1 HW Decode: WMV9, AVC/H264, JPEG/MJPEG, HEVC/H265, VP9, AV1 HW Encode: AVC/H264, JPEG, HEVC/H265, VP9
	<b>Display</b>	1 x VGA 1 x LVDS/eDP (eDP available upon request) 3 x DDI VGA: resolution up to 1920x1200 @ 60Hz LVDS: dual channel 24-bit, resolution up to 1920x1200 @ 60Hz eDP: resolution up to 4096x2304 @ 60Hz HDMI: resolution up to 4096x2160 @ 30Hz DP++: resolution up to 4096x2304 @ 60Hz
	<b>Triple Displays</b>	VGA + LVDS + DDI DDI + eDP + DDI (available upon request)
<b>EXPANSION</b>	<b>Interface</b>	1 x PCIe x4 (Gen 4) 5 x PCIe x1 (Gen3) (8 x PCIe x1 available upon request) 1 x I2C 1 x SMBus 1 x SPI 2 x UART (TX/RX)
<b>AUDIO</b>	<b>Interface</b>	HD Audio
<b>ETHERNET</b>	<b>Controller</b>	1 x Intel® I225 series (10/100/1000Mbps/2.5G), co-lay PCIe x1 (available upon request)
<b>I/O</b>	<b>USB</b>	4 x USB 3.2 Gen.2 8 x USB 2.0
	<b>SATA</b>	2 x SATA 3.0 (up to 6Gb/s), co-lay PCIe x1 (available upon request)
	<b>NVMe SSD</b>	1 x 64GB/128GB/256GB/512GB/1024GB on board SSD (available upon request)
	<b>DIO</b>	1 x 8-bit DIO
<b>WATCHDOG TIMER</b>	<b>Output &amp; Interval</b>	System Reset, Programmable via Software from 1 to 255 Seconds
<b>SECURITY</b>	<b>TPM</b>	Available Upon Request
<b>POWER</b>	<b>Type</b>	8.5~20V, 5VSB, VCC_RTC (ATX mode)      8.5~12V, VCC_RTC (AT mode)
	<b>Consumption</b>	TBD
<b>OS SUPPORT</b>		Windows: Windows 10 IoT Enterprise 64-bit      Linux
<b>ENVIRONMENT</b>	<b>Temperature</b>	Operating: 0 to 60°C, -40 to 85°C      Storage: -40 to 85°C
	<b>Humidity</b>	Operating: 10 to 90% RH      Storage: 10 to 90% RH
	<b>MTBF</b>	TBD
<b>MECHANICAL</b>	<b>Dimensions</b>	COM Express® Compact      95mm (3.74") x 95mm (3.74")
	<b>Compliance</b>	PICMG COM Express® R3.0, Type 6
<b>STANDARDS AND CERTIFICATIONS</b>	<b>Certification</b>	CE, FCC, RoHS, UKCA

## ► Ordering Information

Model Name	P/N	Processor	Memory	LVDS/eDP	LAN/PCIe	SATA/PCIe	USB3.2 Gen2	USB2.0	TPM	Storage	Power	Thermal	Temperature
<b>TGU968-TS6-1185GRE</b>	770-TGU9681-000G	I7-1185GRE	2 SODIMM	LVDS	LAN	SATA	4	8	N/A	64GB NVMe SSD	ATX/AT	Cooler	-40 to 85°C
<b>TGU968-BS0-1145G7E</b>	770-TGU9681-100G	I5-1145G7E	2 SODIMM	LVDS	LAN	SATA	4	8	N/A	N/A	ATX/AT	Heatsink	0 to 60°C
<b>TGU968-TS0-1115GRE</b>	770-TGU9681-200G	I3-1115GRE	2 SODIMM	LVDS	LAN	SATA	4	8	N/A	N/A	ATX/AT	Cooler	-40 to 85°C
<b>TGU968-BS0-6305E</b>	770-TGU9681-300G	Celeron 6305E	2 SODIMM	eDP	LAN	SATA	4	8	N/A	N/A	ATX/AT	Heatsink	0 to 60°C

Remark: The SKU availability is subject to change without notice in advance.

## ► Optional Items

• Heat Spreader	A71-808335-000G
• COM335 Carrier Board Kit	770-CM3351-000G