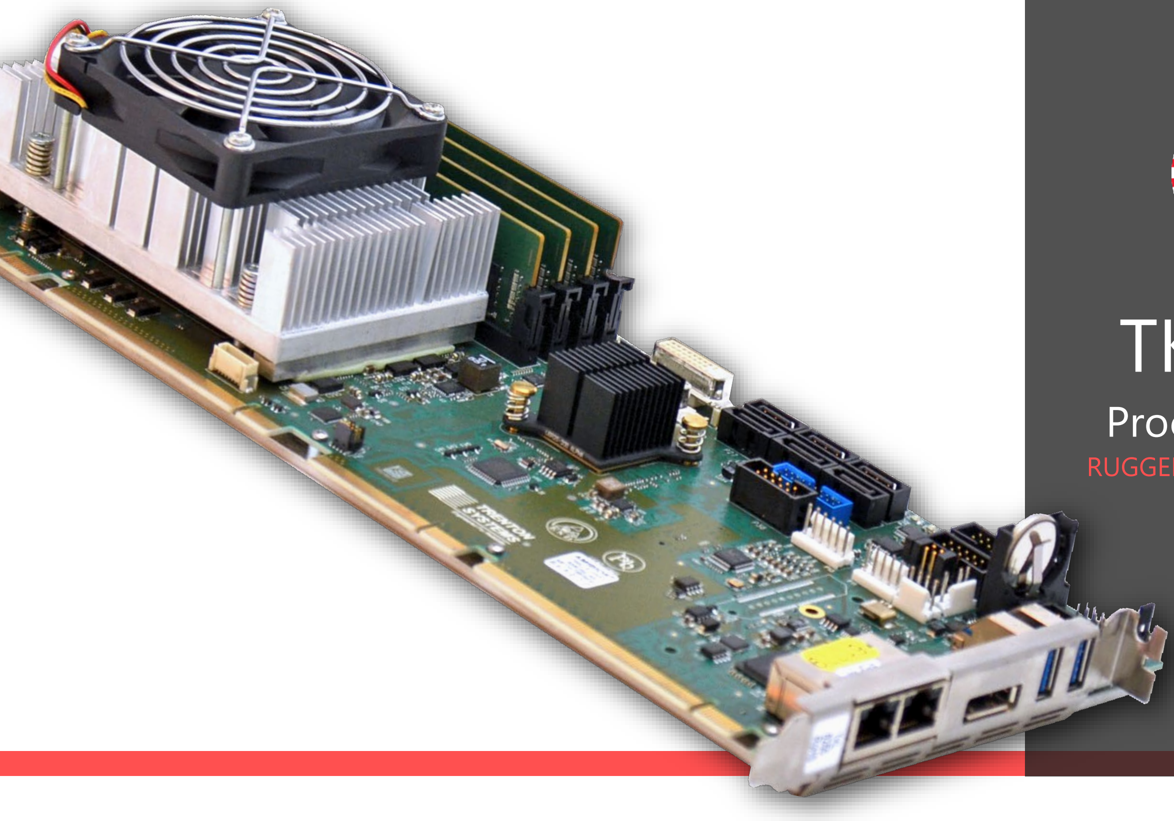


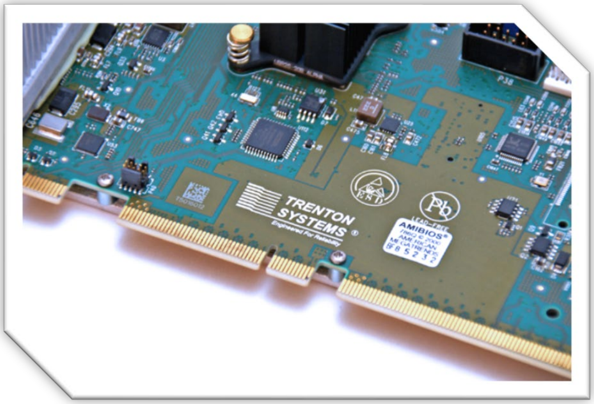
TKL8255

Processor Board

RUGGEDIZED | MADE IN USA

Swift Performance with Xeon® or Core™

The TKL8255 rugged processor board is designed to tackle the widest range of industrial and embedded computing challenges using a powerful Intel Xeon or Core processor in a 2U, 3U, 4U or 5U rugged chassis. It's what your application deserves.



NVMe Drive Support

The TKL8255 is capable of utilizing those ultra-fast NVMe M.2 drives for when you need a PCIe-based storage solution.

20 Lanes of PCIe Gen 3

Not 5, not 10, not 15, but 20 lanes of PCIe Gen 3 ensures significant expandability when paired with a PICMG 1.3 Series Backplane.

ECC Memory Support

Stop data corruption dead in its tracks with error-correcting code memory, perfect for mission-critical applications.

PROCESSOR BOARD

TKL8255 | Type: PICMG 1.3 Series

COMPATIBLE CHASSIS MODEL NUMBER(S)

TRC2010, THS2085, TRC2019, THS4086, THS4095, TRS4019, TRC3010

Contact us for custom options

PROCESSORS

- Intel® Core™ or Xeon® E processors; LGA1151 Socket
- CPU TDP support up to 125W

CPU	Cores/Threads	Frequency	Cache	TDP
i5-7500	4/4	3.40-3.80GHz	6 MB	65W
i7-7700	4/8	3.60-4.20GHZ	8 MB	65W
E3-1275v6	4/8	3.80-4.20GHz	8 MB	73W

MEMORY

Slots: 4x DDR4 DIMM sockets
Dual: Channel memory support
Capacity: Up to 64GB DDR4 ECC DIMM total RAM
Type: ECC DDR4-2400 UDIMM
DIMM Sizes: 16GB, 8GB, or 4GB
Error Detection: Corrects single-bit errors and detects double-bit errors using ECC memory
*ECC support dependent on CPU installed

STORAGE

Type(s):

- 6x SSD/HDD SATA3 (6 Gbps) drives of any size
- 1x M.2 NVMe x4 PCIe 3.0 lanes
    - 2242,2260, & 2280 card M.2 lengths

Capacity: Up to 12TB per drive (larger capacities available upon request)
SATA Modes: AHCI or RAID
RAID: Intel® RSTe SATA RAID support 0/1/5/10 Modes

ON-BOARD DEVICES

Chipset: Intel® C236
Network Controllers:

- Dual Intel® i350 Gigabit Ethernet
- Intel® i219 Gigabit Ethernet

Graphics: Intel® Integrated Graphics
TPM 2.0: Secure cryptoprocessor that helps you with actions such as generating, storing, and limiting the use of cryptographic keys. A requirement for Microsoft's bitlocker drive volume encryption features.

INPUT / OUTPUT

USB: 12x USB 3.0/2.0 ports

- 2x USB 3.0 ports on rear I/O
- 2x USB 3.0 ports via PCB internal header
- 4x USB 2.0 ports via PCB internal headers
- 4x USB 2.0 ports via PICMG connection to Backplane

Display: 1x DisplayPort
DVI-D: 2x DVI-D internal ports
LAN: 3x RJ-45 Gigabit Ethernet LAN ports

- 2x RJ-45 Gigabit Ethernet LAN ports on rear I/O
- 1x RJ-45 Gigabit Ethernet LAN port via PICMG to Backplane

Serial: 2x RS232, R422, R485 DB9 Serial headers
PCI: 2.2 Compliant via PCIe to PCI bridge at 32bit/33MHz
LPC Bus: For TPM, Super I/O, and Serial support

PROCESSOR BOARD DIMENSIONS

Length: 13.345" | 30.858 cm
Width: 5.570" | 14.6 cm
**System dimensions dependent on rugged chassis selection*

SYSTEM BIOS

BIOS Type: *128Mb Macronix MX25L12835FM2I-10G SPI Serial EEPROM (SPI Flash)*
BIOS Features:

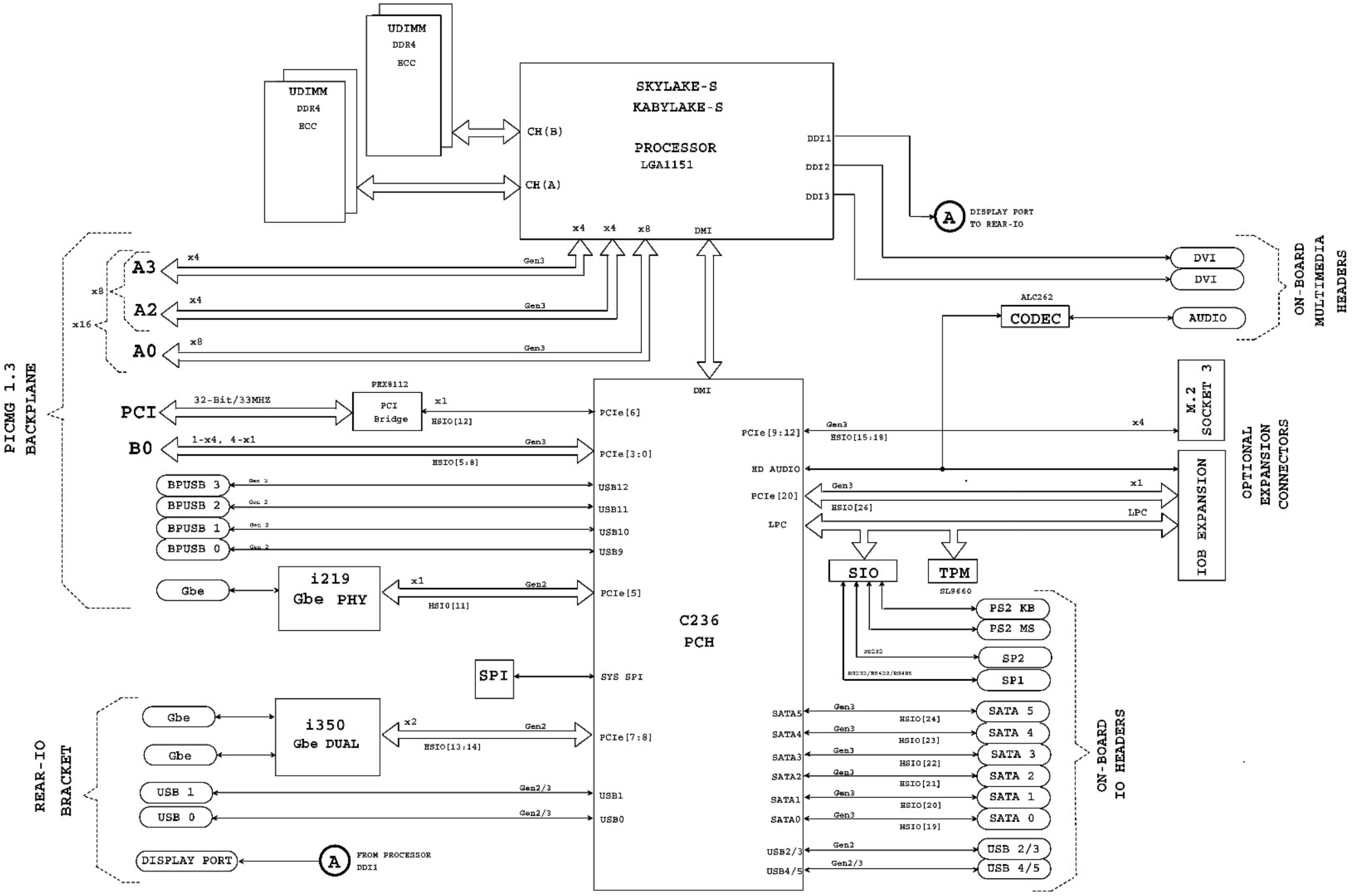
- Plug and Play (PnP)
- APM 1.2
- PCI 2.2
- ACPI 1.0 / 2.0
- USB Keyboard Support
- SMBIOS 2.3
- UEFI

ENVIRONMENTAL SPECIFICATIONS

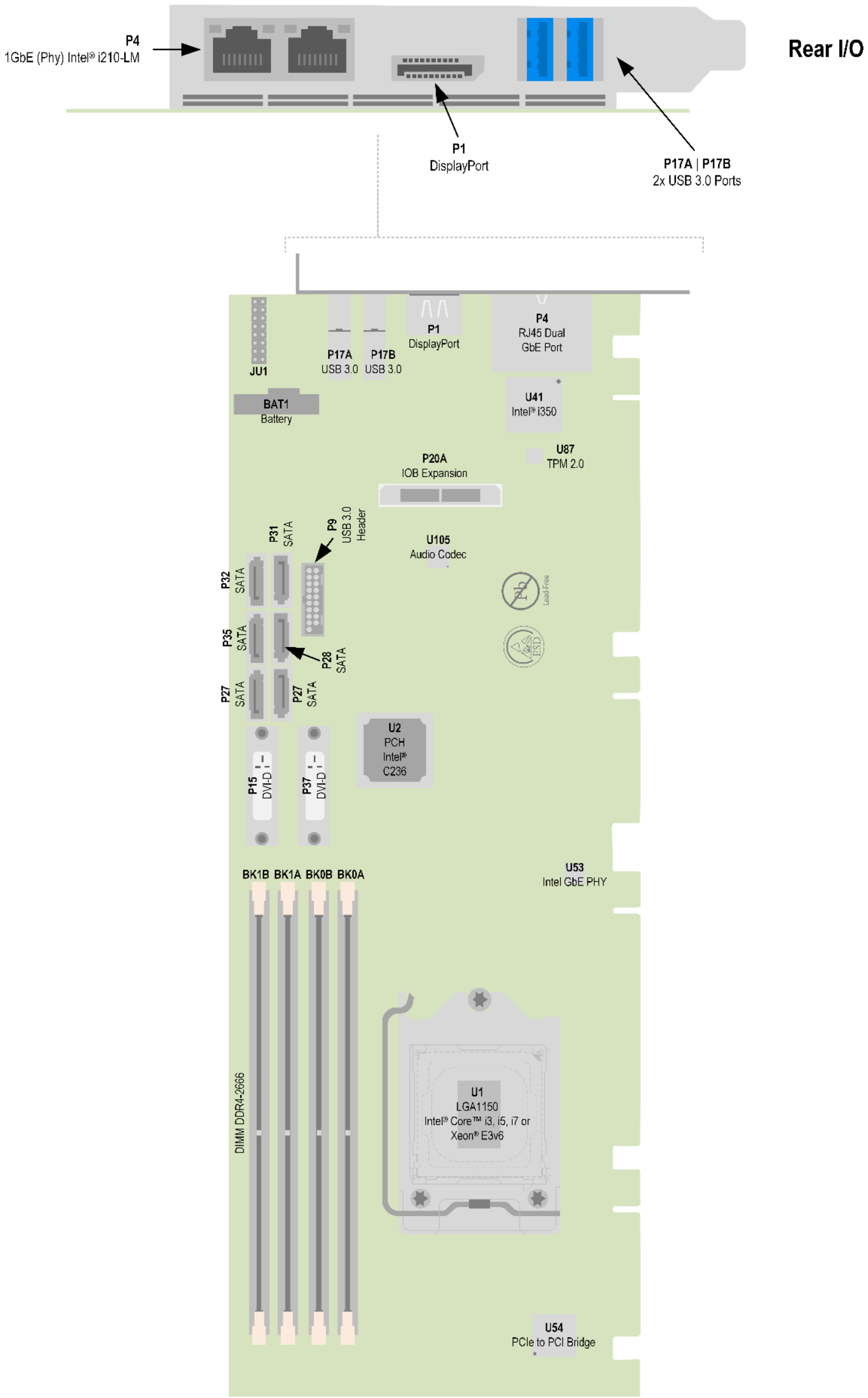
Operating Temperature: 0°C - 50°C
Storage Temperature: -40°C - 70°C
Operating Humidity: 8% - 90% Non-Condensing
Non-operating Humidity: 5% - 95% Non-Condensing
FCC
CE

**Numbers noted are dependent on CPU selection. Please contact Trenton Systems for specific CPU environmental specs.*

BLOCK DIAGRAM



LAYOUT DRAWING



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