GENE-TGU6

Intel® 11th Tiger Lake Series

GENE Board

Engineering Specification

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Revision History

Revision	Brief Description of Changes	Date of Issue	Author(s)

0.1	Initial document	2020,07,28	Alan Lan

1. Main Feature

- Intel® 11th gen Core™ i7/i5/i3/Celeron Processor SoC
- Non-ECC DDR4 SODIMM Slot x 2, up to 32GB
- LVDS/eDP x 1 (Default: LVDS), DP 1.4 x 2, HDMI 2.0 x 1
- GbE x 2, SATA III x 1, DIO x 8bit
- USB 3.2 x 4 (Up to Gen 2), RS-232/422/485 x 4
- Full size mSATA/mPCIe Slot x 1 (With Nano-SIM)
- M.2 2280 M key x 1, M.2 2230 E key x 1
- Wide DC Input 9-36V (Optional: 12V Only)

2. Hardware SPECIFICATIONS

Model	GENE-TGU6
Form Factor	3.5" GENE Board
CPU (Main stream)	Intel® 11th Generation Core™ i7/i5/i3/Celeron SoC
CPU Frequency	Up to 2.7GHz
Chipset	Integrated SoC
Memory Type	Dual Channel DDR4 (Non-ECC) SODIMM x 2, up to 32GB
Max. Memory Capacity	Up to 32GB
BIOS	UEFI only
Wake On LAN	Yes
Watchdog Timer	255 Levels
Ethernet	GbE x 2 (Intel i219 & i225 *1)
CRT/ LCD Controller	Intel® 11th Generation Core™ i7/i5/i3/Celeron SoC
Video Output	LVDS/eDP x 1 (Default: LVDS), DP 1.4 x 2, HDMI 2.0 x 1
Audio	ALC892 (Without Amplifier)
USB Port	USB3.2 Gen2 x4/2.0 x 2 (Up to Gen2)
Serial Port	RS-232/422/485 x 4
Parallel Port (LPT)	-
FDD Interface	-
SSD	1. SATA III x 1 2. Full size mSATA/mPCIe x 1 with NANO-SIM
Expansion Slot	M.2 2230 E key x 1 M.2 2280 M key x 1 SMBUS/I2C/LPC/eSPI x 1
PS/2	-
PCI	-
CFast	-
SD	-
TPM	Yes
FAN	PWM FAN x 1
DIO	8bit
Battery	RTC Battery (CR-2032)

Power Requirement	+9-36V (Optional: +12V), AT/ATX
Power Consumption (Typical)	TBD
Dimension	5.75" x 4" (146mm x 101.7mm)
Operating Temperature	32°F ~ 122°F (0°C ~ 60°C)
Storage Temperature	-4°F-176°F (-20°C ~ 80°C)
Operating Humidity	0-90% @ 40°C, non-condensing
MTBF (Hours)	TBD
Certification	CE/FCC Class A
Anti-Vibration	-
Accessory	-
Packing	Single Pack as standard

3. Block diagram
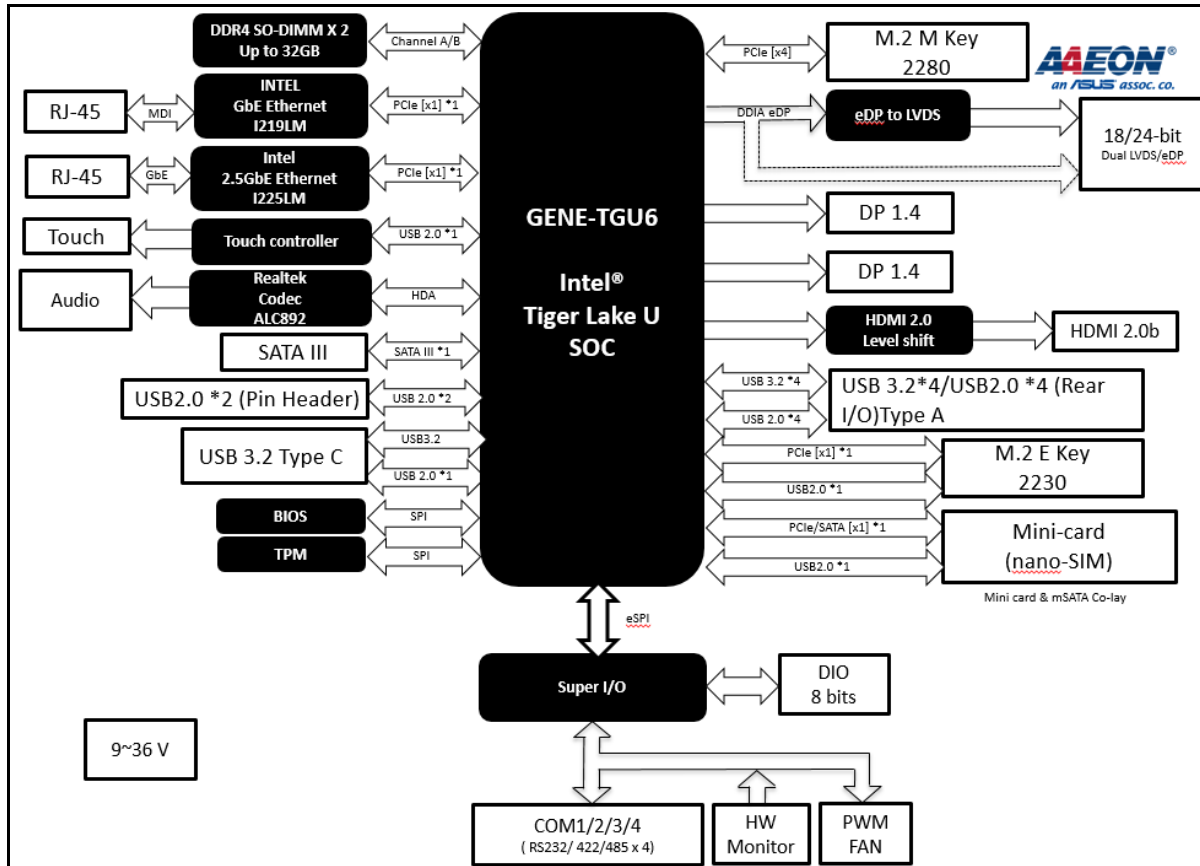
4. OS Support

Operation System	Support	Notes
Windows 10	V	64bit
Linux	V	Ubuntu 16.04 and after