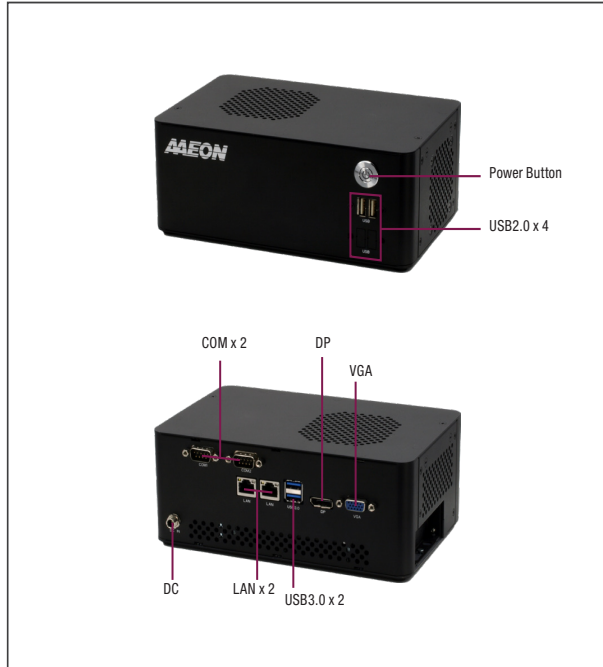


# GENESYS-CML5 PRELIMINARY

3.5" SubCompact Board System with 10th Generation Intel® Core™ i7/i5/i3/Pentium®/Celeron® Processor SoC

SubCompact Board System



## Features

- Non-ECC DDR4 SODIMM Slot x 2, up to 64GB
- GbE x 2, SATA III x 2
- USB 3.2 Gen 2 x 2 (Rear I/O), USB 2.0 x 4 (Optional)
- RS-232/422/485 x 2 (Optional)
- M.2 M Key 2280 PCIe[x4]/SATA[x1] x 1
- PCIe[x4] x 1 (Q470E only)



|                                        |                                                     |
|----------------------------------------|-----------------------------------------------------|
| USB                                    | USB3.2 Gen 2 x 2 (Q470E)<br>USB3.2 Gen1 x 2 (H420E) |
| SERIAL PORT                            | COM RS232/422/485 x 2 (Optional)                    |
| VIDEO                                  | DP++ x 1, VGA x 1                                   |
| <b>INTERNAL I/O</b>                    |                                                     |
| USB                                    | USB2.0 x 4 (Optional)                               |
| SERIAL PORT                            | —                                                   |
| VIDEO                                  | —                                                   |
| SATA                                   | SATA III x 2<br>+5V SATA Power Connector x 1        |
| AUDIO                                  | —                                                   |
| DIO/GPIO                               | —                                                   |
| SMBus/I2C                              | I2C/SMBus x 1 (Optional)                            |
| Touch                                  | —                                                   |
| FAN                                    | 4pins Smart Fan x1                                  |
| SIM                                    | —                                                   |
| Front Panel                            | PWR LED, Power Button                               |
| Others                                 | FPC x 1 (Q470E only)                                |
| <b>EXPANSION</b>                       |                                                     |
| Mini PCI-E/mSATA                       | —                                                   |
| M.2                                    | M-Key 2280 x 1 (PCIe x4, SATA)                      |
| Others                                 | —                                                   |
| <b>ENVIRONMENT &amp; CERTIFICATION</b> |                                                     |
| 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)                           | 380,571                                             |
| EMC                                    | CE/FCC Class A                                      |

## Specifications

| SYSTEM            |                                                                                                                                                                                                                                                                                                           |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| FORM FACTOR       | 3.5" SubCompact Board System                                                                                                                                                                                                                                                                              |
| CPU               | Intel® 10th Generation Core™/Pentium/Celeron SoC<br>i7-10700TE (8C/16T, 2.00 GHz, up to 4.40 GHz, TDP 35W)<br>i5-10500TE (6C/12T, 2.30 GHz, up to 3.70 GHz, TDP 35W)<br>i3-10100TE (4C/8T, 2.30 GHz, up to 3.60 GHz, TDP 35W)<br>G6400TE (2C/4T, 3.20 GHz, TDP 35W)<br>G5900TE (2C/2T, 3.00 GHz, TDP 35W) |
| CHIPSET           | Integrated with Intel® SoC                                                                                                                                                                                                                                                                                |
| MEMORY TYPE       | DDR4 up to 2933MHz Dual Channel, SODIMM x 2, up to 64GB, Non-ECC                                                                                                                                                                                                                                          |
| BIOS              | UEFI                                                                                                                                                                                                                                                                                                      |
| WAKE ON LAN       | Yes                                                                                                                                                                                                                                                                                                       |
| WATCHDOG TIMER    | 255 Levels                                                                                                                                                                                                                                                                                                |
| SECURITY          | TPM2.0                                                                                                                                                                                                                                                                                                    |
| RTC Battery       | Lithium Battery 3V/240mAH                                                                                                                                                                                                                                                                                 |
| DIMENSION         | 8.27" x 5.28" x 3.23" (210mm x 134mm x 82mm)                                                                                                                                                                                                                                                              |
| OS Support        | Windows 10 (64bit)<br>Linux Ubuntu 20.04.1/Kernel 5.4                                                                                                                                                                                                                                                     |
| POWER             |                                                                                                                                                                                                                                                                                                           |
| POWER REQUIREMENT | +12V                                                                                                                                                                                                                                                                                                      |
| POWER SUPPLY TYPE | ATX                                                                                                                                                                                                                                                                                                       |
| CONNECTOR         | DC Jack Connector                                                                                                                                                                                                                                                                                         |
| POWER CONSUMPTION | Intel® i7-10700TE, DDR4 3200Mhz 32GB x2, 5.64A @ +12V(Typical)<br>Intel® i7-10700TE, DDR4 3200Mhz 32GB x2, 10.63A @ +12V(Max)                                                                                                                                                                             |
| DISPLAY           |                                                                                                                                                                                                                                                                                                           |
| CONTROLLER        | Intel® HD Graphics 610/630                                                                                                                                                                                                                                                                                |
| LVDS/eDP          | —                                                                                                                                                                                                                                                                                                         |
| Display Interface | DP++ x 1<br>VGA x 1                                                                                                                                                                                                                                                                                       |
| Multiple Display  | 2 Simultaneous Displays                                                                                                                                                                                                                                                                                   |
| AUDIO             |                                                                                                                                                                                                                                                                                                           |
| CODEC             | —                                                                                                                                                                                                                                                                                                         |
| AUDIO INTERFACE   | —                                                                                                                                                                                                                                                                                                         |
| Speaker           | —                                                                                                                                                                                                                                                                                                         |
| EXTERNAL I/O      |                                                                                                                                                                                                                                                                                                           |
| ETHERNET          | Intel® i210, i10/100/1000Base, RJ45 x1<br>Intel® i219, i10/100/1000Base, RJ45 x1 (support vPro on i5/i7 processors with Q470E)                                                                                                                                                                            |

## Optional Accessories

| Part Number        | Description                 | QTY |
|--------------------|-----------------------------|-----|
| 968C128G3N         | 2.5 SSD.SATA.128GB          | 1   |
| 968D4008GL         | 8GB.DDR4 2400Mhz.SODIMM     | 2   |
| 1255201200         | Power Adapter. 12V.10A.120W | 1   |
| 1702031802         | Power Cord (US)             | 1   |
| 1702031803         | Power Cord (Europe)         | 1   |
| 170203180E         | Power Cord (Japan)          | 1   |
| GENESYS-CML5-COM1  | COM Port Kit (Single Port)  | 1   |
| GENESYS-CML5-USB1  | USB2.0 Kit (Dual Port)      | 1   |
| GENESYS-CML5-HDD1  | HDD Kit (cable only)        | 1   |
| GENESYS-CML5-WMT1  | Wall Mount Kit.             | 1   |
| GENESYS-CML5-VESA1 | VESA Mount Kit              | 1   |

## Packing List

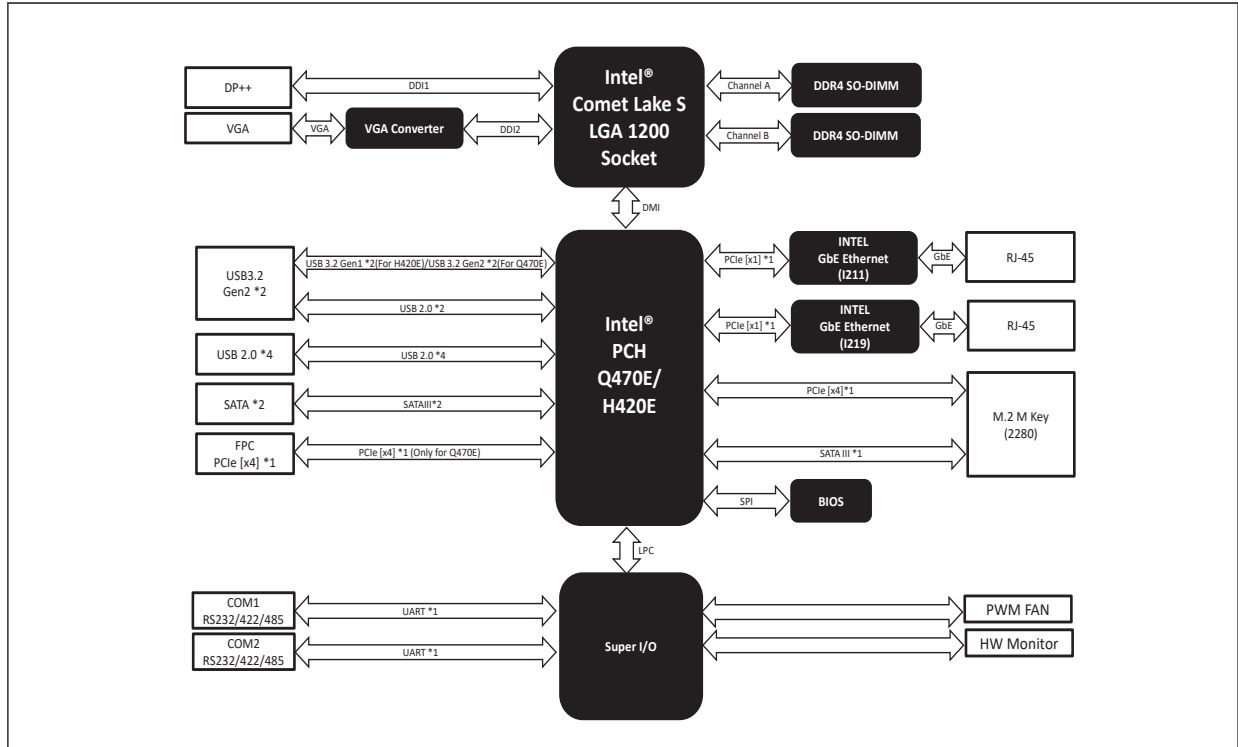
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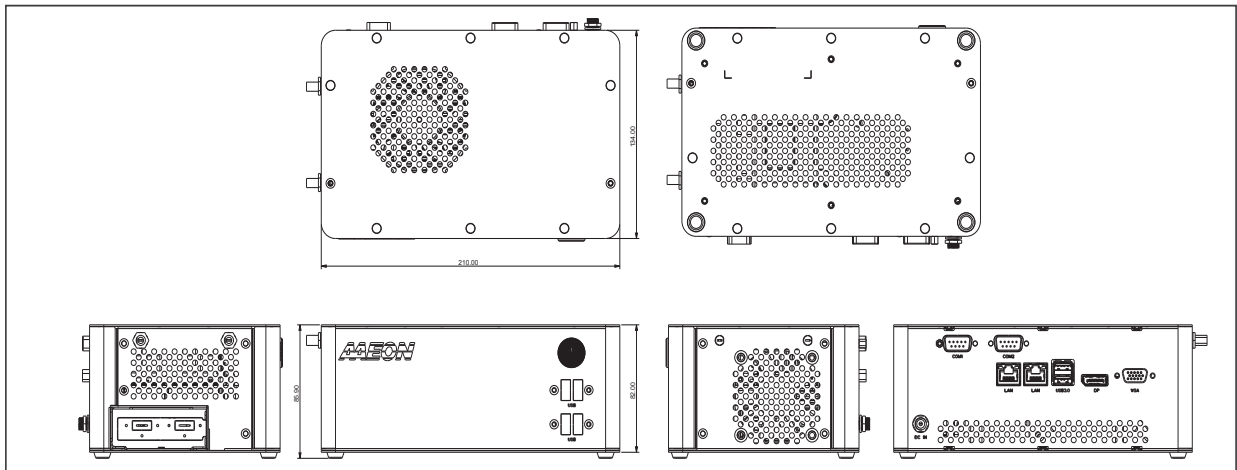
SubCompact Board System

## Block Diagram



## Dimension

Unit: mm



## Ordering Information

| Part Number           | CPU                                       | PCH   | Memory          | Display            | Storage          | LAN     | USB                           | RS-232/422/485 | Expansion slot                           | TPM    | Power | Operating Temp |
|-----------------------|-------------------------------------------|-------|-----------------|--------------------|------------------|---------|-------------------------------|----------------|------------------------------------------|--------|-------|----------------|
| GENESYS-CML5-A10-0001 | FCLGA1200<br>(Socket Type, TPD up to 35W) | Q470E | Memory Slot x 2 | DP++ x1<br>VGA x 1 | SATA x 1         | GbE x 2 | USB3.2 Gen2 x 2               | 0              | M.2 2280 M Key x 1<br>PCIe[x4] x 1 (FPC) | TPM2.0 | 12V   | 0°C ~ 50°C     |
| GENESYS-CML5-A10-0002 | FCLGA1200<br>(Socket Type, TPD up to 35W) | H420E | Memory Slot x 2 | DP++ x1<br>VGA x 1 | SATA x 1         | GbE x 2 | USB3.2 Gen2 x 2               | 0              | M.2 2280 M Key x 1                       | TPM2.0 | 12V   | 0°C ~ 50°C     |
| GENESYS-CML5-A10-AI03 | FCLGA1200<br>(Socket Type, TPD up to 35W) | Q470E | DDR4 x 2        | DP++ x1<br>VGA x 1 | 128GB<br>SSD x 1 | GbE x 2 | USB3.2 Gen2 x 2<br>USB2.0 x 4 | 2              | Movidius2280 x 1                         | TPM2.0 | 12V   | 0°C ~ 50°C     |

## Assured Systems

Assured Systems is a leading technology company with over 1,500 regular clients in 80 countries, deploying over 85,000 systems to a diverse customer base in 12 years of business. We offer high-quality and innovative rugged computing, display, networking and data collection solutions to the embedded, industrial, and digital-out-of-home market sectors.

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