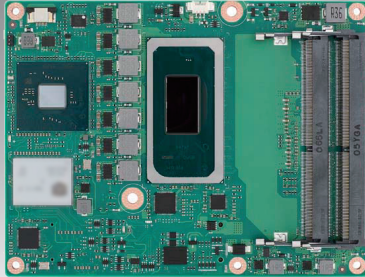


SOM-5883

Intel® 11th Gen Core Processors (Code Name: Tiger Lake-H) COM Express® Basic Type 6 Module

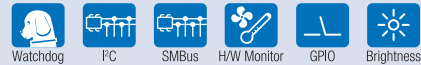
NEW



Features

- Intel® 11th Gen Core Processors, up to 8Core/16T, L3 Cache 24M
- Intel Iris Xe(Gen 12) graphics, 4 independent 4K display
- Dual channel DDR4 Max 128GB SODIMM, support ECC
- Super speed I/O: PCIe4 x16 (16GT/s), USB3.2 gen3 (10Gb), 2.5GbE, SATA3 (6Gb)
- TPM2.0 security protection, onboard NVMe SSD fast & anti-vibration
- Supports iManager, Edge-AI Suite, DeviceOn

Software APIs:

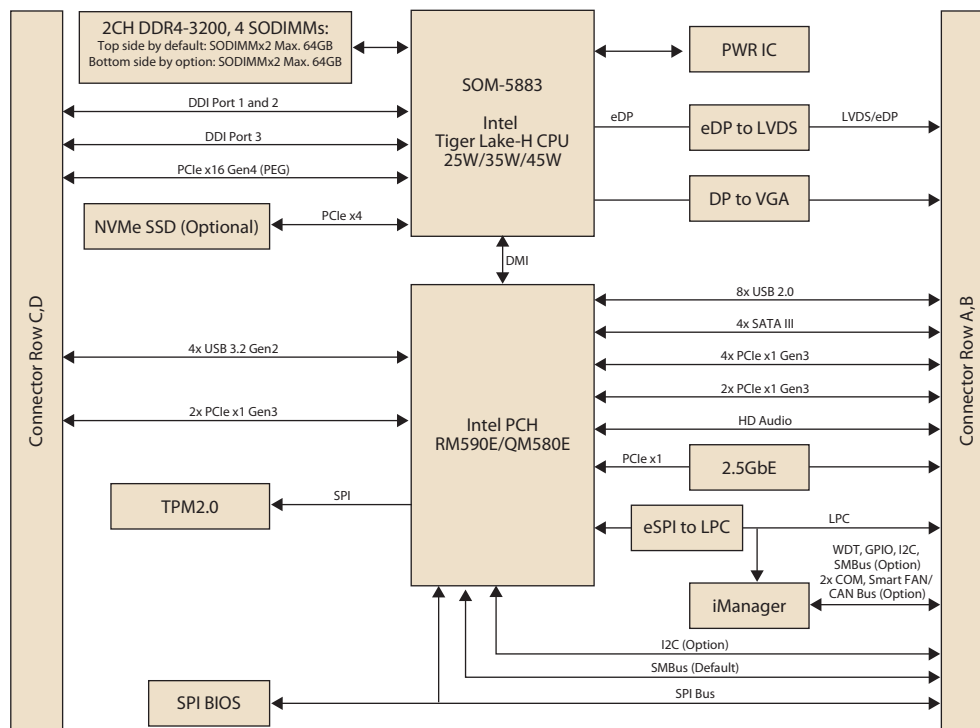


Windows Embedded iManager WISE-DeviceOn CE FC

Specifications

| | | | | | | | | | |
|--------------------------|---------------------------------|---|------------------------|------------|---------|---|------------|------------|------------|
| Form Factor | Form Factor | COM Express Compact Module | | | | | | | |
| | Pin-out Type | COM Express R3.0 Type 6 compatible | | | | | | | |
| Processor System | CPU | i7-11850HE | i5-11500HE | i3-11100HE | 6600HE | W-11865MRE | W-11555MRE | W-11155MRE | W-11865MLE |
| | Base Frequency | 2.6 GHz | 2.6 GHz | 2.4 GHz | 2.6 GHz | 2.6 GHz | 2.6 GHz | 2.4 GHz | 1.5 GHz |
| | Max Single Core Turbo Frequency | 4.7 GHz | 4.5 GHz | 4.4 GHz | - | 4.7 GHz | 4.5 GHz | 4.4 GHz | 4.5 GHz |
| | Cores | 8 | 6 | 4 | 2 | 8 | 6 | 4 | 8 |
| | LLC | 24 MB | 12 MB | 8 MB | 8 MB | 24 MB | 12 MB | 8 MB | 24 MB |
| | CPU TDP | 45W/35W | 45W/35W | 45W/35W | 35W | 45W/35W | 45W/35W | 45W/35W | 25W |
| | Chipset | QM580E | QM580E | QM580E | QM580E | RM590E | RM590E | RM590E | RM590E |
| | BIOS | AMI UEFI 256Mbit | | | | | | | |
| Memory | Technology | DDR4 | | | | | | | |
| | Speed | 3200 | 3200 | 3200 | 3200 | 3200 | 3200 | 3200 | 3200 |
| | ECC Support | Non-ECC or ECC support by specific SKU | | | | | | | |
| | Max. Capacity | Max. 128GB | | | | | | | |
| | Socket | Maximum 4pcs 260P SO-DIMM (Dual Channel), 2pcs top side by default & 2pcs bottom side by option | | | | | | | |
| Graphics | Controller | Intel Iris Xe(Gen 12) graphics | | | | | | | |
| | Max. Frequency | 1.35 GHz | 1.35 GHz | 1.25 GHz | 1.1 GHz | 1.35 GHz | 1.35 GHz | 1.25 GHz | 1.35 GHz |
| | Graphic Memory | Shared memory | | | | | | | |
| | 3D/HW Acceleration | JPEG, H264 (8 bits) and HEVC/H265 (10 bits) | | | | | | | |
| Display | VGA | 1920 x 1200@60Hz | | | | | | | |
| | LCD | LVDS dual channel: 1920 x 1200@60Hz (optional eDP 4096 x 2304@60Hz, 24bpp) | | | | | | | |
| | DDI | *3 DDI ports support configurable HDM/DMI/DisplayPort HDMI: 4096 x 2160@24Hz, DVI: 1920 x 1200@60Hz, DP: 4096 x 2304@60Hz* | | | | | | | |
| | Multiple Display | Quad Simultaneous Independent Display | | | | | | | |
| Expansion | PCI Express x16 (Gen4) | 1 PCIe x16 configurable to 1 x16, 2 x8, 1 x8 + 2 x4 | | | | | | | |
| | PCI Express x1 (Gen3) | 8 PCIe x1, configurable to x4 or x2 | | | | | | | |
| | Audio Interface | Intel HD Audio | | | | | | | |
| | LPC | Yes | | | | | | | |
| Serial Bus | SMBus | Yes | | | | | | | |
| | I2C Bus | Yes | | | | | | | |
| Ethernet | Gigabit | Intel I225LM/IT (up to 2.5GbE) | | | | | | | |
| I/O | SATA3.0 | 4 Ports (6 Gbps) | | | | | | | |
| | USB3.2 (Gen2) | 4 Ports (10 Gbps) | | | | | | | |
| | USB2.0 | 8 Ports (480 Mbps) | | | | | | | |
| | SPI Bus | Yes. For BIOS EEPROM | | | | | | | |
| | GPIO | 8-bit | | | | | | | |
| | Watchdog | 65536 level, 0 ~ 65535 sec | | | | | | | |
| | COM Port | 2 Ports (2-Wire) | | | | | | | |
| | TPM | TPM2.0 (optional) | | | | | | | |
| | Smart Fan | 2 Ports: 1 port on COM module (Notice: the input voltage of fan is aligned to Vin); 1 port on carrier board | | | | | | | |
| | Power | Type | ATX: Vin, VSB; AT: Vin | | | | | | |
| Supply Voltage | | Vin: 8.5V ~ 20V; VSB: 4.75V ~ 5.25 V, RTC Battery: 2.0V ~ 3.3V | | | | | | | |
| Power Consumption (Max.) | | 68.38W @ 12V (i7-11850HE with 128GB DDR4 3200) | | | | | | | |
| Power Consumption (Idle) | | 15.75W @ 12V (i7-11850HE with 128GB DDR4 3200) | | | | | | | |
| Environment | Operating Temperature | Operating Standard: 0 ~ 60° C (32 ~ 140° F), Extend: -40 ~ 85° C (-40 ~ 185° F) with 0.7m/s air flow. Storage: -40 ~ 85° C (-40 ~ 185° F) | | | | Standard: 0 ~ 60° C (32 ~ 140° F) Extend: -40 ~ 85° C (-40 ~ 185° F) | | | |
| | Storage Temperature | -40 ~ 85° C (-40 ~ 185° F) | | | | | | | |
| | Humidity | Operating: 40 °C @ 95% relative humidity, non-condensing Storage: 60 °C @ 95%relative humidity, non-condensing | | | | | | | |
| | Vibration Resistance | 3.5 Grms | | | | | | | |
| Mechanical | Dimensions | 125 mm x 95 mm (4.92" x 3.74") | | | | | | | |

Block Diagram



Ordering Information

| Part No. | CPU | Core | Base Freq. | Max. Boost Freq. | CPU TDP | LLC | PCH | DDR4 SODIMM | SSD | USB4 | Thermal solution | Operating Temp. |
|-------------------|----------------------|------|------------|------------------|---------|------|--------|-------------|-----|---------|------------------|-----------------|
| SOM-5883C7Q-U6A1 | Core i7-11850HE | 8 | 2.6GHz | 4.7GHz | 45W/35W | 24MB | QM580E | non-ECC | N/A | N/A | Active | 0 ~ 60 °C |
| SOM-5883C5Q-U6A1 | Core i5-11500HE | 6 | 2.6GHz | 4.5GHz | 45W/35W | 12MB | QM580E | non-ECC | N/A | N/A | Active | 0 ~ 60 °C |
| SOM-5883C3Q-U4A1 | Core i3-11100HE | 4 | 2.4GHz | 4.4GHz | 45W/35W | 8MB | QM580E | non-ECC | N/A | N/A | Active | 0 ~ 60 °C |
| SOM-5883C3QA-U4A1 | Core i3-11100HE | 4 | 2.4GHz | 4.4GHz | 45W/35W | 8MB | QM580E | non-ECC | N/A | Option* | Active | 0 ~ 60 °C |
| SOM-5883CRQ-U6A1 | Celeron 6600HE | 2 | 2.6GHz | N/A | 35W | 8MB | QM580E | non-ECC | N/A | N/A | Active | 0 ~ 60 °C |
| SOM-5883D8R-U6A1 | Xeon W-11865MRE (8C) | 8 | 2.6GHz | 4.7GHz | 45W/35W | 24MB | RM590E | ECC | N/A | N/A | Active | 0 ~ 60 °C |
| SOM-5883D6R-U6A1 | Xeon W-11555MRE (6C) | 6 | 2.6GHz | 4.5GHz | 45W/35W | 12MB | RM590E | ECC | N/A | N/A | Active | 0 ~ 60 °C |
| SOM-5883D4R-U4A1 | Xeon W-11155MRE (4C) | 4 | 2.4GHz | 4.4GHz | 45W/35W | 8MB | RM590E | ECC | N/A | N/A | Active | 0 ~ 60 °C |
| SOM-5883D8RX-U6A1 | Xeon W-11865MRE (8C) | 8 | 2.6GHz | 4.7GHz | 45W/35W | 24MB | RM590E | ECC | N/A | N/A | Active | -40 ~ 85 °C |
| SOM-5883D6RX-U6A1 | Xeon W-11555MRE (6C) | 6 | 2.6GHz | 4.5GHz | 45W/35W | 12MB | RM590E | ECC | N/A | N/A | Active | -40 ~ 85 °C |
| SOM-5883D4RX-U4A1 | Xeon W-11155MRE (4C) | 4 | 2.4GHz | 4.4GHz | 45W/35W | 8MB | RM590E | ECC | N/A | N/A | Active | -40 ~ 85 °C |
| SOM-5883D8RX-SSA1 | Xeon W-11865MLE (8C) | 8 | 1.5GHz | 4.5GHz | 25W | 24MB | RM590E | ECC | N/A | N/A | Active | -40 ~ 85 °C |

*SOM-MZ10 is not included in SOM-5883C3QA-U4A1, need to be purchased from optional accessories
 Any other SKUs or combination is project based support. Please contact sales for details.
 Memory sockets maximum 4pcs. 2pcs top side by default & 2pcs bottom side by option.

Development Board

| Part No. | Description |
|------------------|--|
| SOM-DB5830-00A2 | COMe Devel. Board COME R3.0 Type6 pin-out (LVDS) 0 ~ 60 °C |
| SOM-DB5830A-00A2 | COMe Devel. Board COME R3.0 Type6 pin-out (eDP) 0 ~ 60 °C |
| SOM-DB5830X-00A2 | COMe Devel. Board COME R3.0 Type6 pin-out (LVDS) -40 ~ 85 °C |

Packing List

| Part No. | Description | Quantity |
|---------------|--------------------------|----------|
| - | SOM-5883 COM module | 1 |
| 197005238T000 | Heatspreader of SOM-5883 | 1 |

Optional Accessories

| Part No. | Description |
|----------------|---|
| 1970005036T001 | Semi-Cooler 125 x 95 x 33.2 mm with 12V Fan |
| 1970005036T001 | QFCS 125x95x26.86 mm |

Embedded OS

| OS | Part No. | Description |
|--------------|----------------|-------------------------------------|
| Win10 | 20706WX9HS0143 | img W10 19HL SOM-5883 64b 1809 ENU |
| Win10 | 20706WX9VS0147 | img W10 19VL SOM-5883 64b 1809 ENU |
| Win10 | 20706WX9ES0158 | img W10 19EL SOM-5883 64b 1809 ENU |
| Ubuntu 20.04 | 20706U20DS0030 | img Ubnun20.4 SOM-5883 64b 2004 ENU |