

# CEM511

COM Express Type 6 Compact Module with 7th Gen Intel® Core™ i7/i5/i3 & Celeron® Processor

## Features

- 7th gen Intel® Core™ i7/i5/i3 and Celeron® 3965U processor (Kaby Lake-U)
- 2 DDR4-2133 SO-DIMM, up to 32GB
- Max. up to 6 lanes of PCI Express
- 3 SATA-600
- 4 USB 3.0 and 8 USB 2.0
- AXView 2.0 intelligent remote management software for industrial IoT applications
- TPM 1.2 supported

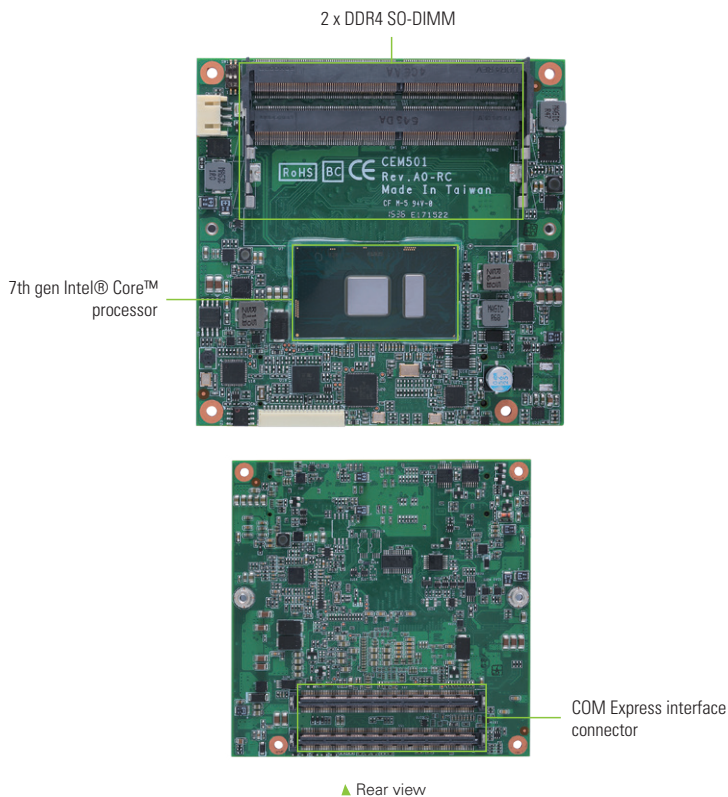


### Core System

|                     |   |
|---------------------|---|
| CPU                 | Intel® Core™ i7-7600U, i5-7300U, i3-7100U processor (Kaby Lake-U) & Intel® Celeron® processor 3965U |
| System Memory       | 2 x 260-pin DDR4-2133 SO-DIMM, up to 32GB   |
| Chipset             | SoC integrated  |
| BIOS                | AMI uEFI (Legacy free)  |
| SSD                 | N/A   |
| Watchdog Timer      | 65536 levels, 0 ~ 65535 sec.  |
| Expansion Interface | 6 lanes of PCI Express Gen. 3.0   |
| Battery Lithium     | N/A   |
| Power Input         | ATX: +12V, +5VSB<br>AT: +12V  |
| Size                | 95 x 95 mm  |
| Board Thickness     | 2.0 mm  |
| Temperature         | -40°C ~ +85°C (-40°F ~ +185°F), operation   |
| Operation Humidity  | 10% ~ 95% relative humidity, non-condensing   |
| Vibration           | 3.5 Grms  |

### I/O

|                     |  |
|---------------------|--|
| MIO                 | 1 x LPC interface<br>1 x SPI interface<br>2 x Serial TX/RX<br>1 x I <sup>2</sup> C interface |
| SATA                | 3 x SATA-600   |
| Hardware Monitoring | Yes  |
| Ethernet            | 1 port as 10/100/1000 Mbps supports Wake-on-LAN, PXE Boot ROM with Intel® i219LM             |
| Audio               | HD link interface to baseboard for Codec   |
| USB                 | 4 x USB 3.0<br>8 x USB 2.0   |
| TPM                 | TPM 1.2  |
| SMBus               | Yes  |
| Digital I/O         | 4 channels IN & 4 channels OUT (SDIO optional)   |
| Smart Battery       | Yes  |



### Display

|                   |   |
|-------------------|---|
| Chipset           | Intel® gen 9 Graphics Engine<br>support Gfx - DX12.0, OCL2.0, OGL4.3  |
| Display Interface | 2 x DDI (DP/HDMI/DVI). The 2nd DDI could be configured to VGA (optional)<br>1 x LVDS; 18/24-bit dual channel (eDP optional) |

### Packing List

Quick installation guide

### Ordering Information

| Standard                             |  |
|--------------------------------------|--|
| CEM511PG-i7-7600U (P/N: E38D511102)  | COM Express Type 6 compact module with Intel® Core™ i7-7600U, DDI/LVDS, GbE LAN, USB 3.0 and TPM |
| CEM511PG-i5-7300U (P/N: E38D511101)  | COM Express Type 6 compact module with Intel® Core™ i5-7300U, DDI/LVDS, GbE LAN, USB 3.0 and TPM |
| CEM511PG-i3-7100U (P/N: E38D511100)  | COM Express Type 6 compact module with Intel® Core™ i3-7100U, DDI/LVDS, GbE LAN, USB 3.0 and TPM |
| CEM511PG-Cel-3965U (P/N: E38D511103) | COM Express Type 6 compact module with Intel® Celeron® 3965U, DDI/LVDS, GbE LAN, USB 3.0 and TPM |
| Optional                             |  |
| CEB94011 (P/N: E394011100)           | COM Express Type 6 evaluation board  |
| 7108D511000E                         | CEM511 heat sink w/ fan  |
| 5078D501200E                         | CEM501 heat spreader   |

## Block Diagram

