



**Intel Atom® Processor E3900 Series  
In-Vehicle Box PC**



## VC230-AL

Atom

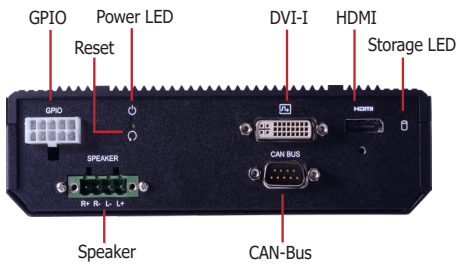


### Features

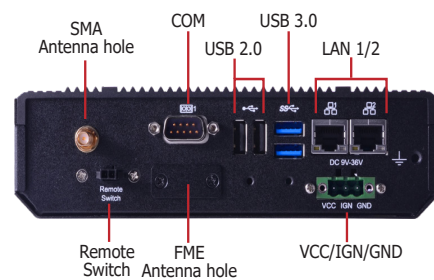
- Anti-vibration and fanless In-Vehicle computer
- Supports ignition delay on/off function
- 1 mSATA, eMMC (optional)
- GPS Onboard
- 3 SIM Slots Onboard
- Supports Wi-Fi, 3G, and GPRS application



### Panel

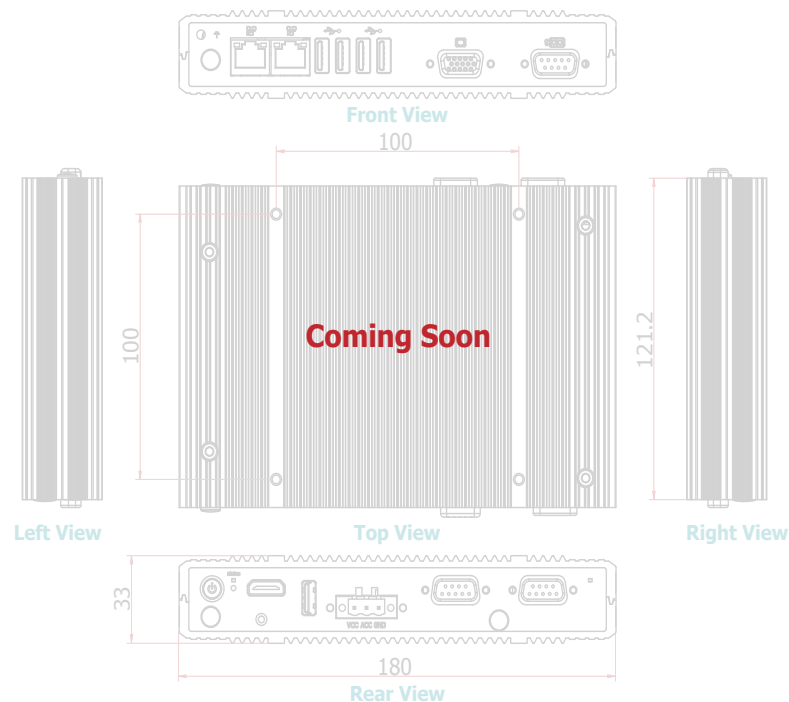


Front View



Rear View

### Dimensions





**Specifications**

|                                     |                               |                                                                                                                                                                                                                                                                                     |
|-------------------------------------|-------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>SYSTEM</b>                       | <b>Processor</b>              | Intel Atom® Processor E3900 Series, BGA 1296<br>Intel Atom® x7-E3950 Processor, Quad Core, 2M Cache, 1.6GHz (2.0GHz), 12W<br>Intel Atom® x5-E3940 Processor, Quad Core, 2M Cache, 1.6GHz (1.8GHz), 9W<br>Intel Atom® x5-E3930 Processor, Dual Core, 2M Cache, 1.3GHz (1.6GHz), 6.5W |
|                                     | <b>Memory</b>                 | 1 SODIMM Memory Support up to 8GB Single Channel DDR3L 1600/1866MHz                                                                                                                                                                                                                 |
|                                     | <b>BIOS</b>                   | AMI SPI 64Mbit                                                                                                                                                                                                                                                                      |
| <b>GRAPHICS</b>                     | <b>Controller</b>             | Intel® HD Graphics                                                                                                                                                                                                                                                                  |
|                                     | <b>Display</b>                | 1 x HDMI HDMI: resolution up to 3840x2160 @ 60Hz<br>1 x DVI-I DVI-I: resolution up to 2560x1600 @ 60Hz                                                                                                                                                                              |
|                                     | <b>Dual Displays</b>          | HDMI + DVI-I                                                                                                                                                                                                                                                                        |
| <b>STORAGE</b>                      | <b>External/Internal</b>      | 4GB/8GB/16GB/32GB eMMC Onboard (available upon request)                                                                                                                                                                                                                             |
| <b>EXPANSION</b>                    | <b>Interface</b>              | 1 x Full-size Mini PCIe (PCIe/USB/Daul micro SIM)                                                                                                                                                                                                                                   |
|                                     |                               | 1 x Full-size Mini PCIe (PCIe/USB/micro SIM)                                                                                                                                                                                                                                        |
|                                     |                               | 1 x Half-size mSATA                                                                                                                                                                                                                                                                 |
| <b>ETHERNET</b>                     | <b>Controller</b>             | 2 x Intel® I210AT PCIe (10/100/1000Mbps)                                                                                                                                                                                                                                            |
| <b>GPS</b>                          | <b>GPS</b>                    | u-blox NEO-M8N onboard<br>NEO-M8U/L as option to support Dead Reckoning                                                                                                                                                                                                             |
| <b>LED</b>                          | <b>Indicators</b>             | 1 x Power LED<br>1 x Storage LED                                                                                                                                                                                                                                                    |
| <b>FRONT I/O</b>                    | <b>Display</b>                | 1 x HDMI<br>1 x DVI-I                                                                                                                                                                                                                                                               |
|                                     | <b>DIO</b>                    | 8-bit Isolated DIO up to 30V Input<br>4 x DI<br>4 x DO                                                                                                                                                                                                                              |
|                                     | <b>CAN-Bus</b>                | 1 x DB9 include 2 x CAN-Bus Ports                                                                                                                                                                                                                                                   |
|                                     | <b>Buttons</b>                | 1 x Reset Button                                                                                                                                                                                                                                                                    |
|                                     | <b>Audio</b>                  | 1 x Speaker Out with Dual 5w Amp                                                                                                                                                                                                                                                    |
|                                     | <b>Antennas</b>               | 1 x SMA Antenna Hole<br>1 x FME Antenna Hole                                                                                                                                                                                                                                        |
| <b>REAR I/O</b>                     | <b>Ethernet</b>               | 2 x GbE (RJ-45)                                                                                                                                                                                                                                                                     |
|                                     | <b>Serial</b>                 | 1 x RS-232/422/485 (DB-9)                                                                                                                                                                                                                                                           |
|                                     | <b>USB</b>                    | 2 x USB 2.0 (type A)<br>2 x USB 3.0                                                                                                                                                                                                                                                 |
|                                     | <b>Antennas</b>               | 1 x SMA Antenna Hole<br>1 x FME Antenna Hole                                                                                                                                                                                                                                        |
| <b>WATCHDOG TIMER</b>               | <b>Output &amp; Interval</b>  | System Reset, Programmable via Software from 1 to 255 Seconds                                                                                                                                                                                                                       |
| <b>POWER</b>                        | <b>Type</b>                   | Wide Range 9~36V with Vehicle Control                                                                                                                                                                                                                                               |
|                                     | <b>Connector</b>              | 3-pin Terminal Block (VCC/ACC/GND)                                                                                                                                                                                                                                                  |
| <b>OS SUPPORT</b>                   |                               | Windows 10 64-bit<br>Ubuntu 18.04<br>CentOS 7                                                                                                                                                                                                                                       |
| <b>MECHANISM</b>                    | <b>Construction</b>           | Aluminum + SPGC Metal                                                                                                                                                                                                                                                               |
|                                     | <b>Mounting</b>               | Wall/VESA Mount                                                                                                                                                                                                                                                                     |
|                                     | <b>Dimensions (W x H x D)</b> | 180mm x 50mm x 121.2mm (W x H x D)                                                                                                                                                                                                                                                  |
|                                     | <b>Weight</b>                 | TBD                                                                                                                                                                                                                                                                                 |
| <b>ENVIRONMENT</b>                  | <b>Operating Temperature</b>  | -40 to 70°C                                                                                                                                                                                                                                                                         |
|                                     | <b>Storage Temperature</b>    | -40 to 85°C                                                                                                                                                                                                                                                                         |
| <b>STANDARDS AND CERTIFICATIONS</b> | <b>Shock</b>                  | MIL-STD-810G 516.6                                                                                                                                                                                                                                                                  |
|                                     | <b>Vibration</b>              | MIL-STD 810G 514.6C-3                                                                                                                                                                                                                                                               |
|                                     | <b>Certifications</b>         | CE/FCC Class B/E-mark (E13)                                                                                                                                                                                                                                                         |

## 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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