



- **EN50155 Qualified**
- **Rugged and Compact**
- **Based on Intel® Atom™**
- **Specialized High Transmit Power Wi-Fi**
- **Low Power and Fanless**
- **IoT Ready**
- **ESF and EC Ready**

## Features

**Rugged and Compact** - The BoltCOR 20-11 is very powerful, yet compact mobile computer. With extended temperature range and rugged circular connectors, it is the ideal platform for harsh environments both in mobile and industrial applications

**Certified to Perform** - Designed to meet the transportation market requirements, the BoltCOR 20-11 is EN50155 compliant and supports features such as opto-isolation on I/O and transient and surge protection on the wide range power supply

**Connected Flexibility** - The BoltCOR 20-11 features a high transmit power Wi-Fi interface ideal for fleet management, logistics, and mobile mesh networking applications. Additionally, a variety of 3G/4G cellular wireless options are available (consult factory).

**Low Power and Fanless** - Designed with high efficiency in mind, the BoltCOR 20-11 delivers exceptional performance and low power consumption

**IoT Ready** - Ideally suited for Industrial & Rugged IoT applications to connect data with the business enterprise to make intelligent and actionable decisions

**ESF & EC Support** - Available with Everyware Software Framework (ESF) to speed up application software development on the device. Also, enjoy the benefits of the Everyware Cloud (EC) to dramatically cut Time-to-Market when building scalable, robust applications that int

## Description

The BoltCOR 20-11 is a rugged mobile computer platform that targets demanding vehicle and industrial installations such as those in heavy industry machinery, rail networks and rolling stock, buses, etc. Thanks to the very compact yet rugged design and integration, the system withstands the mechanical and temperature stresses encountered in harsh environmental conditions while providing an exceptional set of communication options needed in diverse use cases.

The BoltCOR 20-11 provides the computational power of the Intel Atom processor, connectivity through a specialized high transmit power Wi-Fi (standard) and 3G cellular (optional) networks, dual Gigabit Ethernet, a high performance GPS, and plenty of transportation-specific features such as optoisolated I/Os, serial ports, USBs and a wide range power supply.

Being low power, fanless, and compact, the BoltCOR 20-11 is off-the-shelf ready for integration in industrial, railway, automotive and similar applications. In addition, the device is IP65 protected and features high-end rugged connectors making the BoltCOR 20-11 easy to maintain and providing long term reliability in harsh environments.

The BoltCOR 20-11 can leverage Everyware Software Framework (ESF) for fast and reliable device application development and the Everyware Cloud (EC) that provides the entire infrastructure to instantly integrate devices and data into the business enterprise.

## Specifications

|                         |                     |                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------------|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>PROCESSOR</b>        | CPU                 | Intel Atom Z510P, 1.1GHz                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>MEMORY</b>           | RAM                 | 1GB RAM Soldered on Board                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>STORAGE</b>          | SSD                 | 2GB Flash Disk SSD, 8GB DOM                                                                                                                                                                                                                                                                                                                                                                                             |
|                         | Other               | 1x microSDHC Slot (Maintenance)                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>I/O INTERFACES</b>   | Ethernet            | 2x 10/100/1000Mbps                                                                                                                                                                                                                                                                                                                                                                                                      |
|                         | USB                 | 3x USB 2.0 (Maintenance)                                                                                                                                                                                                                                                                                                                                                                                                |
|                         | Serial              | 1x RS-232 (Full-Duplex) – 1x RS-232/RS-422/RS-485 (RS-232/RS-422 Full-Duplex, RS-485 Configurable) – 1x RS-232 (Maintenance)                                                                                                                                                                                                                                                                                            |
|                         | CAN                 | 2x CAN bus                                                                                                                                                                                                                                                                                                                                                                                                              |
|                         | Digital I/O         | 2x Opto-isolated Digital Input – 1x Opto-isolated Digital Input Odometer                                                                                                                                                                                                                                                                                                                                                |
|                         | Video               | 1x VGA (Maintenance)                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>RADIO INTERFACES</b> | Cellular            | GPRS, CDMA 1xRTT, EV-DO Rev. A, LTE (Consult Factory)                                                                                                                                                                                                                                                                                                                                                                   |
|                         | GPS                 | 50 channels Galileo                                                                                                                                                                                                                                                                                                                                                                                                     |
|                         | Wi-Fi               | Dual Band 2.4/5.0GHz IEEE 802.11 a/b/g/n - High TX Output Power up to 25dBm @ a/g/n Bands                                                                                                                                                                                                                                                                                                                               |
|                         | Antennas (External) | 1x SMA GPS, 2x SMA Wi-Fi, 1x Reserved                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>OTHER</b>            | RTC                 | Yes (24 Hours at 25°C Typical)                                                                                                                                                                                                                                                                                                                                                                                          |
|                         | LEDs                | 4x Green LEDs                                                                                                                                                                                                                                                                                                                                                                                                           |
|                         | Buttons             | 1x Reset                                                                                                                                                                                                                                                                                                                                                                                                                |
|                         | SIM Slot            | 1x SIM Card Slot                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>POWER</b>            | Input               | 9 - 36VDC (Nominal 24VDC), Ignition Key Input                                                                                                                                                                                                                                                                                                                                                                           |
|                         | Consumption         | 19W Typical                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>ENVIRONMENT</b>      | Operating Temp      | - 30 to +60°C EN50155 Class T1 (70°C for 10 min)                                                                                                                                                                                                                                                                                                                                                                        |
|                         | Storage Temp        | - 40 to +85°C                                                                                                                                                                                                                                                                                                                                                                                                           |
|                         | Humidity            | < 95% Relative Humidity at +45°C Non Condensing                                                                                                                                                                                                                                                                                                                                                                         |
| <b>CERTIFICATIONS</b>   | Compliance          | Design Qualified to the Following Certifications: EN 50155 (Railway Applications) – EN 61373 (Vibrations & Shocks) – EN 60950 (Safety) – EN 61000 (Burst Immunity Test) – EN 60068 (Temperature Test) – DIN-5510-2 (German Fire and Smoke) and ISO-11170 (Italian Fire and Smoke) – Load Dump (for 24V In): ISO 7637-2 (2004-06) – AREMA Class C Operating Temperature requirements – UL 60950-1, CSA C22.2 No. 60950-1 |
|                         | Ingress             | IP65                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>MECHANICAL</b>       | Enclosure           | Black Ultra-light Extruded Aluminum Alloy Enclosure                                                                                                                                                                                                                                                                                                                                                                     |
|                         | Dimensions          | 254x129x57mm / 10.0x5.08x2.24 in (LxWxH)                                                                                                                                                                                                                                                                                                                                                                                |
|                         | Cooling             | Fanless Design (No Moving Parts)                                                                                                                                                                                                                                                                                                                                                                                        |
|                         | Weight              | 1.5Kg                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>SOFTWARE</b>         | OS                  | Windows Embedded Standard 2009 Support                                                                                                                                                                                                                                                                                                                                                                                  |