CONDUENT
Transportation

Integrated Vehicle Unit for public transit

High performance, onboard processor with integrated communication capabilities that improves real-time data exchange

Integrated Vehicle Unit (IVU)

The Integrated Vehicle Unit (IVU) is an on-board processor that is a durable, open platform designed specifically for the public transit industry. It allows for more integration, expandability, and connectivity with matrixed communications - addressing current vehicle management needs as well as future enhancements. The use of industry standard modules allows for technological change—future-proofing the platform.

Features include:

• Enhanced integration capabilities through a comprehensive set of networking interfaces

• Integrated video

• High performance processor and storage for future expandability

• Industry-standard operating system

A customizable solution for today with adaptability for future growth and innovation.

IVU is a state-of-the-art integrated solution to provide an efficient data collection with both the capability to interface to existing components and the capacity to integrate new technologies and peripheral devices, as well as accommodating memory and processor upgrades to handle increasing data and processing needs.

Technical specifications
Features:

• Processor: Intel Bay Trail Atom E3827 1.75GHz, dual core

• Memory: 4 GBytes DDR3L-1066 RAM- 1, 4Gb removable C-Fast storage, 16Gbytes SSD Primary storage

• LAN 4 x 10/100 Layer 2 switch

• 802.11 a/b/g/n with support for WEP, WPA, WPA2

• Compliant with COM-Express ITS/FTA Smartbus, SAE J1708, J1939, and 1587 Vehicle Area Network (VAN) standards

• Radio network compatibility including: VHF, UHF, and 800/900 MHz trunked simulcast or multicast radio systems

• Interfaces with CDMA, GSM/GPRS cellular, and WiFi systems

• USB 2.0 port, USB 3.0 port

• Six RS-232/RS-422/RS-485 serial ports

• Dual J1708 and CAN/J1939 ports

• Isolated discrete I/O signals- 22 inputs- 13 outputs

• 3 PCIe slots for optional features

• Built-in audio routing features

• 2 x 18W audio amplifiers for internal/external announcements

• HDMI display output

• Front panel status lights (PWR, Storage, WLAN, WWLAN, GPS)

• Smart display port for use with MDT

• uBlox Neo-M8L dead reckoning GPS receiver and 72 channel receiver to support GPS and GLONASS simultaneously

• Optional 2nd 802.11 a/b/g/n card with support for WEP, WPA, WPA2

• Optional backup camera and video capture

Specifications:

• Power requirements continuous: voltage: VDC Max: 32V, Min 9V, SAE J1455 and ISO7637-2 compliant

• Designed to meet the specifications required for heavyduty vehicle applications

Environmental:

• Operating temperature: -30 to 65° C

• Storage temperature: -40 to 85° C

• Vibration: MIL-STD 810G

• IP 54 rated

• MTBF: 50,000 hours

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