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COMPANY

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Metro and Train Transportation Defence

Bus Transportation

Public Safety

Industrial

- Ruggedness
- Reliability
- Extended Temperature
- High Availability
- Scalability



Presence in Asia and Europe





Lyon -France

Bangkok - Thailand

Bangalore - India

Hong Kong (HQ)









INTEGRATED BUS-PC

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Automotive Research Association of India

Research Institute of the Automotive Industry with the Ministry of Heavy Industries & Public Enterprises, Govt. of India

Intelligent Bus DURION integrated SC

DURION integrated SCU – ARAI Certified BUS PC





1. Purpose Built

- Ultra-Rugged sealed IP65 enclosure and connectors
- All-in-one System Connector, M12 Ethernet and TNC connectors
- Power Supply 9-38VDc, with 4-10 second UPS and Ignition control
- Indefinite overvoltage protection to +60VDc, 100VDc transients
- Wide temperature range -25 to +80°C operating
- SATA II Flash Disk for storage and OS
- Microcontroller based monitoring and control system
- Compliant to standards ISO 7637-2 :2011 ISO 16750-2 :2010
- 100% ARAI Certified for compliance to India ITS standards

2. Integrated

- 4th Generation Core i3 processor, up to 2GB 1600MHz DDR3L RAM
- 10/100Mbit ETH, 2x Serial, 2x USB, CAN, CRT Output, 7W Stereo Amplifiers, HD Audio
- GPRS/EDGE/3G modem Data, SMS and Audio Call support, WiFi b/g/n and GPS
- 4x Frame Grabber for NTSC/PAL cameras
- 12/24VDc Digital I/O, 2x Analog Inputs
- +12VDc regulated 40W output for cameras, driver HMI and other devices

3. Future Proof

- Wireless technology agnostic
- Expansion to include additional interfaces with MiniPCle
- Upgradeable to Include Passenger WiFi router functionality







DURION BUS-PC

Ducimon

System Highlights – Monitoring System

1. General

- 32-bit ARM CORTEX processor with USB2.0 Host interface
- Serial port device emulation, easy-to-use command scripts
- Custom functions easy to add

2. Control

- Powering system ON and OFF
- UPS battery charging
- Shutdown process, ignition key controlled of SW Shutdown
- Thermal control of processor and system
- Power control of system, external +12V, audio amplifiers, modem
- Hard reset of 3G modem
- Hard reset and ACPI prower control of CPU
- External ERROR signal indication (Open Collector)

3. Monitoring

- 10-bit ADC for Input voltage, UPS battery voltage, external inputs
- Internal temperature monitoring
- Ignition key and main power failure

4. Event Logging

- EEPROM storage of data
- Start-up parameter and condition storage
- Time stamped event and error logging



Integrated SCU (Single Control Unit) Block Diagram

Α U MiniPCle MiniPCle D **CRT** Wireless Module Wireless Module Display Port 3G+SIM+GPS 802.11b/g/n DC/DC **UPS** Vehicle Grade PSU. Display **GPS** 3G -WiFi **Filers** Input 9-38VDc I/O **Protection** With 5-10s UPS Ignition **Ignition Control** 7+7W Stereo Audio Auxiliary **Switched** HD Audio port 1/0 Conditioned +12VDc 40W **Power Output** 4x MiniPCle 4x Digital Inputs Analogue In CAMERA Direct PAL 2x Digital Outputs **Isolated DIO** IN + DVR Inputs 12/24VDc 2x Analogue Inputs 1x CAN **USB RS-232 RS-485 Ethernet** Port (maintenence) Port **CAN 2.0** 10/100Mbit 2x 1x 1x Interface Interface Interface Service Ethernet (Not Isolated) Port Port Ports Port

Integrated SCU Power Supply System

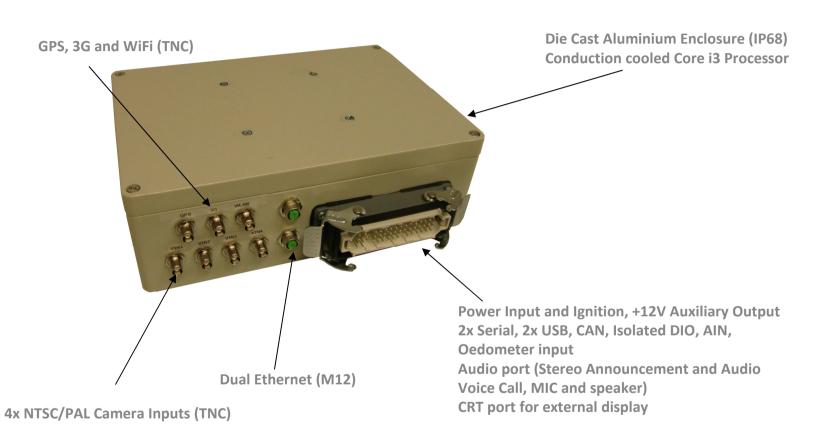
1. Active Protection and Filtering Unit

- Activates at 38VDc 0,5V below power supply maximum
- Active Clamp dissipates transients up to 100VDc for 0,5s without switchoff
- Disconnects input power if voltage exceeds 38VDc over 0,5s
- Indefinite overvoltage and reverse voltage protection to +60VDc
- Input and UPS battery voltage monitoring
- In case of input power disconnection, computer runs on UPS back-up
- Auto-recovery when error condition removed
- Automotive class EMC filter
- Proprietary design of Dragontech

2. Power Supply

- 9-38VDc Input (Clamped to 38VDc) compliance with nominal +12/24VDc battery systems
- Ignition key control with configurable shut-down delay, self power off
- Supercapacitor back-up for 4-10 seconds (depending on load)
- Compliance to relevant automotive standards
- 40W +12VDc Auxiliary regulated switched output for peripherals MMI display, cameras etc.
- Auxiliary power output disconnected during overvoltage error condition
- ISO 7637-2 and ISO 16750-2 compliant with active protection unit

DURION BUS-PC Connectors and Enclosure





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