DCS-211

19” Rackmount Data Collection System

Features

- Intel Atom® x5-E3930 processor
- 8x Digital I/O with 2kVrms isolation, 4x 2A relays in DO-R
- 3x M12 GbE, 1x RJ-45 GbE, 2x isolated RS232/422/485, 2x USB and one lockable HDMI port
- Up to 3x PCI Express mini slots with one USIM card slot each
- Storage: up to 64GB eMMC 5.0, 1x 2.5” SATA drive bay (optional CFast) and onboard M.2 slot

Preliminary



Specifications

- **System**

Processor
Intel Atom® x5-E3930 1.6GHz

Memory
1x SODIMM socket, 4GB DDR3L 1600MHz (up to 8GB)

Storage
eMMC 5.0 32GB (default), 64GB (optional)
1x hot swappable 2.5” SSD or accessible CFast slot on front panel (optional)
1x M.2 slot for SATA storage only (2280 type) supports “M key”

- **External I/O Interfaces**

Ethernet
4x GbE (Intel® I210IT), 1x RJ-45 and 3x M12, 2kVrms isolation
Speed and Activity LEDs on front panel

Serial Port
2x RS-232/422/485 programmable, DB-9 connector on front panel, 1kVrms isolation, supports auto flow

USB 2.0
1x USB 2.0, Type A connector on front panel, 1000mA

USB 3.0
1x USB 3.0, Type A connector on front panel, 1600mA

Graphics Output
1x HDMI (lockable)

Digital Input
8x isolated digital input channels
2.5kVrms optical isolation
Input voltage up to 137.5V (nominal voltage 24/36/72/110V)
8x status LEDs
Reserved redundant design by BOM option
Connector Type: D-sub on front panel

Digital Output
4x DO channels without isolation in D-sub connector
Additional 4x isolated digital output channels and independently controlled internal integrated relays in separate D-sub connector (DO-R)
2.5kVrms optical isolation
NC/NO contacts can be connected to outsider connector
Working voltage from 16.8V to 137.5V (nominal voltage 24/36/72/110V)
Relay working current level 2A DC at 110V, short-term over-load capability
8x status LEDs
Reserved read back design by BOM option

Antennas
7x antenna connector cutouts reserved

CAN/MVB
Two DB-9 connector cutouts on front panel reserved for MVB or CAN modules

GNSS
Supported by Mini PCIe module with one SMA connector reserved

Audio
1x M8 connector audio port on front panel
Analog single-end Line-in
Analog differential Speaker-out

- **Internal I/O**

Mini PCIe
2x Mini PCIe slots (PCIe + USB 2.0) + 1x Mini PCIe slot (USB 3.0), compliant to PCIe mini card spec v1.2; both support Full/Half size modules, w/ USIM for each slot
Two SIM slots are externally accessible with protective covers, support 3G/4G/GPS/CAN/MVB function Mini PCIe modules

USIM
3x SIM slots, one onboard, two externally accessible via front panel with protective cover

USB
1x wafer connector reserved

Specifications

- **Power**

  DC Input
  Input range: 16.8V to 154VDC, 2kVrms isolation
  Max. input current: 0.5A @ 137.5VDC
  A-coded M12 connector with 4 pins, cable type

  Power/Fail Reset
  System reset & power button, 1x power LED

  Power Consumption
  20W typical

  Backup
  Industrial grade coin cell battery, supports RTC

- **Notifications**

  Thermal Sensor
  1x CPU Tj, 2x thermal sensors (located on PCBA top & bottom sides)

  LED Indicators
  Power (on/off)
  Storage activity
  Ethernet activity/speed
  Serial port activity
  Overtemp warning
  1x WDT, 2x user defined
  All LEDs on front panel

- **Mechanical**

  Dimensions
  19" 1.5U rack, 445mm x 250mm x 65.5mm (W x D x H)

  Conformal Coating
  By request

  Mounting
  Rack mount (mounting kit included)

  Weight
  Without rackmount ears: 5.3 kg
  With rackmount ears: 5.76 kg

- **Software**

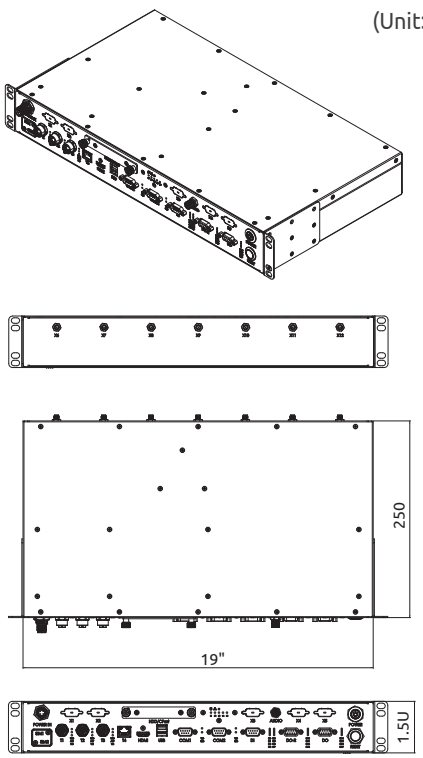
  BIOS
  AMI EFI BIOS

  SEMA
  ADLINK SEMA 3.5 for WDT, hardware monitor, and fail-safe dual BIOS

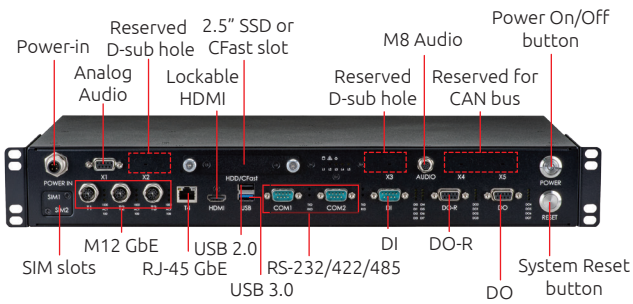
  Operating System
  CentOS
  Linux Ubuntu 16.04 LTS, QT compatible, 64 bit

Mechanical Drawing

(Unit: mm)



Mechanical Layout





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