

# DMI-1210

## 12.1" Driver HMI with Intel Atom® x5-E3930 Processor

### Features

- Intel Atom® x5-E3930 processor, up to 1.8GHz
- 12.1" color display: 4:3, 1024x768 pixels, 600cd/m2, 5-wire resistive touch
- Isolated 2x M12 GbE, 2x DB-9 serial and 1x M8 USB 1.1 ports
- MVB/CAN bus support by PC/104 or Mini PCI Express add-on module
- Built in GNSS and two Mini PCI Express card slots for cellular modem with USIM
- Nominal Voltage: 24VDC, 36VDC, 72VDC and 110VDC (EN50155 compliant)
- IP65 front and IP20 rear ingress ratings



### Specifications

#### System

##### Processor

Intel Atom® x5-E3930 processor, 1.3GHz dual-core with ECC (TDP 6.5W)

##### Display

12.1", 4:3 TFT LCD  
 600cd/m2 luminance  
 700:1 contrast ratio  
 1024x768 pixel resolution  
 5-wire resistive touch  
 Software controlled brightness

##### Memory

DDR3L-1600GHz 4GB by SODIMM (optional 8GB)

##### Storage

1x M.2 slot for SATA module onboard  
 1x CFast slot, accessible with cover  
 eMMC 5.0 32GB by default, 64GB by request

##### Ethernet

2x 1000BASE-T Ethernet ports based on Intel® I210-IT  
 2kV isolation  
 Supports WOL and teaming

##### USB

1x USB 1.1 port with 2kV isolation and M8 connector  
 1x USB 3.0 Type A port with dust cover for maintenance  
 1x USB 2.0 wafer connector onboard

##### Light Sensor

Sensor on front bezel to detect ambient illuminance  
 easy for auto-dimming application development (contact your ADLINK representative)

#### External I/O

2x GbE ports via M12 connector  
 1x USB 1.1 via M8 connector  
 1x USB 3.0 via Type A connector with cover  
 2x DB-9 connectors for MVB or CAN bus  
 1x Mic-in and Line-out port via M8 connector  
 2x DB-9 RS-232/422/485 serial ports  
 5x antenna cutouts

#### Internal I/O

2x full size Mini PCI Express slots  
 2x micro-SIM slots (one is on the bottom side of mainboard)  
 1x USB 2.0 wafer connectors

#### Wireless

2x Mini PCIe card slots are available for cellular modem or WLAN modules  
 Compliant to Mini PCIe card spec v1.2 (PCIe and USB 2.0)  
 Each Mini PCIe slot supports one micro-SIM  
 4x RP-SMA antenna connector cutouts

#### GNSS

Built in 72 channel high sensitivity GNSS receiver  
 GPS/QZSS L1 C/A, GLONASS L10F, BeiDou B1I, Galileo E1B/C  
 SBAS L1 C/A: WAAS, EGNOS, MSAS, GAGAN  
 1x SMA antenna connector

#### MVB

Supported by PC/104 or Mini PCIe card with two DB-9 outputs

#### CAN

Supported by Mini PCIe card with two DB-9 outputs

#### Power Supply

One 4-pin A-coded M12 connector  
 +24V/+36V/+72V/+110VDC nominal power input (16.8V to 137.5V, EN50155 compliant)

#### Power Consumption

Max. 22W at 100% loading of CPU

## Specifications

### ● Mechanical

#### Dimension

310 x 248 x 87.3 mm (w/o power connector)

#### IP rating

IP65 front, IP20 rear (IP42 rear by request)

#### Weight

4.6 kg without add-on modules

### ● Status LEDs

Power Status

GbE Activity

COM Tx/Rx Activity

### ● Software

#### BIOS

AMI

#### Board management

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

#### OS

Linux Ubuntu 16.04 LTS, Qt compatible, 64-bit

Windows 10

### ● Environmental

#### Operating Temperature

-25°C to +70°C, EN50155 OT3 class

#### Storage temperature

-40°C to +85°C

#### Humidity

10-90% RH operating, non-condensing

5-95% RH storage, EN 60068-2-30, EN 50155

#### Vibration

EN50155 standard, method EN61373: 2010, Category 1 Class B

#### Shock

EN50155 standard, method EN61373: 2010, Category 1 Class B

#### Safety

EN50124-1 (isolation compliance)

#### EMC

EN 50155, EN 50121-3-2

EN 303413 (GNSS)

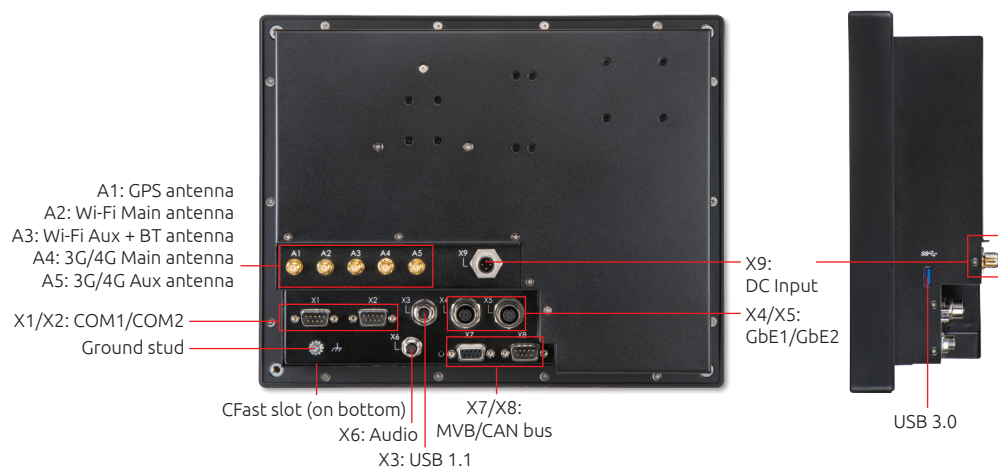
EN 301489-1, EN 301489-19 (GNSS)

#### Altitude

4572m (15000ft) at 25°C

MIL-STD-810G Method 500.5, Procedure II2

## Mechanical Layout



## Ordering Information

- DMI-1210-02, CC**  
 12.1" touch panel PC, Intel Atom® x5-E3930, DDR3L 1600 4GB, no GNSS, no Mini PCIe cellular modules, no MVB module, IP20, conformal coating
- Starter cable kit-DMI-A**  
 1x 4-pin A-coded M12 AC/DC power supply cable  
 2x 8-pin A-coded M12 to RJ45 Ethernet cable  
 1x 4-pin M8 to type A USB 1.1 cable  
 1x 6-pin M8 to microphone and speaker cable  
 2x 9-pin D-sub male-to-female cables for MVB
- PC/104 MVB kit**  
 1x PC/104 MVB card, Duagon D113L.T-P4B2 (PD only, EMD type)  
 2x 9-pin D-sub male-to-female cables
- Mini PCIe Card MVB kit**  
 1x Mini PCIe MVB card, Duagon D017M-P-T-I1-Y30C-M3 (PD only, EMD type)  
 1x Y-split cable to 9-pin D-sub 1x male + 1x female (TBD)
- Mini PCIe Card CAN bus kit**  
 1x Mini PCIe CAN card, ANTZER FARO-HS100  
 1x Y-split cable to 9-pin D-sub 2x male
- Mini PCIe Card cellular kit 01 (for TW, China)**  
 1x Mini PCIe GSM/TD-SCDMA/CDMA/WCDMA/LTE module (SIMCOM SIM7100C-PCIE)  
 2x external antennas  
 2x internal RF cables
- Mini PCIe Card cellular kit 02 (for Europe)**  
 1x Mini PCIe GSM/TD-SCDMA/CDMA/WCDMA/LTE module (SIMCOM SIM7100-PCIE)  
 2x external antennas  
 2x internal RF cables
- Mini PCIe Card WiFi/BT kit**  
 1x Mini PCIe WiFi/BT module (AMPAK AP12356\_I)  
 2x external antennas  
 2x internal RF cables

## Mechanical Drawing

