

MOBL-D2

Universal Mobile Computer

FEATURES

- Very low-power CPU
- Economical without sacrificing reliability
- Smallest computer of its class
- -30°C to 71°C fanless operation
- Meets MIL-810F shock and vibration
- Built-in shock-mediation, mounting plate
- Meets FCC and CE for emissions
- Made in USA

Power Supply

- 9V to 36V input voltage range
- Extensive transient protection
- Ignition switch input for smart OS shutdown

Wireless

- 50-channel GPS, best in class for fast lock and sensitivity - **included**
- Connectors for WiFi, GSM, etc

Modular/Expandable

- PCI/104 and Mini PCI

Connectivity and I/O

- COM - Two RS-232 and one RS-485
- USB - Two ports, USB 2.0, 1 rear service port
- Digital I/O - Four inputs to 32V, one output
- Ethernet - 10/100 Mb
- Video - VGA displays to 1280 x 1024
- CAN Bus

Compatible Operating Systems

- Windows® Embedded or Linux
- All drivers included

Applications

- Public Transit Systems
- Construction Vehicles
- Military
- Mining
- Trucking
- Solar system control
- Fuel distribution systems
- Electronic signage



DESCRIPTION

The MOBL-D2 excels in demanding applications like police, trucking, emergency vehicles, transit systems and other applications where the cost of failure is unacceptably high. The careful circuit design, component selection, testing and superior heat dissipation maximize reliability and minimize costly downtime. The use of military connectors for I/O further enhances reliability where cable stress would damage PC style connectors. The shock suppression system is designed for 24/7 abuse, not just passing a brief MIL test.

Long-term reliability is at the core of our design philosophy. The MOBL-D2 incorporates the field-proven, Octagon Hedgehog® power supply technology, providing superior protection from the severe transients common in mobile power systems. It rejects load dumps, repeated transients and overvoltage.

A unique design tightly integrates the electrical, thermal and mechanical components into a complete system with no compromise to any one segment. It is designed for applications where severe environments and high performance meet. This successful design philosophy allows fanless operation over a conservative -30°C to 71°C range, by using components rated for -40°C to 85°C.

The fully developed and proven platform accelerates your design process. It can be supplied with Windows Embedded or Linux pre-installed with all drivers.

Call Octagon Sales for help in optimizing a solution
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SPECIFICATIONS

Low-Power Processor

- DMP Vortex 86MX
- 6-stage pipeline
- Floating point unit
- 4-way L2 cache
- 800 MHz clock speed
- Maximum power - 2.5W

DRAM Memory

- 1 GB DDR2, industrial temperature grade, surface-mounted

CompactFlash

- Industrial temperature grade, error-correcting, automatic wear-leveling (optional)

Serial Ports

- Two RS-232, two-wire plus ground, one RS-485
- All ports to 115KB

USB Ports

- Two 2.0 ports, speeds 1.5, 12 and 480 Mb/s, one rear service port

Ignition Input

- Assures orderly shutdown when the engine turned off, preventing data loss

Digital I/O

- One output, switches to ground, 100 mA
- Four input lines, voltage detect 10mA current limited

Ethernet Ports

- One 10/100 Base-T port

Wireless Ports

- 50-channel GPS, fast lock, -160 dBm sensitivity, high immunity to jamming, female TNC connector
- Rugged "N" connectors for WiFi, GSM, Mesh, etc.

Video

- VGA video to 1280 x 1024 resolution
- Display power, touchscreen and display controls through video connector

Keyboard and Mouse

- Supported through USB ports

Power Supply

- 9-36VDC input voltage (10-32 VDC continuous)
- Protection - load dump, reverse voltage, brown-out and transient protection
- ATX mode compatible

Power Consumption

- 6-11W at 27VDC input depending upon operating conditions. Less than 1.5W in standby

Status LEDs (bi-color)

- Indicate different power states
- Ethernet link and activity
- Status light programmed by user

Environmental

- -30°C to +71°C ambient air temperature
- Humidity: 5-95% non-condensing
- Fanless operation over the full temp range
- Allow 50 mm on five of six sides for natural convection when used in ambients above 50°C
- For user-added electronics derate 2°C/W
- Shock & vibration - MIL STD 810F, method 516 20g shock and 5g vibration

Emissions

- Meets FCC and CE Class A requirements

Mechanical

- Size: 180 mm wide, 103 mm high, 253 mm deep, including connectors and shock suppression plate (7.1" x 4.0" x 10")
- Shock mediation system withstands millions of shock cycles
- Weight: 2.26 kg (4.98 lbs)
- External Finish: Powder coat paint

CAN/DIG Connector

- Four Digital IN, One Digital OUT and CAN Bus

Power Connector

- 24V vehicular power and ignition switch

SER/USB Connector

- Four serial ports & two USB ports

Display Connector

- Video, power, touchscreen, control & video

ORDERING INFORMATION

- #9183R MOBL-D2 computer
- #8339 Power Cable, 6 feet with wire leads
- #4907914 4 GB, industrial grade, error-correcting, CompactFlash

Represented by: