CM1-86DX3

Extreme Rugged™ PC/104 Single Board Computer with Vortex86DX3 System-on-Chip

Features

- Ultra low power, DM&P Vortex86DX3 SoC
- Full ISA bus support
- 2GB soldered DDR3
- 1x GbE, 1x Fast Ethernet
- SATA, CFast
- VGA and 18/24-bit single channel TTL/TFT
- Supports Smart Embedded Management Agent (SEMA) functions



Specifications

- **Core System**
  - **CPU**
    Vortex86DX3 SoC, 1.0 GHz
  - **Memory**
    2GB soldered DDR3
  - **BIOS**
    AMI BIOS, integrated in SoC
  - **SEMA®**
    Yes
  - **Hardware Monitor**
    2x LAN, watchdog
  - **Watchdog Timer**
    Yes, 3 different
  - **Expansion Busses**
    PC/104 (ISA)
- **Ethernet**
  - **Intel® MAC/PHY**
    1x integrated PHY (10/100 Mbit)
    1x Intel® i210IT (10/100/1000 Mbit)
- **Video**
  - **VGA Interface**
    Yes
  - **LVDS Interface**
    18/24-bit single channel
- **Power**
  - **Standard Input**
    AT mode (5V DC +/-5%)
  - **Power States**
    No ACPI
  - **Power Consumption**
    Approx. ~ 6 to 7 W

Specifications

I/O Interfaces

USB
2x USB 2.0

SATA
1x SATA

Serial
2x RS-232/422/485 serial ports, 2x RS-232 serial ports

PS2
Keyboard and mouse

GPIO
Standard: 8x

Operation System

Standard Support
WES2009, WES7, Linux, QNX

Extended Support (BSP)
WEC7, WinCE 6.0 (on request)

Mechanical and Environmental

Form Factor
PC/104 Specification 2.6

Dimension
96 mm x 90 mm (3.775” x 3.550”)

Operating Temperature
Standard: 0°C to +60°C

Humidity
10% to 90% (non-condensing)

Shock and Vibration
Non-operating: 50G peak-to-peak, 11ms duration, MIL-STD-202G Method 213B
Operating: 11.95 Grms, 50-2000 Hz, each axis, MIL-STD-202G Method 214A

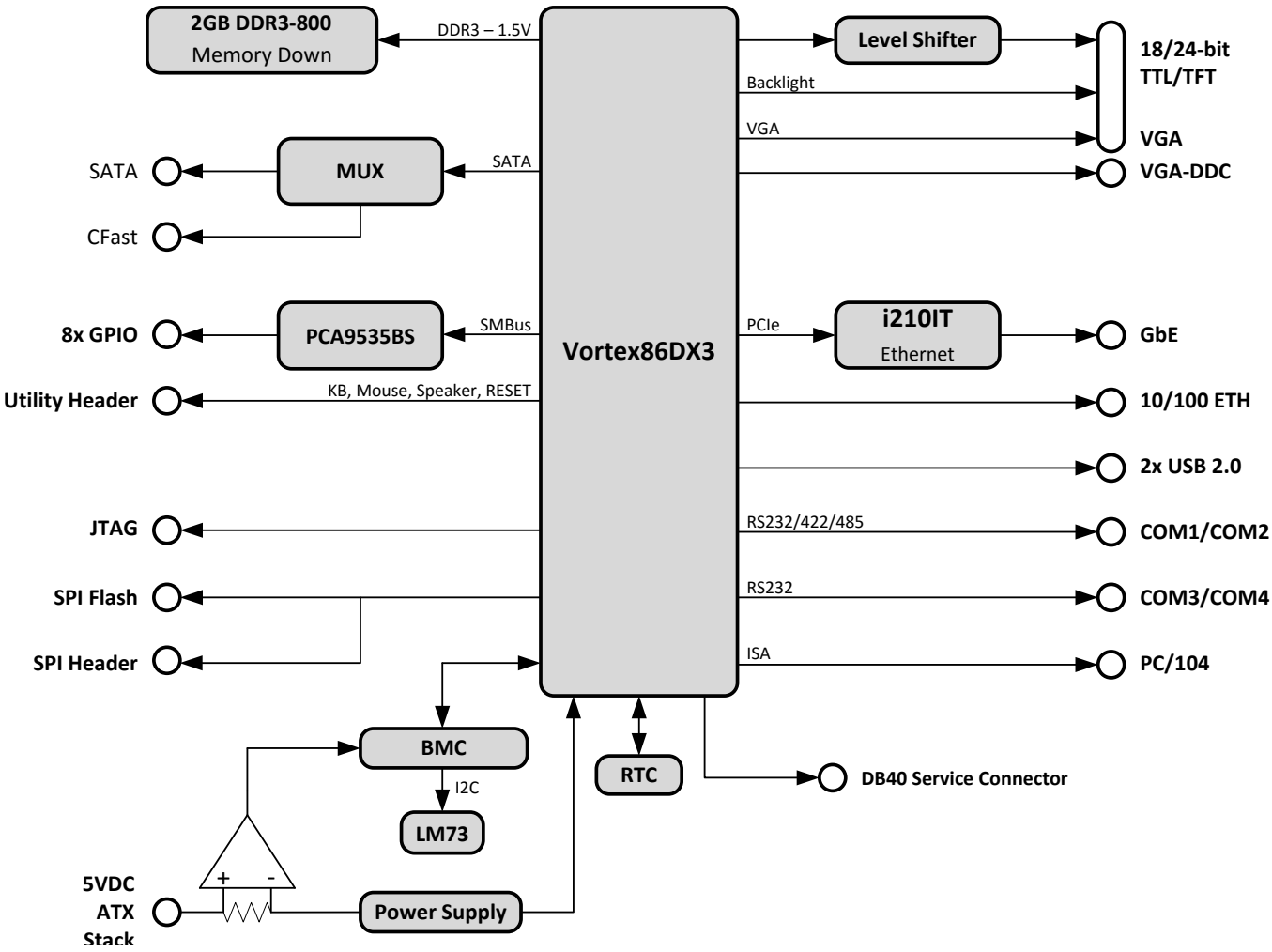
Storage Temperature
-55°C to +85°C

Cooling
Passive

Intelligent Middleware

SEMA®
Local management, control of embedded computer systems
Extended EAPI for monitoring, controlling and analytics applications
Multiple OS support and across platforms (x86, ARM)

Functional Diagram



Ordering Information

- **CM1-86DX3**
  PC/104 with Vortex 86DX3, 2GB soldered DDR3, 10/100 Ethernet, GbE, CFast socket, TTL LCD and VGA display
- **CM1-86DX3-X-01**
  CM1-86DX3 cable kit
- **CM1-86DX3-TM-10**
  CM1-86DX3 Aluminum heatsink 0°C to +60°C
- **CM1-86DX3-TM-20**
  CM1-86DX3 Aluminum heatsink -40°C to +85°C

*other configurations by request

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