

# 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®**

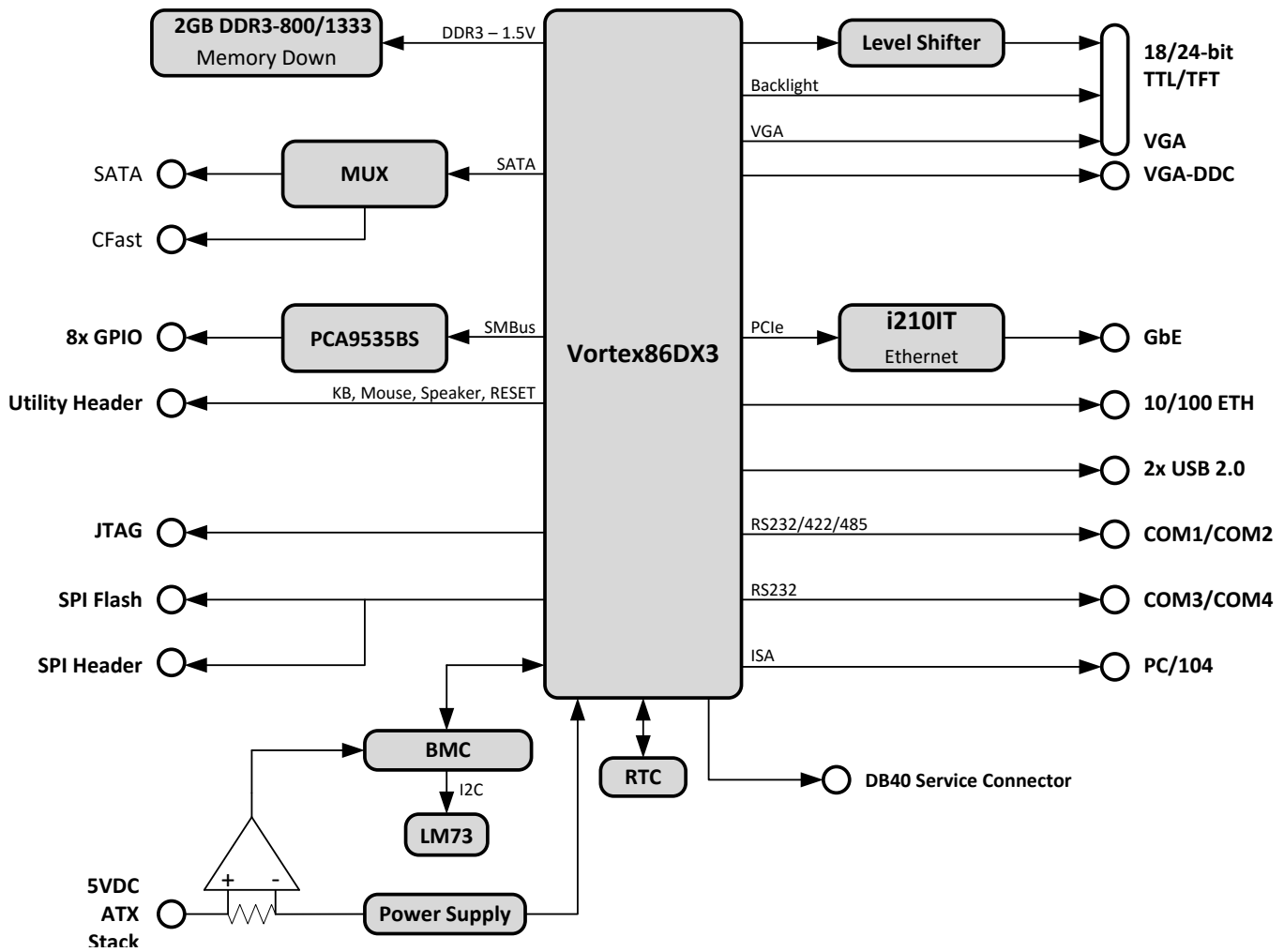
Local management, control of embedded computer systems

Extended EAPI for monitoring, controlling and analytics applications

Multiple OS support and across platforms (x86, ARM)



## Functional Diagram



## Ordering Information

- **CM186DX3**  
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-20**  
CM1-86DX3 Aluminum heatsink

\*other configurations by request