RoBoard RB-110

RoBoard RB-110 Single Board Computer (RB-Boa-05)

The RoBoard is the heart of robotics making your robot more active and intelligent. This is not just a simple robot controller, but a truly computer based solution using the Vortex86DX, a 32bit x86 CPU running at 1000MHz with 256MB DRAM.

RoBoard allows users to install the Windows and Linux series O/S through the Micro-SD card as bootable storage, allowing users to more easily develop robotic applications.

RoBoard has rich I/O interfaces for servo motors, DC motors, sensors (gyroscope, accelerometers and other devices). Also, it has built-in PWM 16 channels to control servo motors or other devices, High Speed RS-232 serial, TTL serial, RS-485, USB V2.0 x 3, 8 channels 10-bit Analog to Digital Conversion, SPI/I2C bus, Audio out & Microphone in, 10/100M LAN and Mini PCI socket for adding off-the-shelf Mini PCI components.

Furthermore the DC input range of RoBoard is from 6V to 24V and the dimensions are as small as 96 x 56 mm!

- Powerful Computer dedicated to robotics applications
- Based on the Vortex86DX, a 32bit x86 CPU running at 1000MHz with 256MB DRAM
- High Speed Serial Port (Up to 12M)
- Compatible with Windows, Linux and DOS
- Open Source C++ Library for RoBoard's unique I/O functions (sensors, actuators, etc.)
- A perfect solution for Microsoft Robotics Studio development

	RB-100
CPU	DM&P Vortex86DX- 1000MHz
Memory	256MB DDR2 onboard
ADCs	● Analog Devices AD-7918 10-bit
Hi-Speed USB UART	● FTDI FT2232HL Hi-Speed UART
I /O Interface	● Micro SD slot x1 ● USB port x 1 (USB 2.0 version)
Connectors	● 2.54 mm 3-pin box header for PWM x 16 ● 2.54 mm 10-pin box header for RS-232 x1 ● 2.54 mm 10 pin box header for High speed (COM 6) x 1 ● 2.0 mm 4 pin header for High speed (COM 5) x 1 ● 2.0 mm 4-pin header for RS-485 x 1 ● 2.0 mm 4-pin header for TTL serial x 2 ● 1.25mm 6-pin wafer for I2C x1 ● 2.54 mm 16-pin header for A/D x1 ● 2.54 mm 10-pin box header for USB x1 ● 1.25 mm 4-pin wafer for LAN x 1 ● 1.25mm 6-pin wafer for JTAG x1 ● 0.8mm 124-Pin Mini PCI Card connector ● 3.96 mm 2 pin for Power x 2
Resolution	PWM : 20ns Serial : 115200bps High Speed Serial : Up to 12Mbps I^2C : 1Kbps ~ 3.3Mbps
Compatible O/S:	DOS, Windows 98/ME, Windows XP, Windows Embedded CE Windows Embedded Standard (XPe) Linux distribution kernel 2.4.24, 2.4.26.
Power Consumption	+5V @ 400mA
Power Input	DC-in 6V to 24V
Dimension	96mm X 56mm
Weight	40g

Mini PCI

Power Input
(Board)

Power Input
(PWM)

COM 6
(Hi-Speed)

COM 1

USB

USB

PWM S1-S16

RS-485

LAN

I²C

COM 3
TTL

COM 4
TTL

COM 5
(Hi-Speed)

A/D

DM&P
Vortex86DX
0928-D-PBGA
CFA-4K22576-01
ISOinChip®