PCI-M512U

Universal PCI, 512 KB SRAM Board with 12-ch DI, 16-ch DO

Features

- Universal PCI (3.3 V/5 V) Interface
- 512 KB SRAM Onboard
  - Two Li-batteries, BT1 & BT2, for dual battery-backup the data of the RAM
  - Unlimited Write Endurance
- 16-channel, 5 V/TTL Digital Output
- 12-channel, 5 V/TTL Digital Input

Introduction

The PCI-M512U provides battery-backup 512 KB SRAM, 12-bit DI and 16-bit DO. In addition, the PCI-M512U supports both 5 V and 3.3 V PCI bus.

The PCI-M512U is equipped with two Li-batteries to maintain the content of the 512 KB SRAM when PC power loss occurs. The two Li-batteries can continue supplying power to the SRAM to retain the important data for 10 years. The two-battery design also makes it safe to replace new batteries without losing data; when one battery is taken out for replacing a new one, the other continues to provide power to the SRAM.

4 LED indicators on the board are provided for giving clear understanding of the battery states such as normal, low voltage or fault. The PCI-M512U is an ideal solution for improving system reliability.

Pin Assignments

Pin Assignment	Terminal No.		Pin Assignment
DO 0	01	02	DO 1
DO 2	03	04	DO 3
DO 4	05	06	DO 5
DO 6	07	08	DO 7
DO 8	09	10	DO 9
DO 10	10	12	DO11
DO 12	12	14	DO 13
DO 14	14	16	DO 15
GND	16	18	GND
+5 V	18	20	+12 V

CN1

Pin Assignment	Terminal No.		Pin Assignment
	01	02	
	03	04	
DI 4	05	06	DI 5
DI 6	07	08	DI 7
DI 8	09	10	DI 9
DI 10	11	12	DI 11
DI 12	13	14	DI 13
DI 14	15	16	DI 15
GND	17	18	GND
+5 V	19	20	+12 V

CN2

Ordering Information

PCI-M512U CR	Universal PCI, 512 KB SRAM Board with 12-ch DI, 16-ch DO (RoHS)

Software

Drivers

- ☑ 32/64-bit Windows 10/11
- ☑ Linux

Sample Programs

- ☑ DOS Lib and TC/BC/MSC Demo
- ☑ VB/VC/Delphi/VB.NET/C#.NET/VC.NET/LabVIEW/Python/MATLAB

Hardware Specifications

Memory	
Type	SRAM
Size	512 KB
Hardware	
Connector	20-pin box header x 2
Card ID	Yes (4-bit)
Digital Input	
Channels	12
Type	5 V/TTL
ON Voltage Level	2.0 V Min.
OFF Voltage Level	0.8 V Max.
Response Speed	1.0 MHz (Typical)
Trigger Mode	Static Update
Digital Output	
Channels	16
Type	5 V/TTL
Operation Mode	Static Update
Load Voltage	Logic 0: 0.4 V Max. Logic 1: 2.4 V Min.
Load Current	Sink: 2.4 mA @ 0.8 V Source: 0.8 mA @ 2.0 V
Response Speed	1.0 MHz (Typical)
PC Bus	
Type	3.3 V/5 V Universal PCI, 32-bit, 33 MHz
Data Bus	8-bit
Power	
Consumption	580 mA @ +5 V
Mechanical	
Dimensions (mm)	86 x 134 x 22 (W x L x D)
Environmental	
Operating Temperature	0 ~ +60°C
Storage Temperature	-20 ~ +70°C
Humidity	5 ~ 85% RH, Non-condensing