



PCI-M512U

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

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.

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 16-ch DI, 16-ch DO (RoHS)
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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



Software

Drivers

- 32/64-bit Windows 10/11
- Linux

Sample Programs

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

Hardware Specifications

Memory	
Type	SRAM
Size	512 KB
Hardware	
Card ID	Yes (4-bit)
Connector	20-pin box header x 2
Digital Input	
Channels	12
Type	5 V/TTL
TTL Input, ON Voltage Level	2.0 V Min.
TTL Input, 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
Voltage	Logic 0: 0.4 V Max. Logic 1: 2.4 V Min.
Max. 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