Notice

This guide is designed for experienced users to setup the system in the shortest time.

Safety Precautions

Always completely disconnect the power cord from your board whenever you are working on it. Do not make connections while the power is on, because a sudden rush of power can damage sensitive electronic components.

Always ground yourself to remove any static charge before touching the board. Modern electronic devices are very sensitive to static electric charges. Use a grounding wrist strap at all times. Place all electronic components on a static-dissipative surface or in a static-shielded bag when they are not in the chassis

Introduction to PER-T276 (NVRAM)

The PER-T276 is a kind of non-volatile memory, which helps protect the system from suffering data loss when power supply suddenly being turned off. The PER-T276 supports 4-Mbit memory, which is connected with M/B by low-pin-count interface. If you want to implement this non-volatile memory into any system or main board, please kindly contact your sales representative to make sure the compatibility between PER-T276 and M/B & system. You may also visit AAEON website for the latest version of the instruction. Please refer to http://www.aaeon.com .

Product Warranty

AAEON Customer Services

All products in AAEON are designed as the strictest specifications to ensure that the products will own the reliable performance in the typical industrial environments. Whether your purchase from AAEON is made to the purpose of the laboratory or the factory facility, you can be assured that every purchase in AAEON will provide the reliability and stability of operation. Your satisfaction is our primary concern. Here is a guide for AAEON's customer services. To ensure you get the full benefits of our services, please follow the instructions below step by step.

Technical Support

We require you to get the maximum performance from your products. If you run into technical difficulties, we'll be here always for you. For the most frequently asked questions, you can easily find solutions in your product documentation. Therefore, we suggest strongly that you can read it before asking for a customer service over the phone. If you still cannot find the answer, gather all questions you can think of and have the product at hand before giving a call to your dealer. All dealers of AAEON are well-trained and ready to provide you as many supports as we can. Based on the customer service we've encountered until now, most of problems are minor and able to be easily solved over the phone. In addition, free-charged technical

support is available from AAEON engineers in the office time. We are always pleased to give advice regarding to any installation and operation for AAEON products.

Ordering Information

● Please go for AAEON website: www.aaeon.com to make sure the latest updated order information.

Packing List

- 1   PER-T276 (NVRAM) module

- 1   Cable with low-pin-count

- 1   CD-ROM for QIG (in PDF format)

Content

1.1 Feature

1. Signal going by Low-Pin-Count (LPC) interface

2. NVRAM 1-Mbit x 4 on module

3. No extra power input needed

4. 3.3V extra power input connector on board (To support the stability, if needed)

5. Grounding connector x 2 for the signal clear

6. 690 micro seconds for writing one block data (255 bits inside) in the office temperature, around 25°C~30°C (data from LPC connector to NVRAM)

7. 690 micro seconds for reading one block data (255 bits inside) in the office temperature, around 25°C~30°C (data from NVRAM connector to LPC connector)

8. Windows XP and Windows 7 support

1.2 Specification

|		
●	Form Factor	PCI-Express Mini Card (30mm x 56mm)
●	Interface	Low-Pin-Count
●	Non-Volatile Memory	Non-Volatile 4-Mbit memory
●	OS	Windows XP 32 bits and 64 bits, Windows 7 32 bits and 64 bits
●	Performance	1. 690 micro seconds for writing one block data (255 bits inside) in the office temperature,

around 25°C~30°C (data from LPC connector to NVRAM)

2. 690 micro seconds for reading one block data (255 bits inside) in the office temperature, around 25°C~30°C

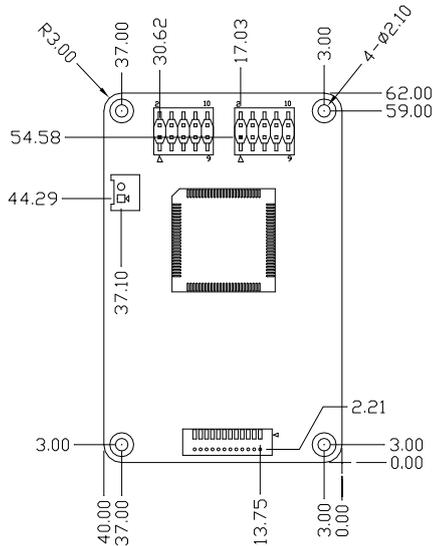(data from NVRAM connector to LPC connector)

- ● Operating Temperature   -4°F ~ 140°F (-20°C ~ 60°C)

- ● Storage Temperature   -4°F ~ 158°F (-20°C ~ 70°C)

- ● Storage Humidity   5 ~ 90% @ 40°C, non-condensing

1.3 Location of Connectors
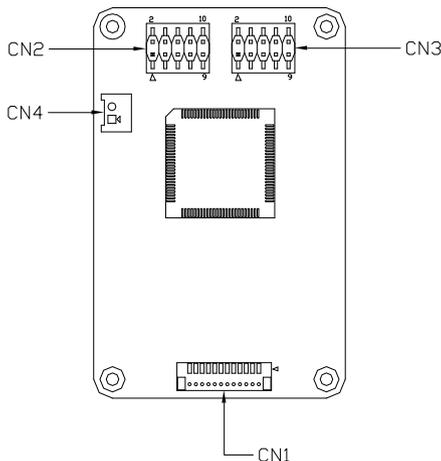
1.4 Mechanical Drawing

1.5 List of Connectors

The board has a number of jumpers that allow you to configure your system to suit your application.

The table below shows the function of each of the board's connectors:

Label	Function
CN1	LPC Connector
CN2	JTAG Connector
CN3	8-pin GND
CN4	External +3.3V Input

1.6 LPC Connector (CN1)

Pin	Signal	Pin	Signal
1	LAD0	2	LAD1
3	LAD2	4	LAD3
5	+3.3 Volt.	6	LFRAME#
7	LRESET#	8	GND
9	LPC_CLK		

1.7 JTAG Connector (CN2)

Pin	Signal	Pin	Signal
1	TDO	2	TCK
3	TDI	4	TMS
5	+3.3V	6	GND

1.8 GND Pin Connector (CN3)

Pin	Signal	Pin	Signal
1	GND	2	GND
3	GND	4	GND
5	GND	6	GND
7	GND	8	GND

Product photos

Component side

Solder side

Cables

Below Table for China RoHS Requirements
产品中有毒有害物质或元素名称及含量

AAEON Main Board/ Daughter Board/ Backplane

部件名称	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
印刷电路板 及其电子组件	×	○	○	○	○	○
外部信号 连接器及线材	×	○	○	○	○	○

O：表示该有毒有害物质在该部件所有均质材料中的含量均在
　　SJ/T 11363-2006 标准规定的限量要求以下。

X：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出
　　SJ/T 11363-2006 标准规定的限量要求。

备注：此产品所标示之环保使用期限，系指在一般正常使用状况下。