

## Notice

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

## Safety Precautions

### **Warning!**



*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.*

### **Caution!**



*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*



## **A Message to the Customer**

---

First of all, thank you for purchasing PER-V02B Mini PCI TTL to DVI Module. This Quick Installation Guide will help you on the process of the installation. Please read it thoroughly before you start to install it. The product comes with a sheet of warranty for two years assurances except for improper use. Therefore, we strongly suggest you to read and refer to the Quick Installation Guide before any installation. You may 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. 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. The guide is for your quick and accurate installation so please refer to it first. We strongly suggest you to 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

---

- PER-V02B-A10  
Mini PCI TTL to DVI LCD Signal Conversion Module

## Packing List

---

- TTL LCD Cable
- Quick Installation Guide
- PER-V02B

## Optional Accessories

---

- 1700200200 DVI Cable
- 1703400207 TTL Cable

# Content

A Message to the Customer .....	2
Product Warranty .....	3
Ordering Information .....	5
Packing List.....	5
Optional Accessories .....	5
1.1 Features .....	7
1.2 Specifications .....	7
1.3 Location of Jumpers and Connectors .....	8
1.4 Mechanical Drawing.....	8
1.5 List of Jumpers.....	9
1.6 PIXS & EDGE Selection (JP1) .....	9
1.7 List of Connector .....	9
1.8 DVI Internal Connector (DVI1) .....	9
1.9 DVI External Connector (CN2) .....	10
1.10 TTL_LCD DF13-10P Connector (CN1) (Optional) .....	11
1.11 TTL_LCD DF13-40P Connector (CN3).....	11
1.12 TTL_LCD DF13-20P Connector (CN4).....	12
1.13 Power Connector (CN5) .....	13

## 1.1 Features

---

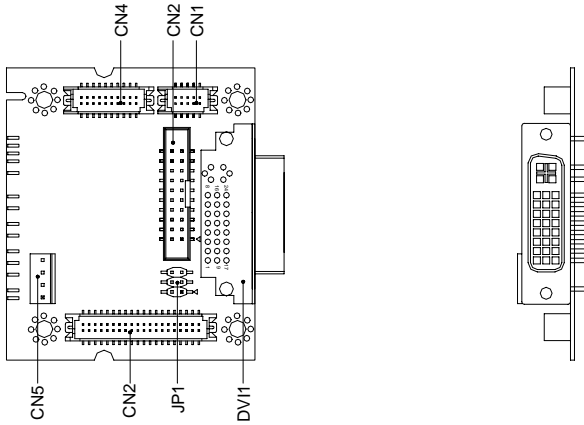
- Supports TTL to DVI LCD Signals Conversion
- Resolution Supports up to 1600 x 1200

## 1.2 Specifications

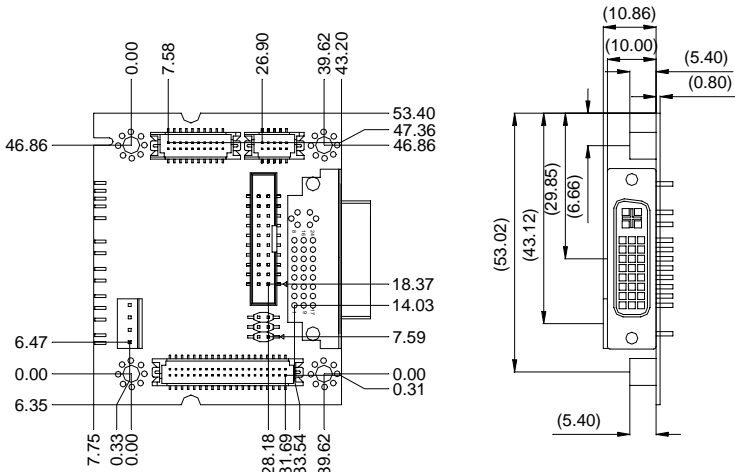
---

- Form Factor: Mini PCI Type III A  
(50.8mm x 59.6mm)
- Signal Conversion Chipset: Silicon Image Sil1160CTU
- Power Request: +3.3V
- Operating Temperature: 32°F~140°F (0°C~60°C)

### 1.3 Location of Jumpers and Connectors



### 1.4 Mechanical Drawing





## 1.5 List of Jumpers

Label	Function
JP1	PIXS Select &EDGE Select

## 1.6 PIXS & EDGE Selection (JP1)

Label	Function
1-3	Two pixel per clock (for 36/48-bits)
3-5	One pixel per clock (for 18/24-bits)(Default)
2-4	Latched on the rising edge of IDCK
4-6	Latched on the falling edge of IDCK (Default)

## 1.7 List of Connector

Label	Function
DVI1	DVI Internal Connector
CN1	TTL_LCD DF13-10P Connector
CN2	DVI External Connector
CN3	TTL_LCD DF13-40P Connector
CN4	TTL_LCD DF13-20P Connector
CN5	POWER Connector

## 1.8 DVI Internal Connector (DVI1)

Pin	Signal	Pin	Signal
1	DVI_TX2-	2	DVI_TX2+
3	GND	4	NC
5	NC	6	DDC_CLK
7	DDC_DATA	8	NC

9	DVI_TX1-	10	DVI_TX1+
11	GND	12	NC
13	NC	14	+5V
15	GND	16	HPDET
17	DVI_TX0-	18	DVI_TX0+
19	GND	20	NC
21	NC	22	GND
23	DVI_TXC+	24	DVI_TXC-

### 1.9 DVI External Connector (CN2)

Pin	Signal	Pin	Signal
1	DVI_TX1+	2	DVI_TX1-
3	GND	4	GND
5	DVI_TXC+	6	DVI_TXC-
7	GND	8	+5V
9	HPDET	10	+5V
11	DVI_TX2+	12	DVI_TX2-
13	GND	14	GND
15	DVI_TX0+	16	DVI_TX0-
17	NC	18	NC
19	DDC_DATA	20	DDC_CLK

### 1.10 TTL\_LCD DF13-10P Connector (CN1) (Optional)

Pin	Signal	Pin	Signal
1	GND	2	GND
3	O_BLUE0	4	O_BLUE1
5	O_GREEN0	6	O_GREEN1
7	O_RED0	8	O_RED1
9	GND	10	GND

### 1.11 TTL\_LCD DF13-40P Connector (CN3)

Pin	Signal	Pin	Signal
1	+5V	2	+5V
3	GND	4	GND
5	+3.3V	6	+3.3V
7	GND	8	GND
9	E_BLUE0	10	E_BLUE1
11	E_BLUE2	12	E_BLUE3
13	E_BLUE4	14	E_BLUE5
15	E_BLUE6	16	E_BLUE7
17	E_GREEN0	18	E_GREEN1
19	E_GREEN2	20	E_GREEN3
21	E_GREEN4	22	E_GREEN5
23	E_GREEN6	24	E_GREEN7
25	E_RED0	26	E_RED1

27	E_RED2	28	E_RED3
29	E_RED4	30	E_RED5
31	E_RED6	32	E_RED7
33	GND	34	GND
35	ODCK	36	VSYNC
37	DE	38	HSYNC
39	NC	40	NC

### 1.12 TTL\_LCD DF13-20P Connector (CN4)

Pin	Signal	Pin	Signal
1	GND	2	GND
3	O_BLUE2	4	O_BLUE3
5	O_BLUE4	6	O_BLUE5
7	O_BLUE6	8	O_BLUE7
9	O_GREEN2	10	O_GREEN3
11	O_GREEN4	12	O_GREEN5
13	O_GREEN6	14	O_GREEN7
15	O_RED2	16	O_RED3
17	O_RED4	18	O_RED5
19	O_RED6	20	O_RED7

### 1.13 Power Connector (CN5)

---

Pin	Signal
1	+12V
2	GND
3	GND
4	+5V

---

**Note:**

1. Connecting CN3 for 18-bit, 24-bit LCD.
2. Connecting CN3 & CN4 for 18-bit, 24-bit, 36-bit LCD.
3. Connecting CN3 & CN4 & CN1 for 18-bit, 24-bit, 36-bit, 48-bit LCD.
4. CN5 is not needed if plugging in Mini PCI slot.
5. Please use either DVI1 or CN2 for DVI output. DVI1 and CN2 cannot be used simultaneously.