

**PEMUX backplane, 2 PCIe Gen 3.0 x16 w/ x16 slot,6 PCIe Gen3.0 x4 w/  
x4 slots, and RoHS**

# **PEMUX-DB-8S1**

## **Quick Installation Guide**

**Version 1.0**

Feb.14, 2019

### **Package List**

PEMUX-8S1-R10 package includes the following items:

- 1 x PEMUX-8S1-R10
- 1 x QIG (Quick Installation Guide)



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## Specifications

- System Type: PEMUX Backplane
- PiMax: 1 ea (full size)
- PCI-E slot:
  - 2 x PCIE x16 from CPU
  - 4 x PCIE x4 from CPU
  - Slot type: x16 signal with x16 slot
  - Slot type: x4 signal with x4 slot
  - 2 x PCIE x4 from PCH
  - Slot type: x4 signal with x4 slot
- Chassis: Mounting hole compatible with PCI-14S
- Others:
  - ATX power connector x1 (24pin)
  - note: Add addition 8pin power connector if needed
  - STATUS\_LED1 connector (2X7 pin) x1 (pwr\_led, sata\_led, lan\_led, 10g\_led)
  - Reset connector (2 pin) x1
  - SM BUS connector (2 pin) x1
  - PWRGD connector (2 pin) x1
  - LCM connector (4 pin) x1
  - PWRBTN connector (2 pin) x1
  - Fan connector (4 pin) x4
  - CASE OPEN (2 pin) x1
  - Note:
    - x4 slot with open-ended connector

## Ordering Information

- **PEMUX-8S1-R10:**
  - 1-Slot PEMUX backplane, 2 PCIe Gen 3.0 x16 w/ x16 slot, 6 PCIe Gen3.0 x4 w/ x4 slots, and RoHS

- **RACK-305G:**  
4U 14-slot full-size rack-mount chassis
- **RACK-360G:**  
4U 14-slot full-size rack-mount chassis
- **RACK-3000G:**  
4U 14-slot full-size rack-mount chassis

## Jumper Settings and Connectors

LABEL	FUNCTION
HDC_CONNA1, HDC_CONNB1, HDC_CONNC1	Motherboard connectors
PCIEX16_1, PCIEX16_2	PCIEX16 BUS connectors
PCIEX4_3~PCIEX4_8	PCIEX4 BUS connectors
LCM1, LCM2	LCM connectors
USB1	USB connector
PSU2	ATX power connector
PSU1	12V DC-IN connector
SM-BUS1	SMBUS connector
PWRBTN1	Power Button connector
RESET1	Reset Button connector
BP_FAN1~BP_FAN4	Fan connectors
PWRGD1	Power good signal output
CASE_OPEN1	Case open connector
PWR_SMB1	Power supply SMBus connector
K_TYPE1, K_TYPE2	Temperature measurement connectors
STATUS_LED1	System status LED connector

<b>PSU2: ATX Power Connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	+3.3V	13	+3.3V
2	+3.3V	14	-12V
3	GND	15	GND
4	+5V	16	PS_ON
5	GND	17	GND
6	+5V	18	GND
7	GND	19	GND
8	Pwr_ok	20	-5V
9	STB5V	21	+5V
10	+12V	22	+5V
11	+12V	23	+5V
12	+3.3V	24	GND

<b>PSU1: 12V DC-IN Connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	GND	5	+12V
2	GND	6	+12V
3	GND	7	+12V
4	GND	8	+12V

<b>BP_FAN1~BP_FAN4: Fan connectors</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	GND	2	+12V
3	FAN SENSE	4	FAN CONTROL

<b>PWRGD1: Power Good output</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	GND	2	Power Good

<b>LCM1, LCM2: LCM Connectors</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	LCM_TX	2	+5V
3	LCM_RX	4	GND

<b>PWRBTN1: Power Button</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	GND	2	PWRBTN_N

<b>RESET1: Reset Button</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	GND	2	RESET_N

<b>SM-BUS1: SMBUS Connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	SMDATA	2	SMBCLK

<b>PWR_SMB1: Power Supply SMBus Connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	SMbus_CLK1	2	SMbus_DAT1
3	NC	4	GND
5	NC		

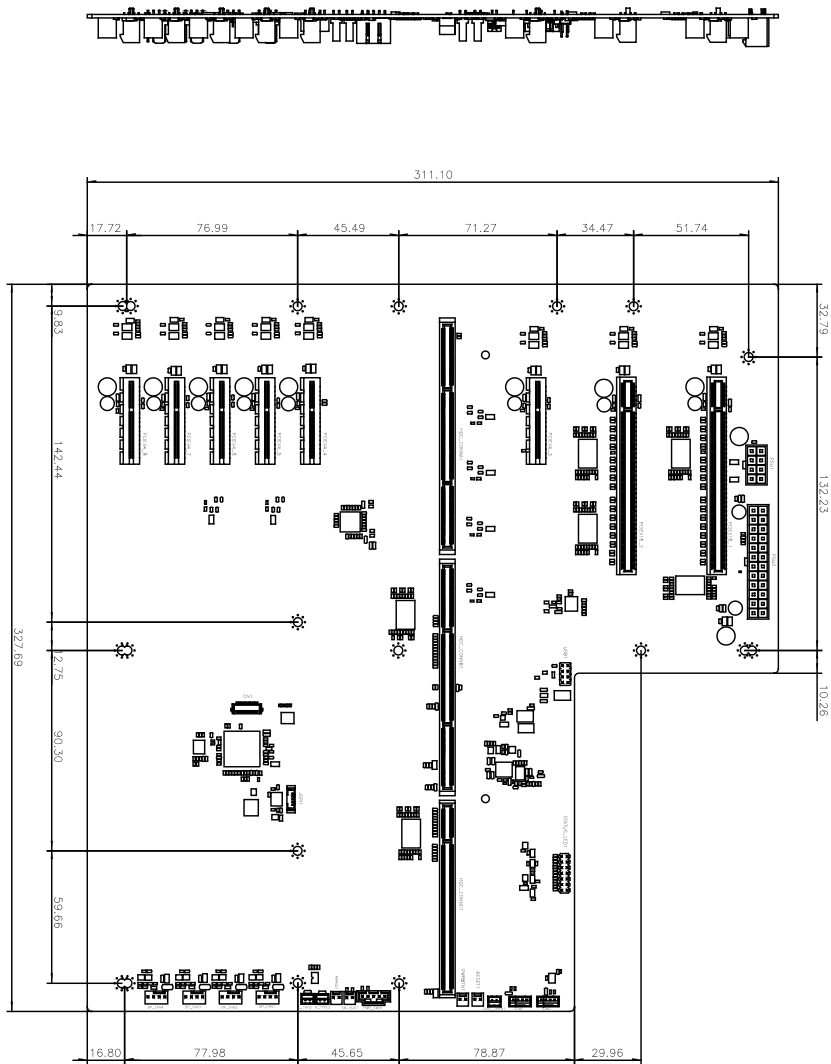
<b>USB1: USB Connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	+5V	2	GND
3	DATA-	4	DATA+
5	DATA+	6	DATA-
7	GND	8	+5V

<b>CASE_OPEN1: Case Open Connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	GND	2	CASEOPEN_N

<b>K-TYPE1, K-TYPE2: Temperature Measurement Connectors</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	T-SENSE_N	2	T-SENSE_P

<b>STATUS_LED1: System Status LED connector</b>			
<b>PIN NO.</b>	<b>DESCRIPTION</b>	<b>PIN NO.</b>	<b>DESCRIPTION</b>
1	System Power LED_N	2	+3.3V
3	HDD active_LED_N	4	+3.3V
5	USB active_LED_N	6	+3.3V
7	System Green LED_N	8	+3.3V
9	System Red LED_N	10	+3.3V
11	10G LAN active LED_N	12	+3.3V
13	1G LAN active LED_N	14	+3.3V

# Board Layout: Jumper and Connector Locations



(Unit: mm)