

ADM-PA100 Quick Start Guide

AD-SG-AD01429_ADM-PA100_V1.1

17th August 2022



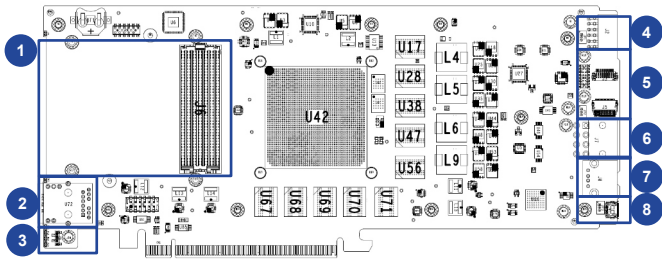
The components on this board can be damaged by Electrostatic Discharge (ESD). To prevent damage, observe SSD precautions:

- Always wear a wrist-strap when handling the card
- Hold the board by the edges
- Avoid touching any components
- Store in ESD safe bag

Initial installation sequence

1. Ensure boot mode is set to SD Card - SD 3.0 (SW1-1 to SW1-4 : ON, OFF, OFF, OFF). Ensure other switches are in factory default positions (see switch table below).
2. Ensure host machine is off, including standby power, using mains power switch on host machine.
3. Plug ADM-PA100 into PCIe slot in host machine.
4. Connect PCIe auxiliary power cable of host machine to ADM-PA100 - External PSU Socket (6).
5. Connect micro-USB cable from development machine to ADM-PA100 - USB either (3) or (8) below.
6. Power on host machine.
7. Use terminal emulator, e.g. TeraTerm, to connect to ACAP UART (via micro-USB cable) and check for Linux command prompt – 115200 baud, 8 data bits, no parity, 1 stop bit. Login is automatic (no password).
8. Visit ADM-PA100 product web page for links to user manual and other documentation: <https://www.alpha-data.com/product/adm-pa100>

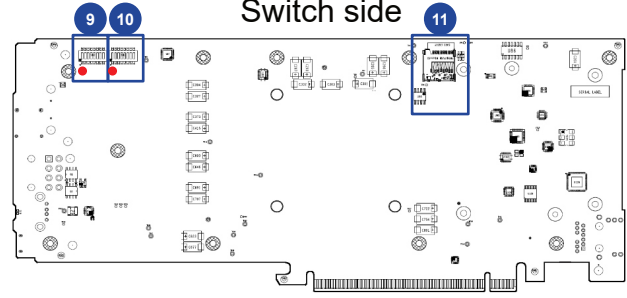
Main component side



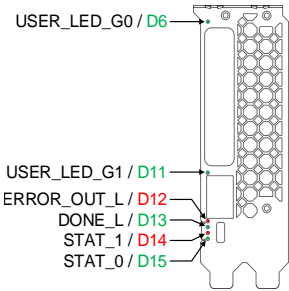
- 1 - FMC+ site
- 2 - GigE
- 3 - USB (front panel*)
- 4 - PMOD interface
- 5 - FireFly
- 6 - PCIe aux. power socket
- 7 - USB ULPI
- 8 - USB (rear edge*)

* - UART serial communication port to the ACAP processor is available at the micro USB sockets on the front (3) or rear (8) edge

Switch side



- 9 - SW2 (8-way DIP switch SW2-1 at red dot)
- 10 - SW1 (8-way DIP switch SW1-1 at red dot)
- 11 - SD Card slot



LED ref.	Function	On state	Off state	STAT_0	STAT_1	ADM-PA100 status
D6	User_LED_G0	ACAP pin M20 = '0'	ACAP pin M20 = '1'	ON	OFF	System good - no alarms
D11	User_LED_G1	ACAP pin M21 = '0'	ACAP pin M21 = '1'	ON	ON	Standby (powered off)
				FLASHING together		Attention - critical alarm
				FLASHING alternating		Service mode
D12	ERROR_OUT_L	Boot error	Boot OK	FLASHING	ON	Attention - alarm active
D13	DONE_L	PL configured	PL not configured	OFF	ON	Missing or invalid application firmware
D14	STAT_1	See LED status table to the right		OFF	OFF	ACAP configuration cleared to protect board
D15	STAT_0					

Switch	Factory default	Function	Off state	ON state
SW1-1	ON	Boot mode 0	See boot mode table to the right	
SW1-2	OFF	Boot mode 1		
SW1-3	OFF	Boot mode 2		
SW1-4	OFF	Boot mode 3		
SW1-5	OFF	Reserved	Not connected	
SW1-6	ON	12V auto-detect	Enabled	8-pin PCIe aux. power cable and PCIe edge both required
SW1-7	ON	Reserved	Not connected	
SW1-8	OFF	Power OFF	Board will power up	Immediately power down
SW2-1	OFF	Factory config.	Normal operation	-
SW2-2	ON	Factory config.	-	Normal operation
SW2-3	OFF	HOST_I2C_EN	System monitor connected to PCIe - slot I2C	System monitor isolated from PCIe slot I2C
SW2-4	OFF	Service mode	System monitor normal operation	System monitor service mode
SW2-5	OFF	PERST to POR_B	PCIe Reset isolated from POR_B	PCIe Reset will drive POR_B low
SW2-6	OFF	POR_B	ACAP power on reset deasserted	ACAP power on reset asserted
SW2-7	OFF	User switch 0	ACAP pin G36 = '1'	ACAP pin G36 = '0'
SW2-8	OFF	User switch 1	ACAP pin G37 = '1'	ACAP pin G37 = '0'

SW1				Boot mode
4	3	2	1	
ON	ON	ON	ON	JTAG
ON	ON	ON	OFF	Quad SPI (24-bit addressing)
ON	ON	OFF	ON	Quad SPI (32-bit addressing)
OFF	OFF	OFF	ON	SD Card - SD 3.0

1. SW1-6 OFF for PCIe edge only (75W or less)
2. SW1-6 ON for PCIe edge and PCIe 8-pin AUX connector (225W capable)
3. Install in server or PC. Check the ADM-PA100 user manual "Figure 3 : Retention Points" for mounting the board and use as many retention points as available.

Download links

ADM-PA100 product web page
ADM-PA100 SDK download

<https://www.alpha-data.com/product/adm-pa100>

<https://www.alpha-data.com/resource/admpa100/sdk>