

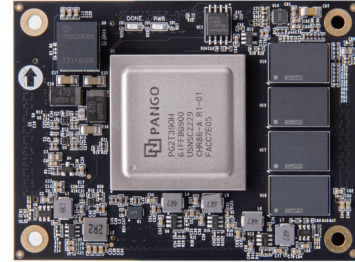
PANGOMICRO SoM Boards Selection Guide

SoM Board Mode	P12	P22	P50G	P50	P100	P390
FPGA Series	Logos				Logos-2	Titan-2
FPGA Chip	PGL12G-6CFBG256	PGL22G-6CMBG324	PGL50G-6IFBG484	PGL50H-6IFBG484	PG2L100H-6IFBG676	PG2T390H-6IFFBG900
Working Temperature	Commercial Grade 0°C to 70°C		Industrial Grade, -40°C-85°C		Industrial Grade, -40°C-85°C	
RAM	32MB SDRAM 16bit	256MB DDR3 16bit	256MB DDR3 16bit	1GB DDR3 32bit	1GB DDR3 32bit	8GB DDR4, 64bit
QSPI Flash	8MB	16MB	8MB	16MB	32MB	16MB
Equivalent LUT4	12480	21,043	51,360	51,360	99,900	365400
Flip-Flops	15600	26,304	64,200	64,200	133,200	487200
Distributed RAM (Kbit)	85	70	544	544	1274	4712
Block RAM	30 (18Kbit)	48 (18Kbit)	134 (18Kbit)	134 (18Kbit)	155 (36Kbit)	480 (36Kbit)
Total Block RAM	540	864	2412	2412	5,580	17280
PLL / GPLL+PPLL	4	6	5	5	6+6	10+10
Extended I/Os	106	114	172	195	190	276
LVDS	20	20	48	48	48	46
PCI-Express	—	—	—	PCIe 2.0	PCIe 2.0	PCIe 3.0
APM	20 (18*18)	30 (18*18)	84(18*18)	84(18*18)	240 (18*25)	840 (18*25)
HSST	—	—	—	4 * 6.375Gbps	8 * 6.6 Gbps	8x 13.125Gbps
ADC	1	1	—	—	1	1
AES	1	1	1	1	1	1
Board-to-board Connector	80pin x2		100pin x2	80pin x4	80pin x4	120pin x4
Size	2.17x1.77 inch		2.36x2.36 inch	2.17x1.77 inch	2.36x2.36 inch	3.15x2.36 inch

PANGOMICRO SoM Boards

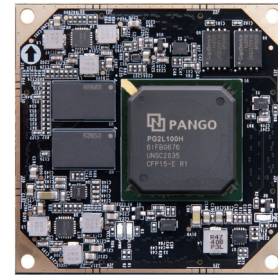
P390 | PG2T390H

- PG2T390H-6IFFBG900.
- 8GB DDR4, 64bit.
- 16MB QSPI Flash.
- LUT6s 243600.
- Equivalent LUT4s 365,400.
- Flip-Flops 487200.
- Distributed RAM 4712Kbit.
- Total Block RAM 17280Kbit.
- GPLLs 10 + PPLLs 10.
- APMs 840 (18*25).
- Support PCIE 3.0, 8x 13.125Gbps HSST.
- 276 expansion I/Os.
- 92 Voltage Adjustable IOs.
- 46 LVDS.
- Industrial Grade, -40°C-85°C.
- 3.15x2.36 inch.



P100 | PG2L100H

- PG2L100H-6IFBG676.
- 1GB DDR3, 32bit, 32MB QSPI Flash.
- LUT6s 66600.
- Equivalent LUT4 99,900.
- Flip-Flops 133,200.
- Distributed RAM 1274Kbit.
- Total Block RAM 5580Kbit.
- GPLLs 6 + PPLLs 6.
- APMs 240 (18*25).
- 8x 6.6Gbps HSST.
- 190 expansion I/Os.
- 100 Voltage Adjustable IOs.
- 48 LVDS.
- Speed Grades 6.
- Industrial Grade, -40°C-85°C.
- 2.36x2.36 inch.



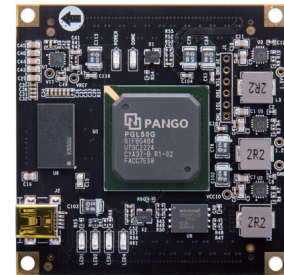
P50 | PGL50H

- PGL50H-6IFBG484.
- 1GB DDR3, 32bit, 16MB QSPI Flash.
- LUT5s 42800.
- Equivalent LUT4 51,360.
- Flip-Flops 64,200.
- Distributed RAM 544Kbit.
- Total Block RAM 2412Kbit.
- GPLLs 5, APMs 84 (18*18).
- Support PCIE 2.0.
- 4x 6.375Gbps HSST.
- 195 expansion I/Os.
- 113 Voltage Adjustable IOs.
- 48 LVDS.
- Speed Grades 6.
- Industrial Grade, -40°C-85°C.
- 2.17x1.77 inch.



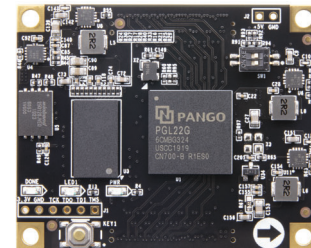
P50G | PGL50G

- PGL50G-6IFBG484.
- 256MB DDR3, 16bit.
- 8MB QSPI Flash.
- LUT5s 42800.
- Equivalent LUT4 51,360.
- Flip-Flops 64,200.
- Distributed RAM 544Kbit.
- GPLLs 5, APMs 84 (18*18).
- 172 expansion I/Os.
- 168 Voltage Adjustable IOs.
- 48 LVDS.
- Speed Grades 6.
- Industrial Grade, -40°C-85°C.
- 2.36x2.36 inch.



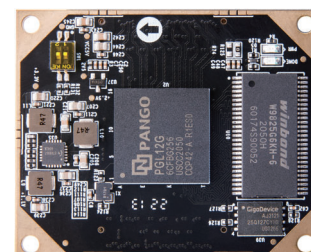
P22 | PGL22G

- PGL22G-6CMBG324.
- 256MB DDR3, 16bit.
- 16MB QSPI Flash.
- LUT5s 17536.
- Equivalent LUT4 21043.
- Flip-Flops 26304.
- Distributed RAM 70Kbit.
- Total Block RAM 864Kbit.
- PLLs 6.
- APMs 30 (18*25).
- 114 expansion I/Os.
- 40 Voltage Adjustable IOs.
- 20 LVDS.
- Speed Grades 6.
- Commercial Grade, 0°C-70°C.
- 2.17x1.77 inch.



P12 | PGL12G

- PGL12G-6CFBG256.
- 32MB SDRAM, 16bit.
- 8MB QSPI Flash.
- LUT5s 10400.
- Equivalent LUT4 12480.
- Flip-Flops 15600.
- Distributed RAM 85Kbit.
- Total Block RAM 540Kbit.
- PLLs 4.
- APMs 20 (18*18).
- 106 Expansion I/Os.
- 40 Voltage Adjustable IOs.
- 20 LVDS.
- Speed Grades 6.
- Commercial Grade, 0°C-70°C.
- 2.17x1.77 inch.



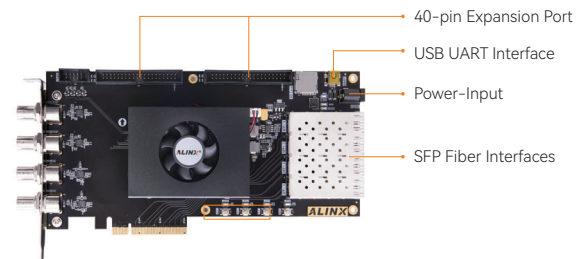
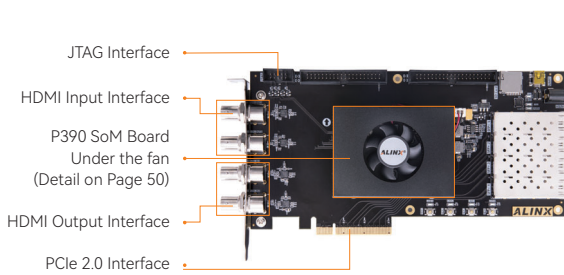
PANGOMICRO Titan-2 Development Boards

AXP392

Titan-2 FPGA 3G-SDI Video Processing Acceleration Development Board

- FPGA: PANGOMICRO FPGA PG2T390H-6IFFBG900.
- 8GB DDR4, 64bit, 16MB QSPI FLASH.
- 4 SFP Fiber Interfaces, Each Up to 10Gbps.
- PCIe 2.0 x8, Single Channel up to 5Gbps.
- 2 3G-SDI Input Interface and 2 3G-SDI Output Interface, Supports HDCctv 1.0, HD-SDI (ST 292), 3G_ SDI (ST-424) and SD_ SDI.

- 2 40-pin Expansion Port for ALINX Brand Modules.
- Integrated USB UART, JTAG, TF Card Slot and Other Common Interfaces.
- Customized Cooling Fan, Maximum Cooling Power Consumption 30W .
- Provide Documents in PDF (Schematic, PCB, Chip Datasheet, User Manual).
- Provide Demos, Supporting Tutorials, Easier to Get Started With.

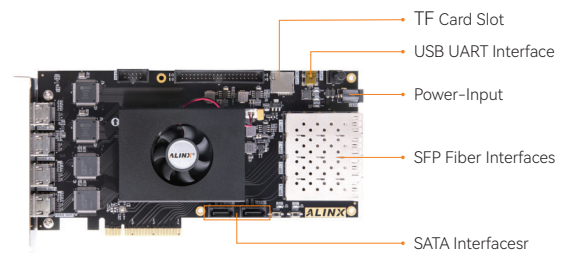
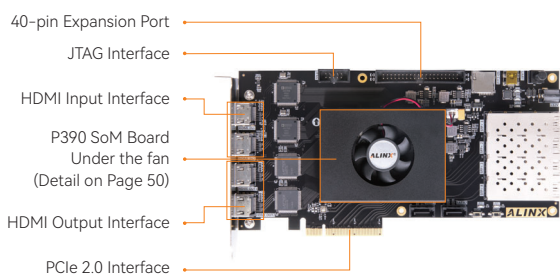


AXP391

Titan-2 FPGA HDMI Video Processing Acceleration Development Board

- FPGA: PANGOMICRO FPGA PG2T390H-6IFFBG900.
- 8GB DDR4, 64bit, 16MB QSPI FLASH.
- 4 SFP Fiber Interfaces, Each Up to 10Gbps.
- PCIe 2.0 x8, Single Channel up to 5Gbps.
- 2 HDMI Input Interface, Supports Up to 4K@30Hz input.
- 2 HDMI Output Interface, Supports Up to 4K@30Hz output.

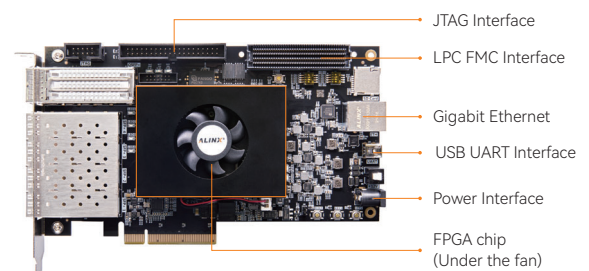
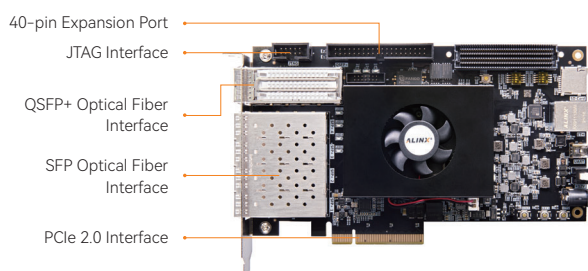
- 2 40-pin Expansion Port for ALINX Brand Modules.
- Integrated SATA, UART, JTAG, TF Card Slot and Other Common Interfaces.
- Customized Cooling Fan, Maximum Cooling Power Consumption 30W .
- Provide Documents in PDF (Schematic, PCB, Chip Datasheet, User Manual).
- Provide Demos, Supporting Tutorials, Easier to Get Started With.



AXP390

Titan-2 FPGA High end open Development Board

- FPGA: PANGOMICRO FPGA PG2T390H-6IFFBG900.
- 8GB DDR4, 64bit , 2GB DDR3, 64bit.
- 64MB QSPI FLASH.
- 1 QSFP+ Optical Interface, Receiving and Sending ,Up to 40Gb/s.
- 4 SFP Optical Interface, Receiving and Sending ,Up to 10Gb/s.
- 1 LPC FMC Expansion Port, External ALINX Various FMC Boards.
- PCIe 2.0 x8 Interface, up to 5Gbp.
- Integrated Gigabit Ethernet, UART, JTAG, TF Card Slot and Other Interfaces .
- Provide Documents in PDF (Schematic, PCB, Chip Datasheet, User Manual).
- Provide Demos, Supporting Tutorials, Easier to Get Started With.



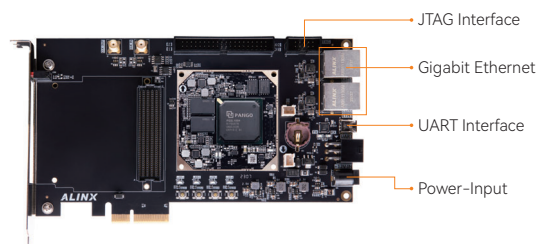
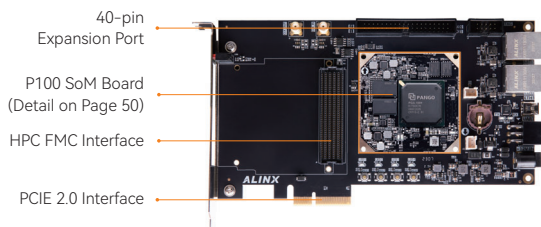
PANGOMICRO Logos Development Boards

AXP110

Logos-2 FPGA Development Board

- FPGA: PANGOMICRO FPGA PG2L100H-6IFBG676.
- 1GB DDR3, 32bit, 32MB QSPI FLASH.
- PCIe 2.0 x4 Interface, Providing PCIe 2.0 x2 Data Transmission, With a Single Channel Communication Rate of Up to 5Gbps.
- 1 LPC FMC Interface, Connect various FMC boards.

- 1 40-pin Expansion Port for ALINX Brand Modules.
- 2 10/100/1000M Adaptive Gigabit Ethernet Interface.
- Integrated UART, JTAG and Other Common Interfaces.
- Provide Documents in PDF (Schematic, Chip Datasheet and User Manual).
- Provide Demos, Supporting Tutorials, Easier to Get Started With.

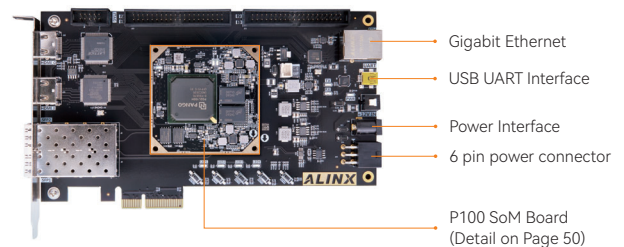
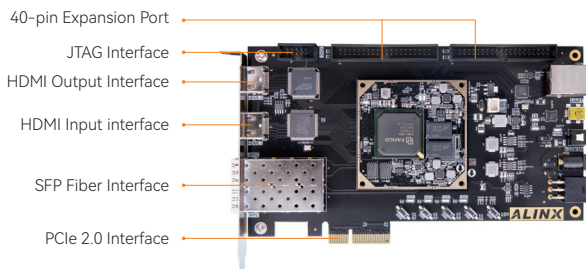


AXP100 / AXP100B

Logos-2 FPGA Development Board

- FPGA: PANGOMICRO FPGA PG2L100H-6IFBG676.
- 1GB DDR3, 32bit, 32MB QSPI FLASH.
- 2 SFP Optical Connectors, Up to 6.6Gbps.
- PCIe 2.0 x2 , Single Channel Communication Rate Can REach Up to 5GBaud.
- 10/100/1000M Adaptive Ethernet Interface , EEPROM 24LC04.

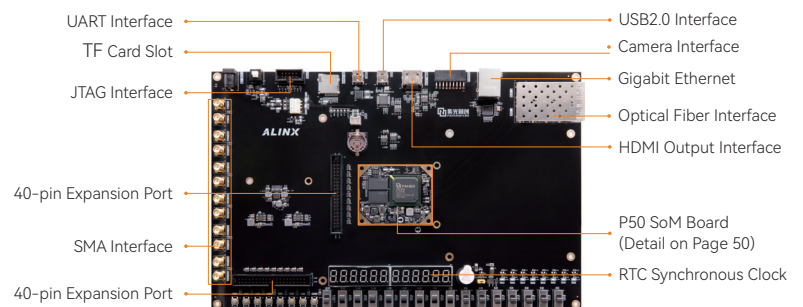
- HDMI Input and Output Interfaces, Support 1080P@60Hz.
- Integrated USB UART, JTAG, 40 pin-extension, TF card slot and Other Interfaces.
- Provide Documents in PDF (Schematic, PCB, Chip Datasheet, User Manual).
- Provide Demos, Supporting Tutorials, Easier to Get Started With.



AXP50

Logos FPGA Teaching Laboratory Box

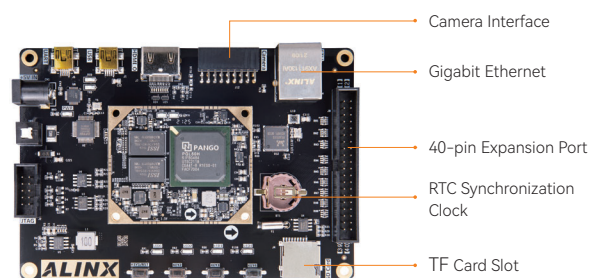
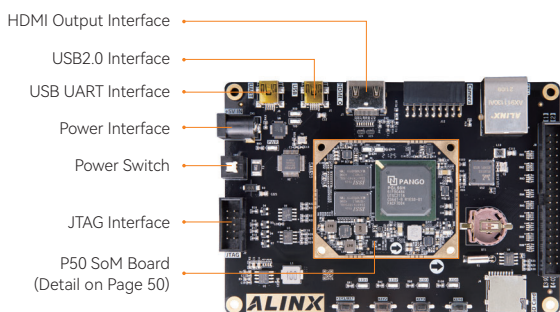
- FPGA: PANGOMICRO FPGA PGL50H-6IFBG484.
- 1GB DDR3, 32bit, 16MB QSPI FLASH.
- AXP50 Development Board x1.
- AN831, AN5640, AN9767, AN9238, AN970 Module 1 Each.
- 1 CMOS Camera Interface, Connected to Monocular Camera Module.
- 2 SFP Optical Fiber Interfaces, 1 Gigabit Ethernet Interface .
- 1 USB interface, 1 UART interface, 1 HDMI Output Interface.
- 40-pin Expansion Port, Connect to Various Support Modules.Integrated TF card slot, JTAG, key, LED , dial switch, nixie tube, SMA, Etc.



AXPGL50H

Logos FPGA Development Board

- FPGA: PANGOMICRO FPGA PGL50H-6IFBG484.
- 1GB DDR3, 32bit, 16MB QSPI FLASH.
- IIC Interface EEPROM 24LC04.
- 10/100/1000M Adaptive Ethernet Interface.
- CMOS Camera Interface, Connected to Monocular Camera Module.
- 40-pin Expansion Port, Connect to Various Support Modules.
- USB Uart Interface for Communication Debugging With Computer.
- Integrated HDMI, USB, TF card slot, JTAG and Other Interfaces .
- Provide Documents in PDF (Schematic, PCB, Chip Datasheet, User Manual).
- Provide Demos, Supporting Tutorials, Easier to Get Started With.

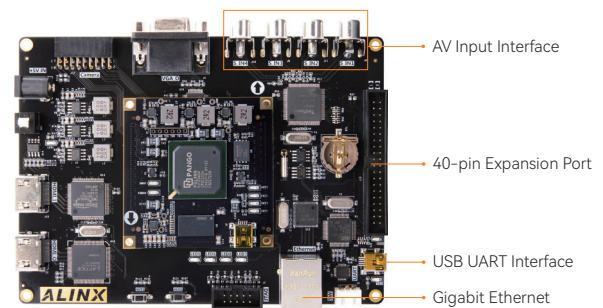
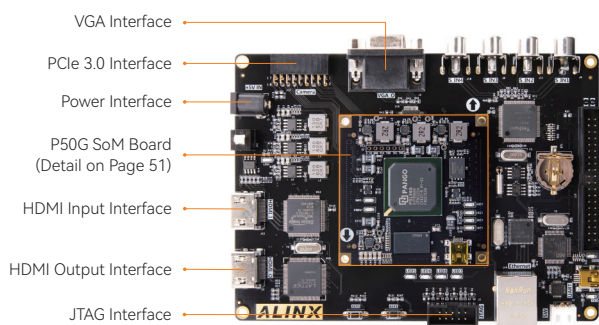


PANGOMICRO Logos Development Boards

AVP50G

Logos FPGA Development Board

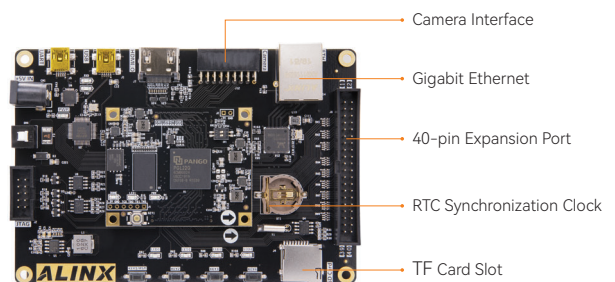
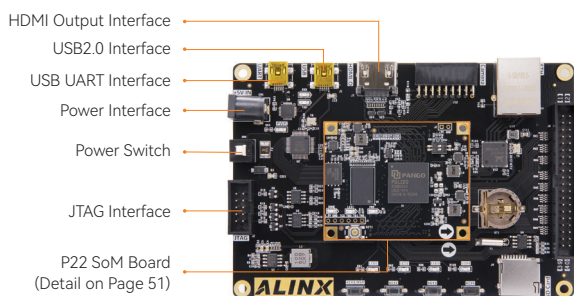
- FPGA: PANGOMICRO FPGA PGL50G-6IFBG484.
- 256MB DDR3, 16bit.
- 8MB QSPI Flash.
- 10/100/1000M Adaptive Ethernet Interface.
- CMOS Camera Interface, Connect OV5640 Camera.
- 4x AV Input.HDMI Input/Output, 1 VGA Output.
- Integrated USB UART, JTAG, 40-pin Extension and Other Common Interfaces.
- Provide Documents in PDF (Schematic, PCB, Chip Datasheet, User Manual).
- Provide Demos, Supporting Tutorials, Easier to Get Started With.



PGL22G

Logos FPGA Development Board

- FPGA: PANGOMICRO FPGA PGL22G-6CMBG324.
- 256MB DDR3, 16bit, 16MB QSPI FLASH.
- IIC Interface EEPROM 24LC04.
- 10/100/1000M Adaptive Ethernet Interface.
- CMOS Camera Interface, Connected to Monocular Camera Module.
- USB Uart Interface for Communication Debugging With Computer.
- 40-pin Expansion Port, Connect to Various Support Modules.
- Integrated HDMI, USB, TF card slot, JTAG and Other Common Interfaces .
- Provide Documents in PDF (Schematic, PCB, Chip Datasheet, User Manual).
- Provide Demos, Supporting Tutorials, Easier to Get Started With.

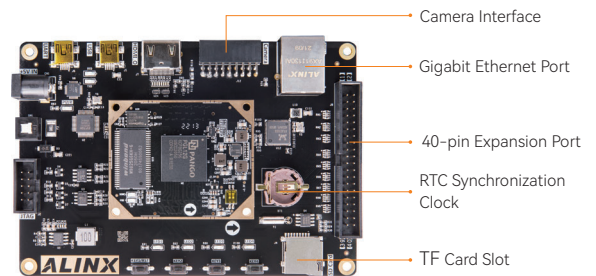
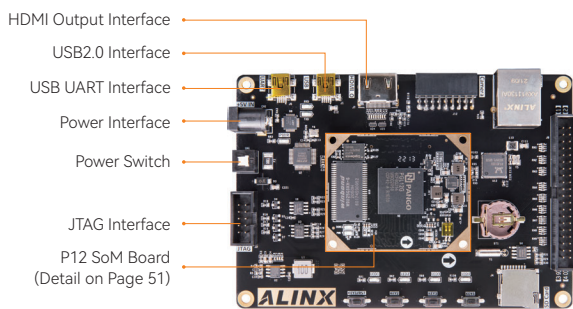


AXP12

Logos FPGA Development Board

- FPGA: PANGOMICRO FPGA PGL12G-6CFBG256.
- 32MB SDRAM, 16bit, 8MB QSPI FLASH.
- IIC Interface EEPROM 24LC04.
- 10/100/1000M Adaptive Ethernet Interface.
- CMOS Camera Interface, Connected to Monocular Camera Module.

- USB Uart Interface for Communication Debugging With Computer.
- 40-pin Expansion Port, Connect to Various Support Modules.
- Integrated HDMI, USB, TF card slot, JTAG and Other Common Interfaces.
- Provide Documents in PDF (Schematic, PCB, Chip Datasheet, User Manual).
- Provide Demos, Supporting Tutorials, Easier to Get Started With.



PGL12G

Logos FPGA Development Board

- FPGA: PANGOMICRO FPGA PGL12G-6CFBG256.
- 32MB SDRAM, 16bit, 8MB QSPI FLASH.
- CMOS Camera Interface, Connected to Monocular Camera Module.
- 2x 40-pin Expansion Port, Externally Connected With Various Supporting Modules.

- HDMI Output Interface.
- USB Uart Interface for Communication Debugging With Computer.
- Integrated TF card slot, JTAG and Other Common Interfaces .
- Provide Documents in PDF (Schematic, Chip Datasheet and User Manual).

