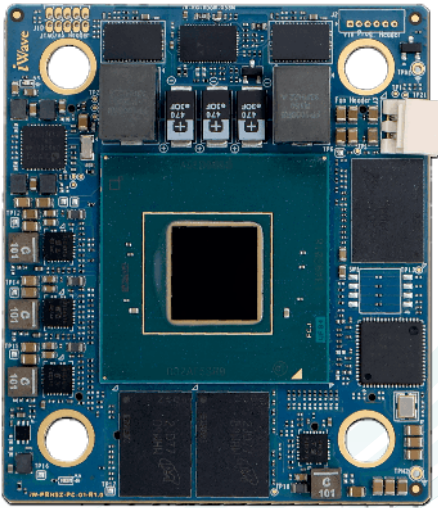




System On Module iW-RainboW-G58M Agilex 5 (B32A) SoC FPGA SOM



Intel Agilex 5 B32A SoC FPGA based System on Modules features.

Group A devices - A5E 065A, A5E 052A, A5E 043A, A5E 028A and A5E 013A

Group B devices - A5E 065B, A5E 052B, A5E 043B, A5E 028B, A5E 013B and A5E 008B

Supports a Hard Processor System comprising of Dual core Arm Cortex-A76 up to 1.4 GHz and Dual core Arm Cortex-A55 up to 1.25 GHz.

The Intel Agilex 5 B32A SOM features 4GB LPDDR4 for HPS (32bit) and 2 x 4GB LPDDR4 for FPGA (32bit), USB2.0 PHY, Up to 2.5G Ethernet PHY, eMMC and QSPI on SOM.

The SOM Supports 24 x transceivers up to 28Gbps speed.

iW-RainboW-G51M HIGHLIGHTS

Dual core ARM Cortex A76 and Dual core ARM Cortex A55 Processor

32GB eMMC (Expandable)

4GB LPDDR4 for HPS (32bit)

2 x 4GB LPDDR4 for FPGA (32bit)

24 x transceivers up to 28Gbps

FPGA HSIO (Up to 48LVDS/96SE)

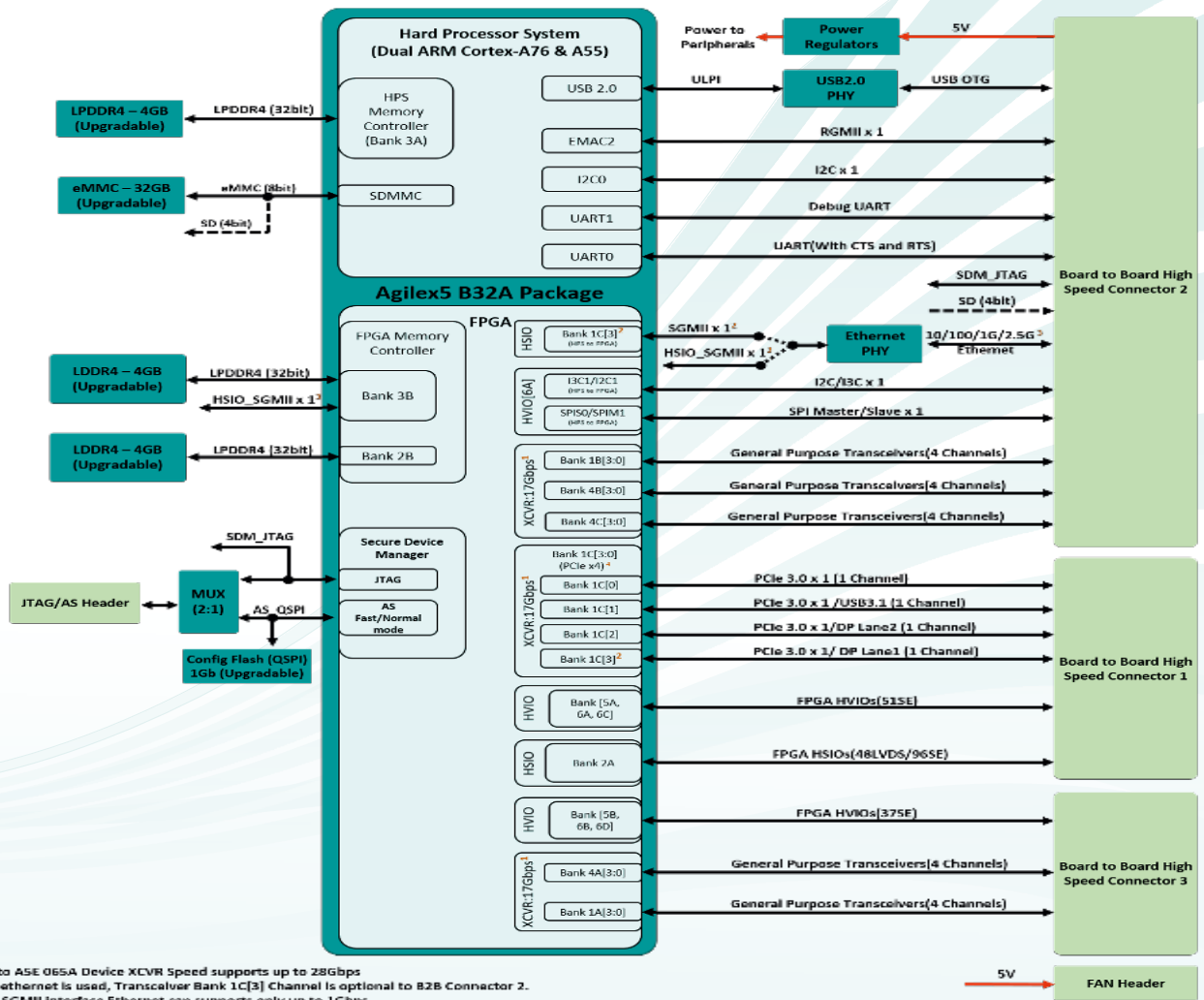
FPGA HVIO (Up to 100)

10+ Years long term support

SPECIFICATIONS

SoC	I2C x 1
Group A devices - A5E 065A, A5E 052A, A5E 043A, A5E 028A and A5E 013A	Data UART x 1
Group B devices - A5E 065B, A5E 052B, A5E 043B, A5E 028B, A5E 013B and A5E 008B	From SDM (Secure Device Manager)
Dual core Arm Cortex-A76 up to 1.4 GHz	JTAG x 1
Dual core Arm Cortex-A55 up to 1.25 GHz	AS x 1 (Active Serial x4)
Memory & Storage	From HPS to FPGA
32GB eMMC (Expandable up to 128GB)	2.5G Ethernet x 1 (through On-SOM Ethernet PHY)
4GB LPDDR4 for HPS (32bit)	USB 3.0 x 1
2 x 4GB LPDDR4 for FPGA (32bit)	SPI x 1 (With 2 Chip select)
1Gb QSPI Configuration flash(Expandable)	I2C x 1
On SOM Features	From FPGA
SGMII Ethernet PHY Transceiver	24 x transceivers up to 28Gbps
USB2.0 ULPI Transceiver	FPGA HSIO (Up to 48LVDS/96SE)
FAN Header	FPGA HVIO (Up to 100)
Board to Board Connector interfaces	OS Support
From HPS (Hard Processor System)	Linux BSP 5.15.9 / Quartus 23.1
RGMII x 1	Power Input:
USB2.0 OTG x 1 (through On-SOM USB2.0 transceiver)	5V through B2B Connector
Debug UART x 1	Operating Temperature
SD x 1 (Optional)	-40°C to +85°C (Industrial)
	Form Factor:
	60mm x 70mm
	Environment Specification:
	REACH & RoHS3 Compliant

Agilex 5 B32A SoC FPGA SOM Block Diagram



OS SUPPORT

Linux BSP 5.15.9
Quartus 23.1

DELIVERABLES

Agilex 5 B32A SoC FPGA SOM
Board Support Package
User Manual

OPTIONAL KITS/Modules

Agilex 5 B32A SoC FPGA SOM
Module + Development Kit
Heat Sink

CUSTOM DEVELOPMENT

BSP Development/OS Porting
Custom SOM/Carrier Development
Custom Application/GUI Development
Design Review and Support

iWave Systems Technologies is an ISO 9001:2015 certified company, head quartered in Bangalore India established in the year 1999. The company focuses on providing embedded solution and services for Industrial, Medical, Automotive and various other Embedded Computing applications. iWave Systems offers wide range of System On Modules and Single Board Computers built using wide range of CPU and FPGA SoC platforms with different form factors such as Qseven, SMARC, SODIMM and HPC by closely working with Tier-1 silicon companies such as NXP, Xilinx, Intel etc.

iWave Systems offers various state of art ready ODM solutions such as Connected Telematic Control Unit / OBD II devices for the automotive edge analytics, Comprehensive ARINC818 solutions for the low latency Aerospace applications and Rugged IP rated performance scalable HMI solutions for Industrial applications.

iWave Systems also provides comprehensive Engineering design services involving Embedded Hardware, FPGA and Software development. iWave offers carrier board and custom hardware development with manufacturing and certification services. iWave's Hardware expertise spans complex board design up to 30 layers; Analog, Digital & RF Designs; FPGA Development up to 3+ million gates and VHDL / Verilog RTL Development & Verification. Our Software expertise ranges from OS Porting, Firmware & Device Drivers Development and Wireless & Protocol

*Optional items not included in the standard deliverables.

Note: iWave reserves the right to change these specifications without notice as part of iWave's continuous effort to meet the best in breed specification. The registered trademarks are proprietary of their respective owners.

Agilex 5 B32A SoC FPGA SOM

The device can be ordered online from the iWave Website

<https://www.iwavesystems.com/product/agilex-5-soc-fpga-system-on-module/>

Or from our Local Partners in your region

<http://www.iwavesystems.com/about-us/business-partner.html>

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