iWave
Embedding Intelligence

The Arria 10 FPGA System On Module is the new addition to iWave's FPGA SOM portfolio. iWave's Arria 10 FPGA System On Module is based on GX family device. The Arria 10 FPGA device compatibility are, GX240, GX320, GX480, GX570, GX660, GX900, GX1150. This module is equipped with 4-GB DDR4 RAM (64bit) support for FPGA with up to 1150K Logic Elements for FPGA fabric. All the IOs and high-speed transceiver blocks will be available on the SOM board to board connectors.

APPLICATIONS: Test and measurement equipment, Control and intelligence equipment, Diagnostic medical imaging equipment, Automation, Military applications, Wireless infrastructure equipment, Compute and storage equipment, Broadcast and distribution equipment

iW-RainboW G24M HIGHLIGHTS

Arria10 FPGA device compatibility

GX270, GX320, GX480, GX570, GX660, GX900, GX1150

With up to 1150K Logic Elements and 24 High Speed transceivers

4-GB DDR4 RAM (64bit) from FPGA

24 high-speed transceivers @ 17.4Gbps

48/96 LVDS from BANK 3B & 3C

93 SE from BANK 2A & 3A

Dual 240 Pin Board to Board Connector

Variable IO voltage support from PMIC

Industrial Grade operation

10+ Years Availability

SPECIFICATIONS

FPGA:

Compatible Arria10 FPGA Family - GX270, GX320, GX480, GX570, GX660, GX900, GX1150

Memory:

2GB DDR4 with ECC for HPS

4GB DDR4 for FPGA

Configurable Flash for FPGA

Dual 240 Pin Board to Board connector

Arria 10 Board to Board IO Interface:

Gigabit Ethernet x 1 Port

USB OTG x 1 Ports

SD (4 bit) x 1 Port (Optional)

20 SE IO

Arria 10 FPGA IO Interface:

24 high speed transceivers

48/96 LVDS from Bank 3B & 3C

43 LVDS/93 SE from Bank 2A & 3A

Headers: JTAG, FAN, FPGA AS headers
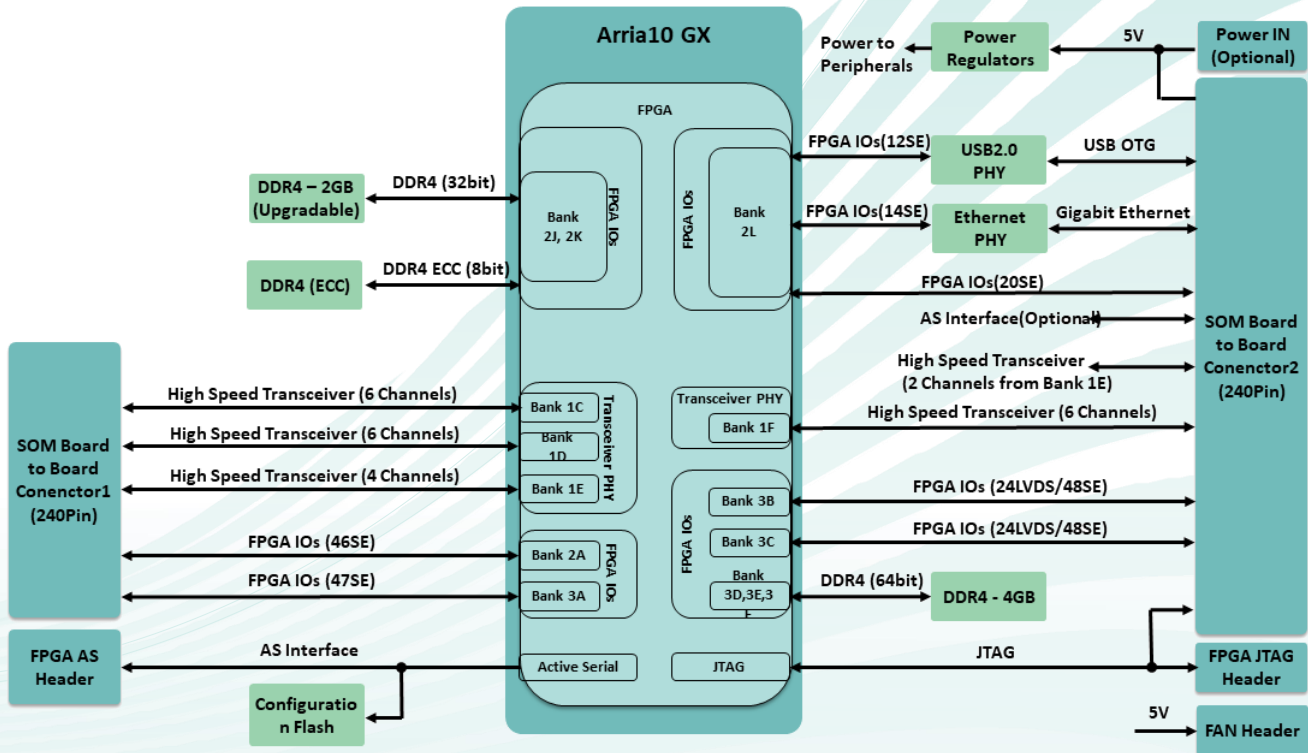
OS Support: Linux 4.9.78

Form Factor: 95mm x 75mm

Power Supply:

5V

Temperature:

-40°C to +85°C Industrial

Arria 10 FPGA SOM – BLOCK DIAGRAM

Note:
- All IOs in SOM Expansion connectors are 1.8V tolerant IOs. Bank 3B,3C,3A supports variable IO level setting from PMIC (1.8V,1.5V, 1.35V,1.2V).
- Each FPGA IO Bank (2A,3A,3B,3C) which goes to Expansion connectors support two General Purpose Clock Input (1 in 2A) & two General Purpose Clock Output (LVDS/SE).

OS SUPPORT	DELIVERABLES	Optional KITS/Modules	CUSTOM DEVELOPMENT
Linux 4.9	Arria 10 SOM Module Board support package User manual	Arria 10 SoC/FPGA Development kit	BSP Development/OS Porting Custom SOM/Carrier Development Custom Application/GUI Development Design Review and Support

iWave Systems Technologies, established in 1999 focuses on Product Engineering Services involving Embedded Hardware, Software & FPGA. The Company designs and develops cutting edge products and solutions. iWave has been innovator in development of highly integrated, high performance, low power and low cost System On Modules and Development Platforms. iWave's expertise brought out multiple SOMs based on ARM, NXP, Intel Atom, Marvell and TI Processors.

iWave Systems has won the confidence of its customers over the years by being a reliable partner in developing innovative products. Our engineers combine outstanding system design experience to deliver Quality Solutions. iWave specializes across Industrial, Automotive and Medical domains. We support our customers by being time efficient, which in turn helps our customers accelerate time to market their products. iWave is windows embedded Silver Partner and winner of the Partner Excellence Award.

*Optional items not included in 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.

Ordering the Arria 10 FPGA SOM
The SOM module can be ordered online from the iWave website
http://www.iwavesystems .com/webforms