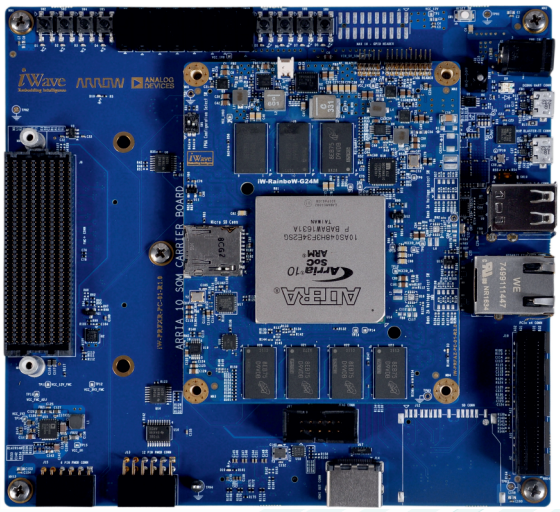
iWave
Embedding Intelligence

Development Platform iW-RainboW-G24D

Arria 10 SoC/FPGA FMC+ Dev-Kit



iWave's Arria 10 SoC / FPGA FMC+ Development Kit comprises of Arria 10 SoC/FPGA SOM and High Performance FMC+ Carrier Card. Arria 10 SoC/FPGA FMC+ Deveopment Kit provides developers best Out-Of-The box experience. It enables, customers to develop rapid prototypes and validate the highspeed interfaces and I/Os. The SOM is equipped with 4GB DDR4 RAM (64bit) from FPGA and 2GB DDR4 SDRAM (32bit) with ECC from HPS (Expandable). Arria 10 SoC/FPGA Development Kit carrier board supports wide range of Highspeed interfaces like FMC+ Connector, PCIe x 4 Connector and NVMe M.2 Connector to validate Arria 10 FPGA Highspeed transceivers and also it supports HDMI Output, USB Blaster-II, Pmod connectors, LEDs, push buttons, sliding switches to validate the Arria 10 FPAG I/Os. And, other on-board switches and connectors are available to validate Arria 10 SoC (HPS) interfaces.

APPLICATIONS: High-Performance Computing, Data Acquisition, Network Processing & Signal Processing.

iW-RainboW-G24D HIGHLIGHTS

Arria 10 SoC & FPGA device compatibility

- SX270, SX320, SX480, SX570, SX660
- GX270, GX320, GX480, GX570, GX660

24 High speed transceivers @ 17.4Gbps

FMC+ Connector x 1

Gigabit Ethernet x 1 Port

PCIe x 4 lane Connector

NVMe M.2 Connector (through PCIe x 4 lane)

USB Blaster-II Interface

HDMI v.1.4a Out

Pmod Connectors

LEDs, Push Buttons, Slide Switches

SPECIFICATIONS

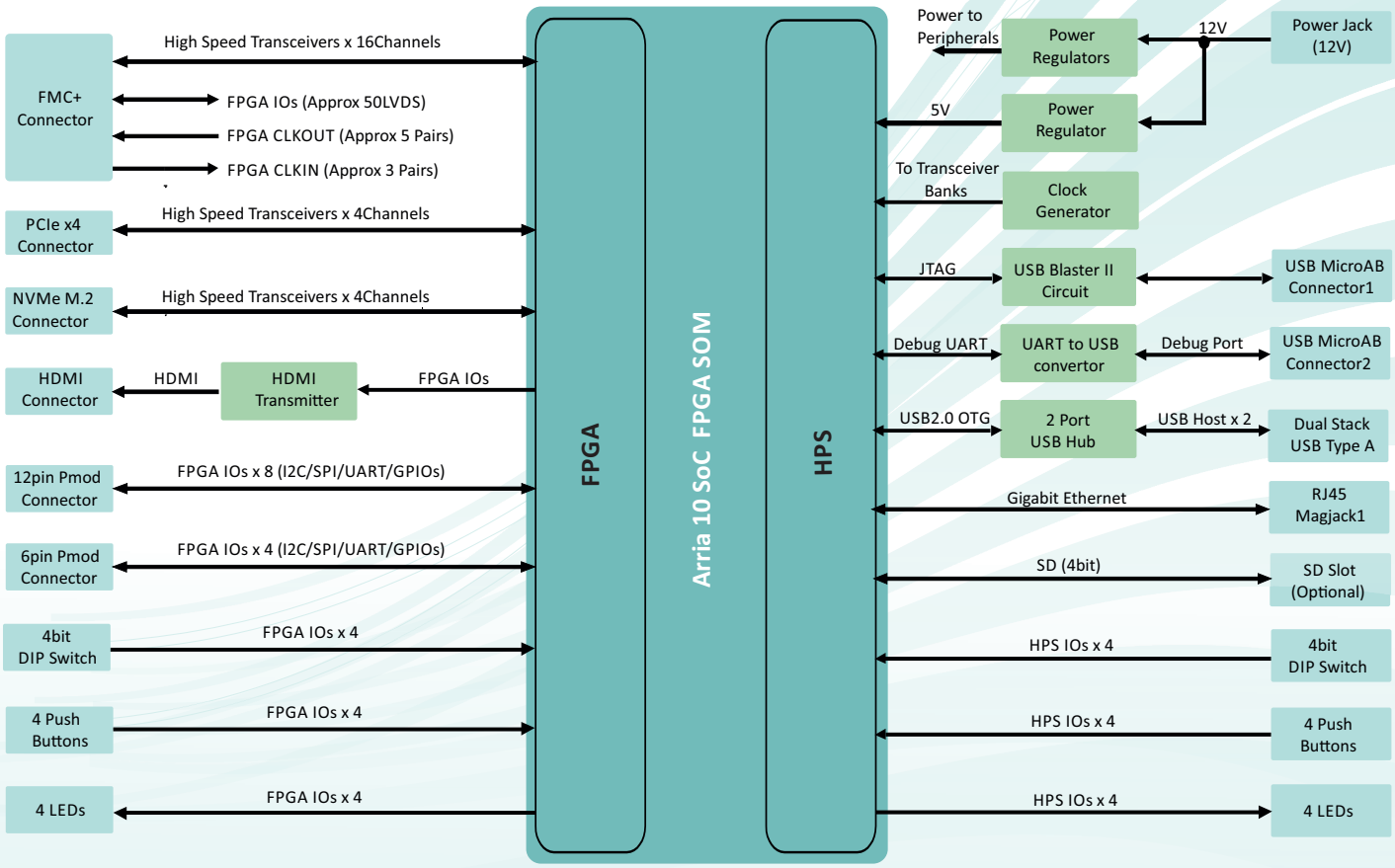
Arria 10 SoC/FPGA SOM:
Compatible Arria10 SoC Family - SX270,SX320,SX480,SX570,SX660
Compatible Arria10 FPGA Family - GX270,GX320,GX480,GX570,GX660
4GB DDR4 SDRAM (64bit) for FPGA
2GB DDR4 SDRAM (32bit) with ECC for HPS (Expandable)
MicroSD Connector for HPS booting
NAND Flash for HPS booting (Optional)
Configuration Flash for FPGA (Optional)
Arria 10 SoC/FPGA Carrier Board:
High Speed Interfaces:
FMC Plus Connector x 1
PCIe x 4 Connector x 1
NVMe M.2 Connector (through PCIe) x 1
Communication Features:
Gigabit Ethernet through Rj45 Magjack
USB Blaster-II Interface
Dual Stack OTG USB 2.0 Type A Connector
Form Factor: 150mm X 140mm

FPGA Standard I/O Interfaces:
12pin Pmod Connector (through FPGA IOs)
6pin Pmod Connector (through FPGA IOs)
Video Interfaces:
HDMI Type A Receptacle Connector
Debug Interfaces:
UART to USB converter with USB MicroAB Connector (for HPS debug)
JTAG USB Blaster II circuit with USB MicroAB Connector
JTAG Connector (Optional)
Additional features:
8 Nos DIP switch
8 Nos Push button switches
8 Nos LEDs
Power ON/OFF Switch
Reset Switch
20Pin MAX10 CPLD IO Header (Optional)
Power Supply: 12V Power Input Jack
Operating Temperature: 0°C to 50°C

iWave
Embedding Intelligence

intel FPGA Design Solutions Network Platinum

High Performance SoC FPGA SOM Carrier Board Block Diagram



OS SUPPORT

Linux 4.9.78

DELIVERABLES

Arria 10 SoC / FPGA FMC+ Dev-Kit
Board Support Package
User Manual

OPTIONAL KITS/Modules

Arria 10 SoC SOM

CUSTOM DEVELOPMENT

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 an innovator in the development of highly integrated, high performance, low power and low cost System On Modules and Development Platforms.

iWave System 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 a Windows embedded Silver partner and a winner of the Partner Excellence Award.

**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.

Ordering the Arria 10 Development Kit with FMC+

The Development Kit can be ordered online from the iWave Website
http://www.iwavesystems.com/webforms

iW-G24D-BR-R1.0

iWave Systems Tech. Pvt. Ltd.,
7/B, 29th Main, BTM Layout 2 nd Stage,
Bangalore-560076, India.
Ph:+91-80-26683700, 26786245
Email: mktg@iwavesystems.com
www.iwavesystems.com

iWave Japan, Inc.
8F-B, Kannai Sumiyoshi Building,
3-29, Sumiyoshi-cho, Naka-ku,
Yokohama, Kanagawa, Japan.
Ph: +81-45-227-7626
Email: info@iwavejapan.co.jp
www.iwavejapan.co.jp

iWave Europe
Postbus 6197
3130 DD Vlaardingen
The Netherlands
Ph: +31 10 28403383
Email: info@iwavesystems.eu

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

iWave Global:

iW-G24D-CU2F-4E001G-S008G-LCG iW-G24D-CU2F-4E002G-S008G-LCI iW-G24D-CU2F-4E002G-S008G-LCK