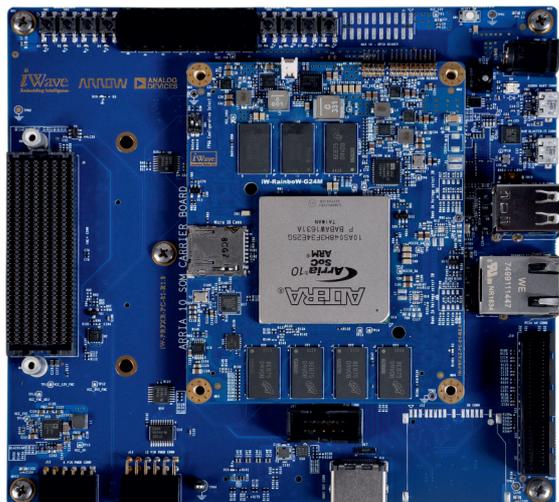


Development Platform iW-RainboW-G24D Arria 10 SoC/FPGA FMC+ Dev-Kit



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+ Development 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 FPGA 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

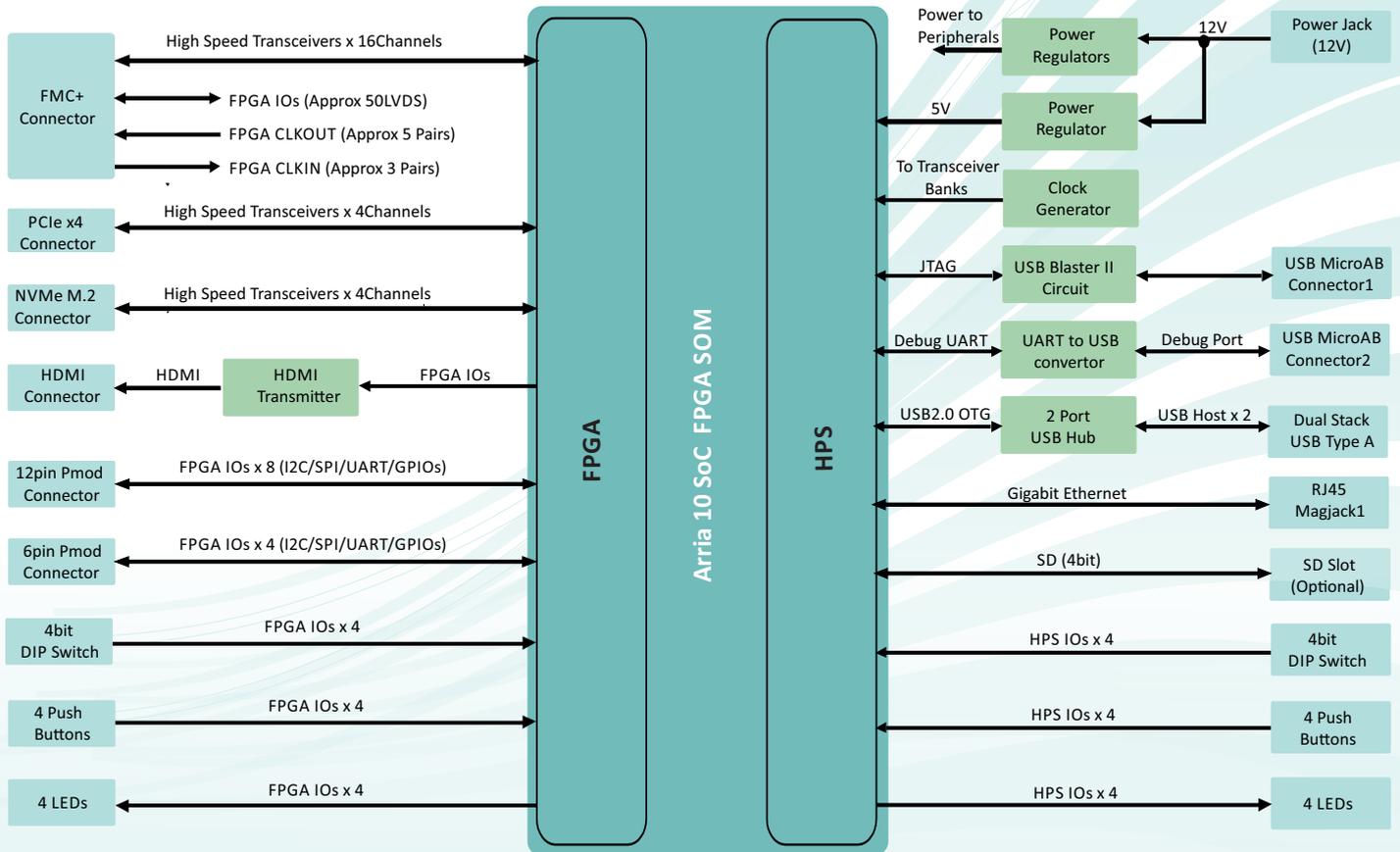
Pmod Connectors

LEDs, Push Buttons, Slide Switches

SPECIFICATIONS

Arria 10 SoC/FPGA SOM:	FPGA Standard I/O Interfaces:
Compatible Arria10 SoC Family - SX270,SX320,SX480,SX570,SX660	12pin Pmod Connector (through FPGA IOs)
Compatible Arria10 FPGA Family - GX270,GX320,GX480,GX570,GX660	6pin Pmod Connector (through FPGA IOs)
4GB DDR4 SDRAM (64bit) for FPGA	Video Interfaces:
2GB DDR4 SDRAM (32bit) with ECC for HPS (Expandable)	HDMI Type A Receptacle Connector
MicroSD Connector for HPS booting	Debug Interfaces:
NAND Flash for HPS booting (Optional)	UART to USB converter with USB MicroAB Connector (for HPS debug)
Configuration Flash for FPGA (Optional)	JTAG USB Blaster II circuit with USB MicroAB Connector
Arria 10 SoC/FPGA Carrier Board:	JTAG Connector (Optional)
High Speed Interfaces:	Additional features:
FMC Plus Connector x 1	8 Nos DIP switch
PCIe x 4 Connector x 1	8 Nos Push button switches
NVMe M.2 Connector (through PCIe) x 1	8 Nos LEDs
Communication Features:	Power ON/OFF Switch
Gigabit Ethernet through RJ45 Magjack	Reset Switch
USB Blaster-II Interface	20Pin MAX10 CPLD IO Header (Optional)
Dual Stack OTG USB 2.0 Type A Connector	Power Supply: 12V Power Input Jack
Form Factor: 150mm X 140mm	Operating Temperature: 0°C to 50°C

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>

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