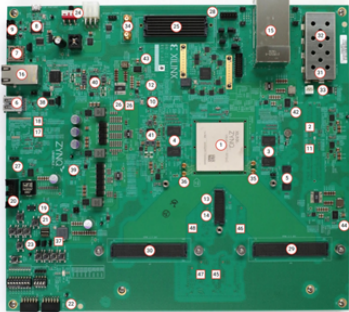
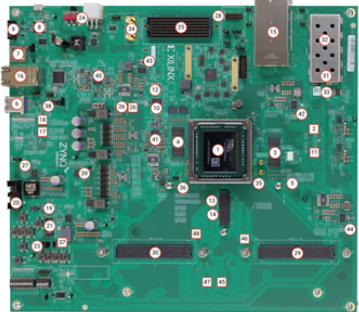


NA22 HW RFSOC-Based Platform Considerations

- 1. AMD/Xilinx RFSOC Evaluation Kits.
- 2. PCIe Boards
- 3. Quotes

Xilinx ZCU208 & ZCU216 Evaluation Kits.

ZCU216		ZCU208	
			
RF Data Converter		RF Data Converter	
# of 14-bit ADCs	16	# of 14-bit RF-ADCs	8
Max Rate (GSPS)	2.5	Max Rate (GSPS)	5
# of 14-bit DACs	16	# of 14-bit RF-DACs	8
Max Rate (GSPS)	9.85	Max Rate (GSPS)	10*
Memory		Memory	
PS DDR4	4GB 64-bit SODIMM	PS DDR4	4GB 64-bit SODIMM
PL DDR4	8GB 64-bit Component	PL DDR4	8GB 64-bit Component
Micro SD Card	16GB	Micro SD Card	16GB
M.2 SATA Connector	Yes	M.2 SATA Connector	Yes
QSPI	2	QSPI	2

Zynq™ UltraScale+™ RFSoc Gen		ZCU208 Eval Kit	ZCU216 Eval Kit
		ZU48DR	ZU49DR
Max. RF input Frequency (GHz)			
Decimation / Interpolation			
14-bit RF-ADC	# of ADCs	8	16
	Max Rate (GSPS)	5.0	2.5
14-bit RF-DAC	# of DACs	8	16
	Max Rate (GSPS)	9.85*	9.85*
SD-FEC		8	0

Zynq™ UltraScale+™ RFSoc Gen 3 Direct-RF Signal Chain Features

		ZU42DR		ZU43DR		ZU46DR		ZU47DR		ZU48DR		ZU49DR	
Max. RF input Frequency (GHz)						6							
Decimation / Interpolation						1x, 2x, 3x, 4x, 5x, 6x, 8x, 10x, 12x, 6x, 20x, 24x, 40x							
14-bit RF-ADC	# of ADCs	8	2	4	8	4	8	8	16				
	Max Rate (GSPS)	2.5	5.0	5.0	2.5	5.0	5.0	5.0	2.5				
14-bit RF-DAC	# of DACs	8		4	12		8	8	16				
	Max Rate (GSPS)	9.85*		9.85*	9.85*		9.85*	9.85*	9.85*				
SD-FEC		0		0	8		0	8	0				

PCIe Cards

HITECH GLOBAL Zynq UltraScale+ RFSoc on ZU48DR Gen3 Silicon

8Ch 14-bit ADC 5GSPS, 8Ch 14-bit DAC 10GSPS

HTG-ZRF8
Xilinx Zynq® UltraScale+™ RFSoc PCI Express Development Platform

8-lane Gen4 PCI Express platform with eight ADC/DAC ports, one FMC+ expansion connector, USB/UART port, Ethernet, Display Port, MicroSD, SATA, USB3, DDR4 SODIMM & components

More Info:
Supported FPGA Devices:
[XCZU48DR-2FFVG1517](#)

UP to 32Gb (SODIMM) for PL & 4Gb for PS

THIRD BEST

8 lane PCIe 4.0 = 16Gbps each dir

HTG-ZRF-EM
Xilinx Zynq® UltraScale+™ RFSoc PCI Express Development Platform /Extended Memory

! All RF connectors are outside PCI bracket !

8-lane Gen4 PCI Express platform with eight ADC/DAC ports, one FMC+ expansion connector, USB/UART port, Ethernet, Display Port, MicroSD, SATA, USB3, x2 DDR4 SODIMMs (Programmable Logic and Processor sides) & x4 components (Processor)

More Info:
Supported FPGA Devices:
[XCZU48DR-2FFVG1517](#) NO Gen1 needed

! UP to 32Gb+4Gb for PL and 32Gb for PS on SODIMM

MOST WANTED

8 lane PCIe 4.0 = 16Gbps each dir

HTG-ZRF-HH
Xilinx ZYNQ™ UltraScale+ RFSoc Half-Size PCI Express Platform

Low-Profile x8 Gen4/3 PCI Express platform with expansion port providing access to 8 ADC/DAC channels, 16GB DDR4 (8GB for the PS & 8GB for the PL), one I/O expansion port with GTY and LVDS I/Os, USB3, Ethernet, SATA, Display port. Supported by different add on cards providing access to different configurations of ADC, DAC and optical interfaces.

More Info:
Supported FPGA Devices:
[XCZU48DR-2FFVG1517](#)

8Gb for PL & 8Gb for PS all soldered on board

8 lane PCIe 4.0 = 16Gbps each dir

HTG-ZRF-SYNC
Xilinx ZYNQ™ UltraScale+ RFSoc x16 PCI Express platform

16 lanes PCIe 4 - MAX DATA BANDWIDTH
Multiple boards Sync

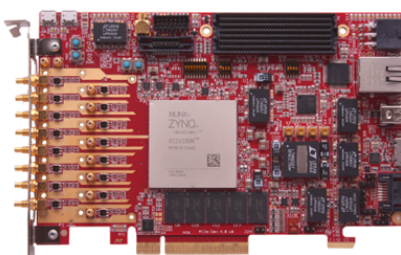
16-lane PCI Express platform with x8 ADC/DAC, x1 USB/UART, x2 Ethernet, x1 Display Port, x1 MicroSD, x1 SATA, x1 USB3, DDR4 SODIMM (PL) & components (PS)

More Info:
Supported FPGA Devices:
[XCZU48DR-2FFVG1517](#) NO Gen1 needed

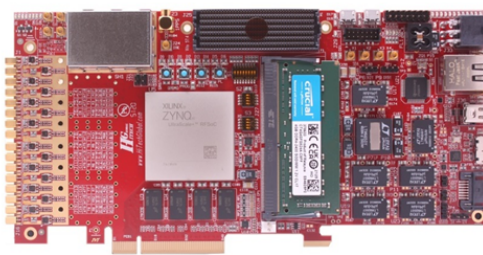
UP to 32Gb (SODIMM) for PL & 4Gb for PS

SECOND BEST

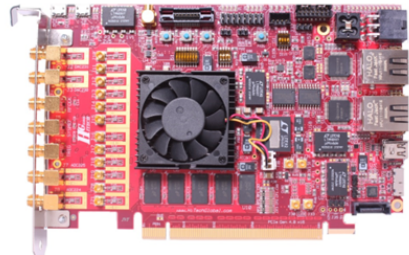
16 lane PCIe 4.0 = 32Gbps each dir



HTG-ZRF8-48
HTG-ZRF8-R2-48 (Multi-Tile Sync)

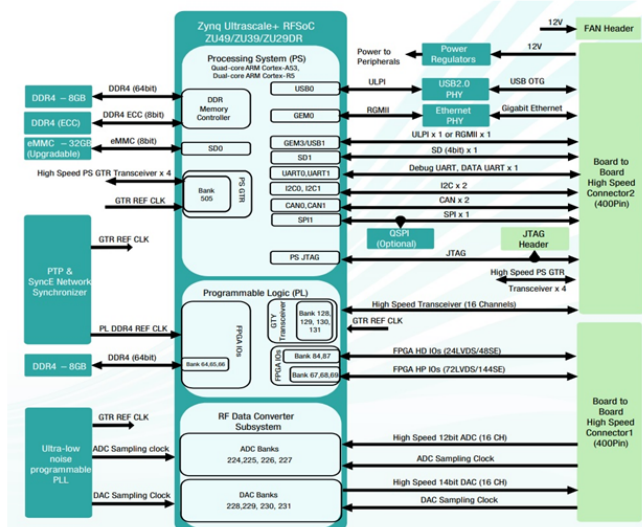


HTG-ZRF-EM-48



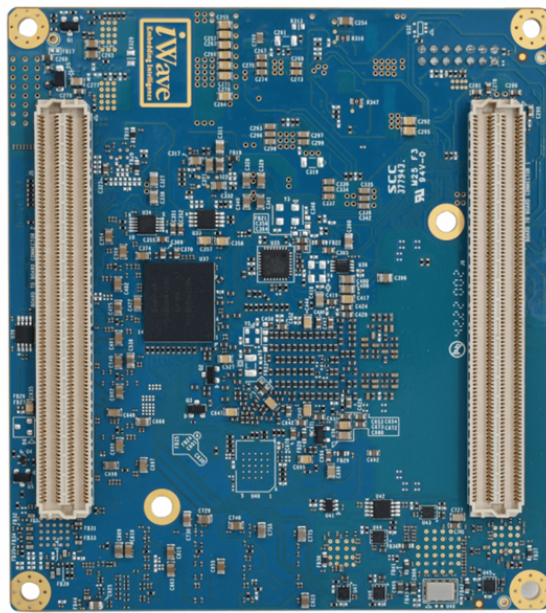
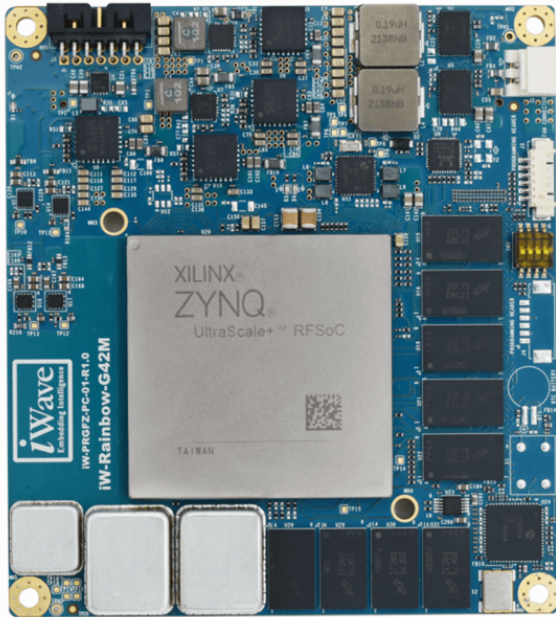
HTG-SYNC-48

iWave iW-RainboW-G42M SOM+ Carrier ZU49DR 16Ch 14-bit ADC 2.5GSPS, 16Ch 14-bit DAC 10GSPS
8Gb soldered for PL + 16Gb soldered for PS DDR4



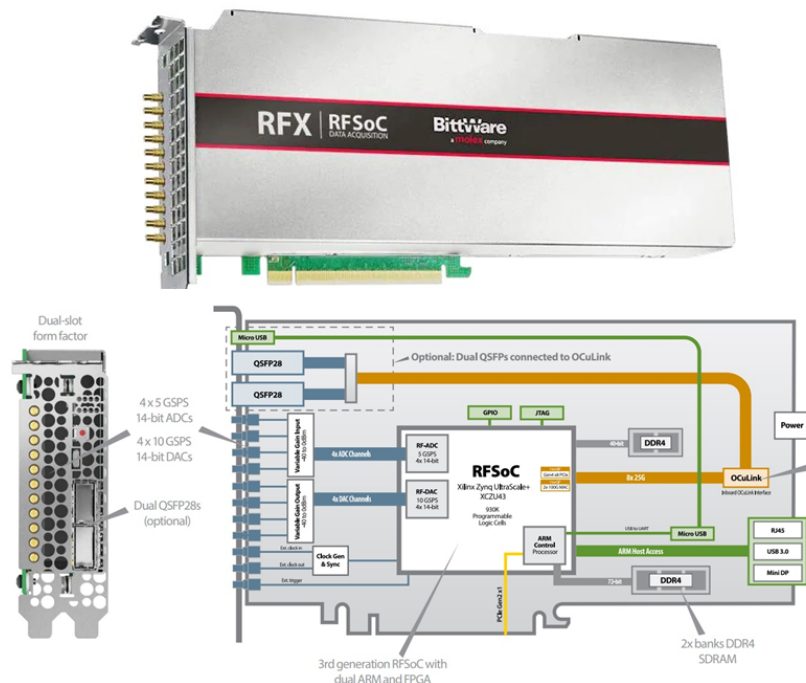
iWave - Indian Company !!!

iWave iW-RainboW-G42M SOM+ Carrier ZU49DR 16Ch 14-bit ADC 2.5GSPS, 16Ch 14-bit DAC 10GSPS
8Gb soldered for PL + 16Gb soldered for PS DDR4



iWave – Indian Company !!!

BITTWARE RFX-8440 ZU43DR 4Ch 14-bit ADC 5GSPS, 4Ch 14-bit DAC 10GSPS 8Gb soldered for PL + 16Gb soldered for PS

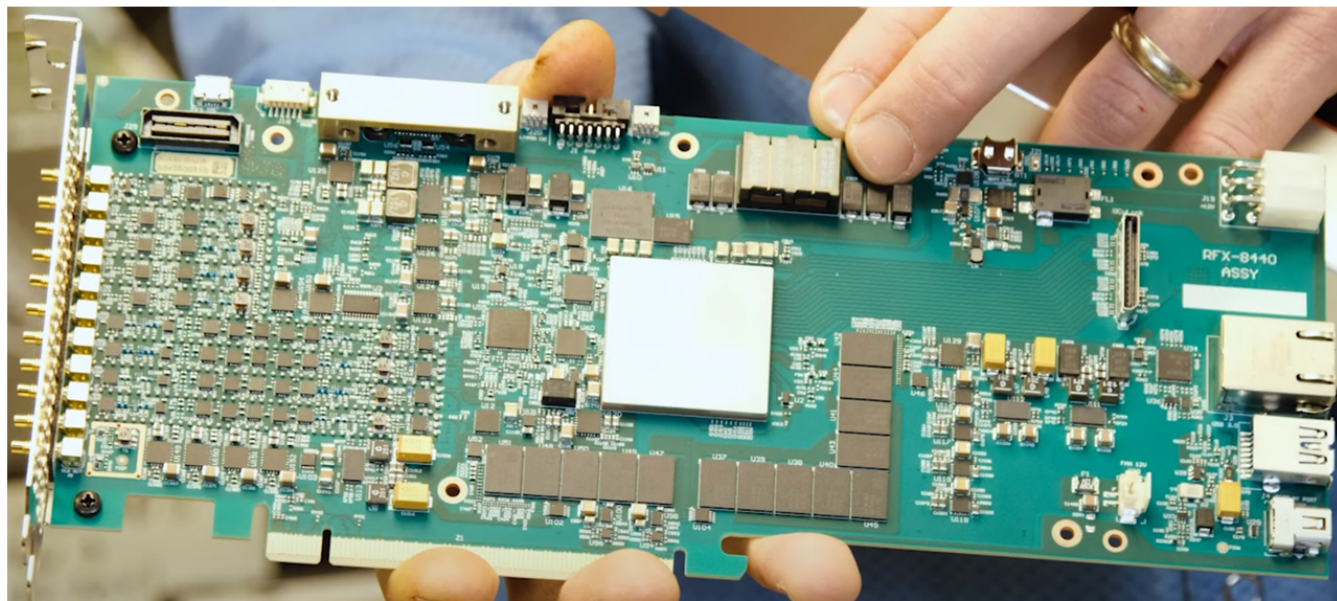


Board Specifications

FPGA	<ul style="list-style-type: none"> Zynq UltraScale+ RFSoc XCZU43 in an E1156 package Core speed grade -2 Contact BittWare for other FPGA options
Analog	<ul style="list-style-type: none"> Several analog configurations available: <ul style="list-style-type: none"> L-Band 1GHz - 2GHz: Includes several signal conditioning components including variable gain Direct 3 GHz Balun: Eliminates amplifier distortion and the L-band signal conditioning Direct 4 GHz Balun: Similar to 3GHz option, but with an extended input range to 4 GHz Contact BittWare for additional options 4 x 5 GSPS 14-bit ADCs: -40 to 0 dBm (default, L-band only) 4 x 10 GSPS 14-bit DACs: -40 to 0 dBm (default) Programmable clocks External reference and triggers SSMC style connectors
On-board flash	<ul style="list-style-type: none"> Flash memory for booting FPGA Flash memory for ARM bootloader and OS image
External memory	<ul style="list-style-type: none"> 16GB DDR4 processing system (ARM) memory with ECC 8GB DDR4 programmable logic memory with ECC
External digital interfaces	<ul style="list-style-type: none"> Processing system <ul style="list-style-type: none"> PCIe Gen2 x1 RJ45 Ethernet USB UART, USB 3.0 Mini DisplayPort Programmable logic: <ul style="list-style-type: none"> Up to 200 Gb/s available via: <ul style="list-style-type: none"> Option 1: In-board OcuLink Option 2: Front panel 2x QSPF28 Xilinx Hard IP support for dual 100GbE and PCIe Gen4

LOW ADC&DAC CHANNELS COUNT : 4+4

BITTWARE RFX-8440 ZU43DR 4Ch 14-bit ADC 5GSPS, 4Ch 14-bit DAC 10GSPS 8Gb soldered for PL + 16Gb soldered for PS



LOW ADC&DAC CHANNELS COUNT: 4+4

!! Add Quotes & Lead time
!! Add Interleaving Sampling

!!

aa