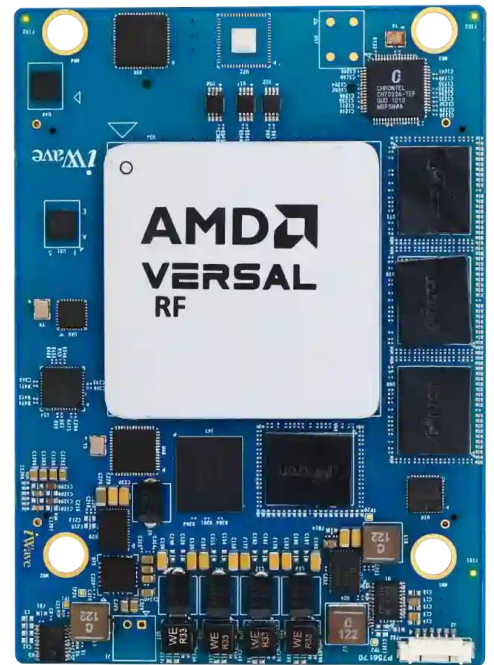


iG-G80M

Versal™ RF

System on Module

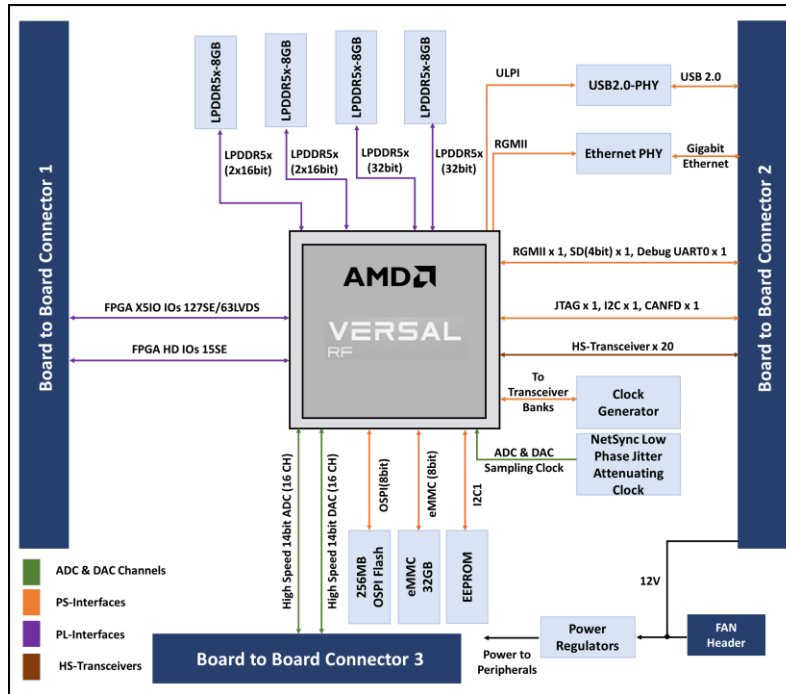
iWave's Versal™ RF System on Module is a high-performance RF computing platform powered by the AMD Versal™ RF adaptive SoC, the module combines integrated RF data converters, adaptive FPGA logic, AI Engines & Arm® processing to deliver low-latency, high-bandwidth signal processing for complex RF workloads. The SoM integrates high-speed RF interfaces, GTM transceivers, high-bandwidth memory, and scalable I/O in a compact, production-ready form factor. By combining RF sampling, adaptive computing, and AI acceleration on a single platform, it simplifies system design, reduces development time & enables rapid deployment of advanced RF applications.



Highlights

- ❖ Versal™ RF System on Module Compatible with VR1952, VR1902, VR1652, and VR1602 devices
- ❖ Up to 2,473.8K Logic Cells & 1,130.88K LUTs for FPGA processing
- ❖ RF input/output support up to 18GHz for wideband applications
- ❖ Up to 16 ADC channels (32GSPS) for high-speed acquisition
- ❖ Up to 16 DAC channels (16GSPS) for signal generation
- ❖ PCIe Gen5 x4 via GTM2 transceivers for ultra-fast data transfer

Block Diagram



Technical Specifications

CPU	Processing System (PS) - Dual Arm Cortex-A72 @1.65GHz, - Dual Arm Cortex-R5F @800MHz - Compatible with VR1952, VR1902, VR1652 & VR1602 devices Programming Logic (PL) - Up to 2,473.8K Logic cells & 1,130.88K LUTs - GTM2 High Speed Transceivers x 20/10 @112Gbps/56Gbps AI Engine (AIE) - AI Engine Tiles up to 120 - AI Data Memory up to 30Mb	Board to Board Connector1 Interfaces (400pin) 16/8 x ADC Channels up to 8/32Gbps 16 x DAC Channels up to 16Gbps - X5IO Bank IOs – up to 64LVDS/128SE - HD Bank IOs – up to 11DIFF/22SE
Memory & Storage	- Dual Channel (2x16bit) 8GB LPDDR5x from PS - Dual Channel (2x16bit) 8GB LPDDR5x from PL 2 x 32bit, 8GB LPDDR5x from PL 32GB eMMC Flash Expandable up to 128GB 256MB (8bit) OSPI Flash or 256MB (4bit) - QSPI flash from PS(Optional) 2Kb EEPROM	Board to Board Connector2 Interfaces (400pin) From PL Block 20/10 GTM2 High Speed Transceivers (Up to 56/112Gbps) From PS Block 1 x 10/100/1000Mbps Ethernet 1 x RGMII, 1 x SD (4bit) 1 x USB2.0 1 x SPI with 3 CS (Optional) 1 x CAN FD, 1 x I2C 1 x Debug UART 1 x JTAG, 1 x SYSMON VP/VN 1 x Thermal Diode Out
On SOM Features	10/100/1000 Ethernet PHY with PTP 1 x USB Transceiver PHY 1 x Clock Generator for TXVR Banks 1 x Low Phase Noise Jitter Attenuating Clock Generator for RF ADC and DAC 1 x FAN Header, 1 x SYNC IN & SYNC OUT, 1 x PPS IN	Software Features - Yocto/PetaLinux BSP - PL & DMA Linux Drivers - PCIe & Ethernet Stack - RF Data Converter Support - Bare-Metal & RTOS Support - Vitis Development Support Form Factor 82mm x 115mm (BRYNc) Power Input 12V through B2B Connector2 Environment Spec. REACH & RoHS3 Compliant* Compliance CE*

A Global Leader in Embedded Systems Engineering and Solutions

Since 1999, we have pioneered leadership in embedded systems technology, establishing ourselves as a strategic embedded technology partner for advanced solutions. Our comprehensive portfolio encompasses ARM and FPGA System on Modules, COTS FPGA solutions, and ODM solutions which include Telematics, Gateways & HMI Solutions.

Beyond our robust product ecosystem, we provide comprehensive ODM support with specialized custom design and manufacturing capabilities, enabling customers to accelerate and optimize their product development roadmaps. With a strategic focus on industrial, automotive, medical, and avionics markets, we deliver innovative technology solutions to global clients.

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