



Q8RF UltraScale+ RFSoc-Based Processor



Q8RF Processor

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Q8RF Processor

High Performance Processor with Embedded RFSoc

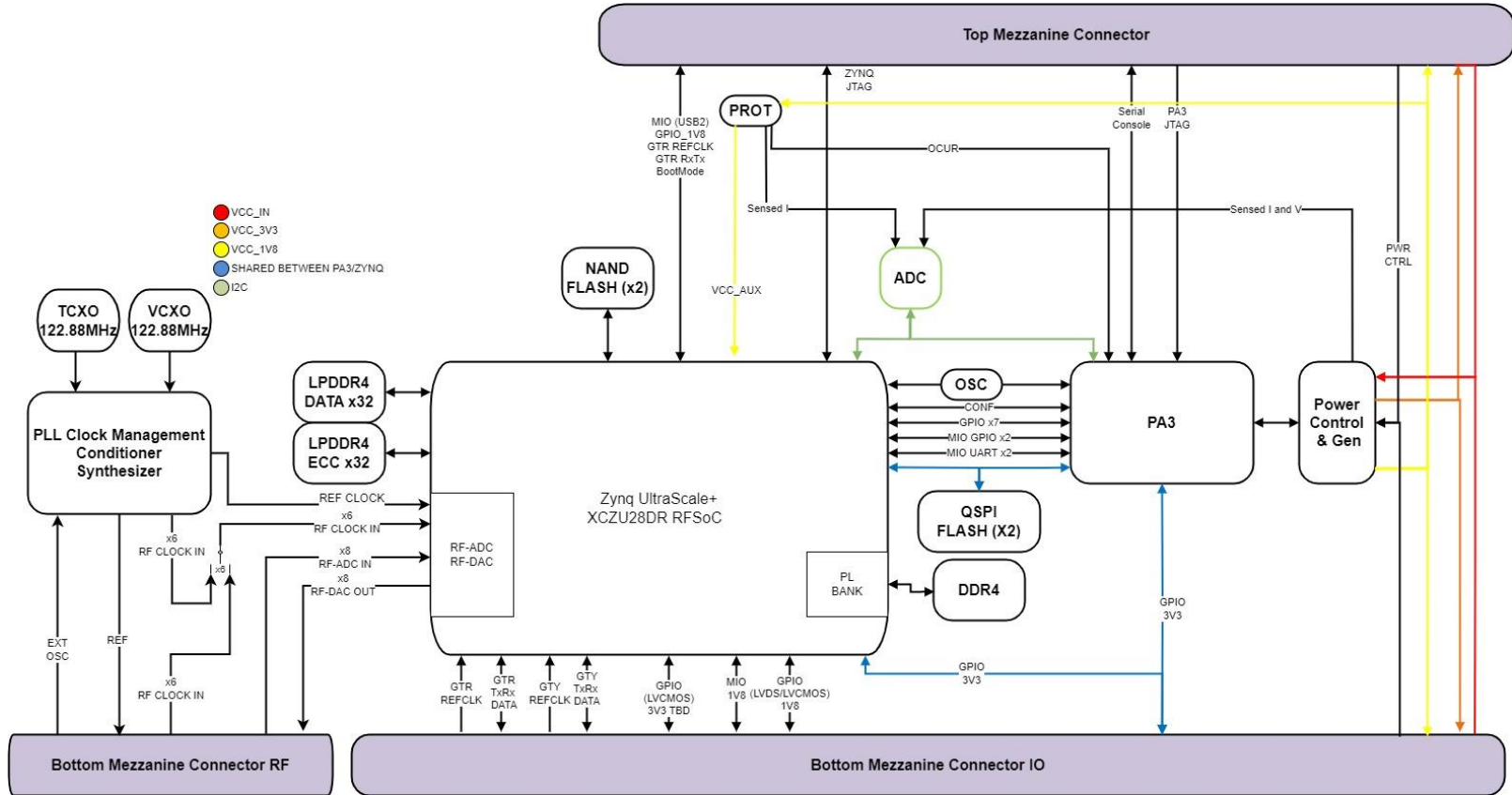
- Extends the capability of Q8S and Q8JS processors with embedded RFSoc (RF System On Chip) for SDR and other applications
- Heterogeneous compute architecture including full ARM processing subsystem, FPGA fabric, and complete analog/digital programmability across the RF signal chain
- Eight embedded RF transceivers (8x 12-bit RF-ADC @ 4.096 GSPS + 8x 14-bit RF-DAC @ 6.554 GSPS)

CHARACTERISTICS

- Xilinx Zynq UltraScale+ ZU28DR RFSoc
- Quad-core ARM Cortex-A53 @ 1.2 GHz, Dual-core ARM Cortex-R5 @ 500 MHz
- 930k system logic cells, 850k flip-flops (FF), 425k look-up tables (LUT) and 4,272 DSP slices
- 4 GB PS LPDDR4 DRAM (with EDAC) & 4 GB PL-accessible DDR4 DRAM
- 2x 256 MB QSPI Flash (NOR) for application firmware
- 2x 32 GB NAND Flash for data mass storage
- 5-16 V input
- 100 mm x 100 mm x 20 mm
- I/O bottom mezzanine connector: 1.8V/3.3V GPIO, LVDS, 16x 28.21 Gbps GTY transceivers supporting PCIe Gen 3 & 100G Ethernet, 3x GTR transceivers supporting PCIe Gen 2 & SATA
- RF bottom mezzanine connector: 8x Transmit + 8x Receive RF, Ext Ref Clock(s) In, Ref Clock Out
- Radiation effects mitigation and 30krad TID lifetime (target)



Q8RF Processor Block Diagram





- **For more information, please contact:**
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