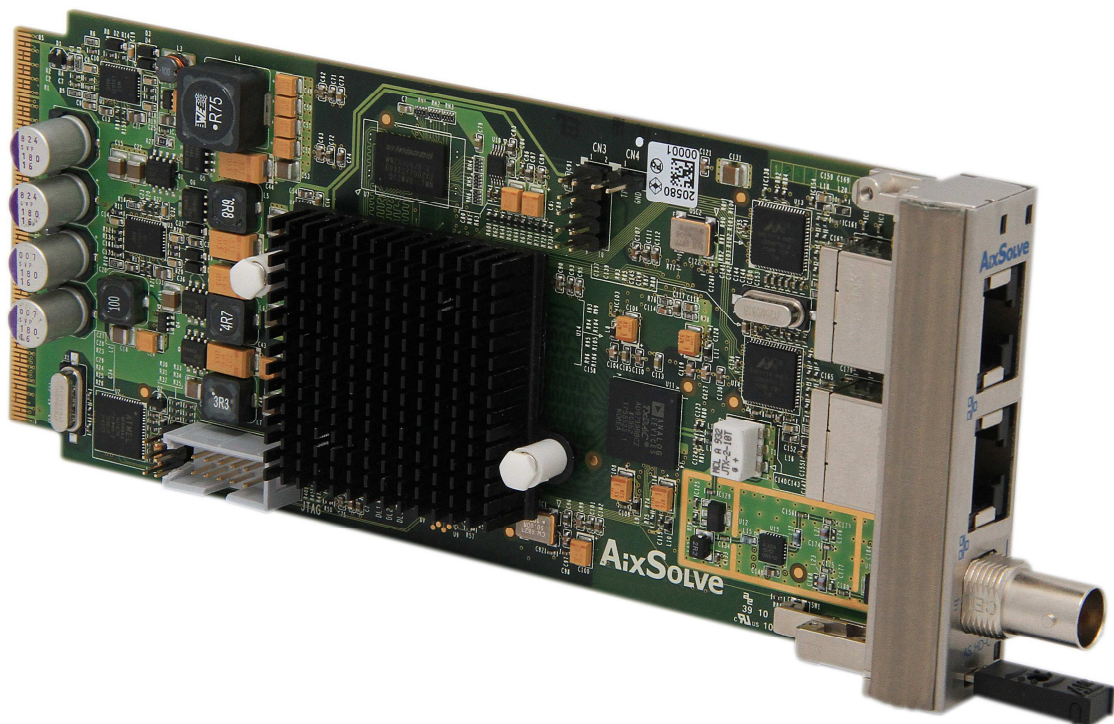


# AixSolve Orion $\mu$ TCA DAC

The *AixSolve ori-dac* ( $\mu$ TCA) is a mid-size I/O AMC module for the production or output of signals in the frequency range from 50 MHz to 1 GHz.

Applications include:

- The realization of various modulation methods including Up Converter Board in the desired frequency range,
- The implementation of RF or signal generator
- The direct output of high-frequency signals.



The main components of the board are the user-programmable Altera FPGA and the AD9739 DAC from Analog Devices. The DAC samples processed 2400 million 14-bit per second. A stable clock supply of 2.4 GHz is integrated on the board. Located between the DAC and the output is a controllable amplifier (-2dB to 30dB).

Furthermore, the board is equipped with a 1Gbit DDR2 RAM and two serial flashes, which can be freely used for the user's application. On the front panel as the I / O in addition to the RF output are also two Gigabit Ethernet interfaces. Three Serdes are connected to the backplane.

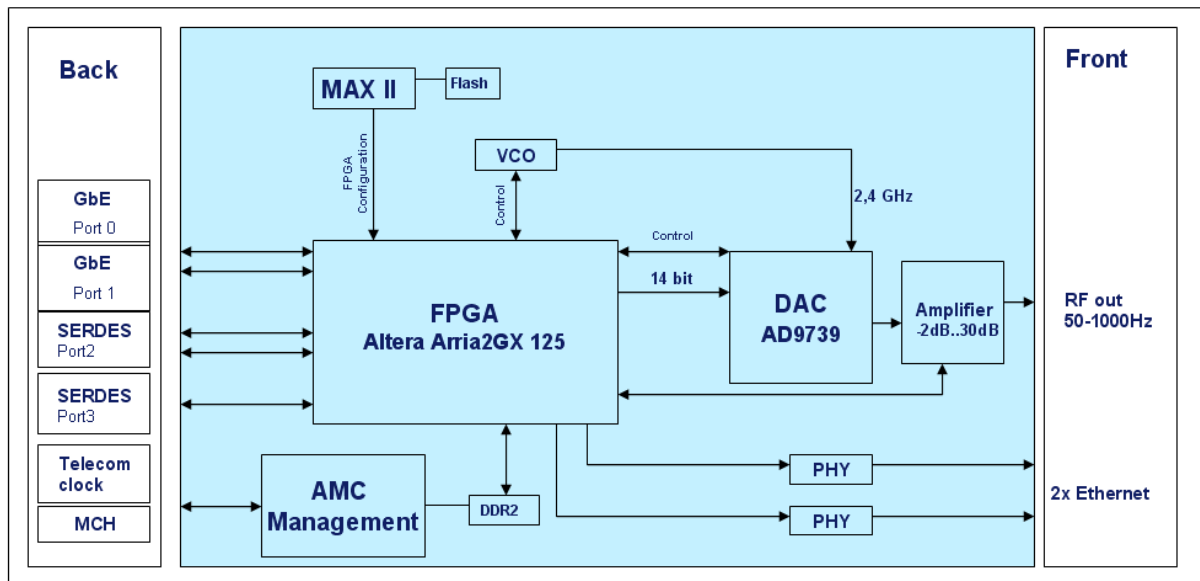
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Board Block diagram:



Analog Output	<ul style="list-style-type: none"> <li>• 1 channel, single ended AC-coupled signal</li> <li>• 14-bit, <b>2400 MSPS</b></li> <li>• 75 Ohm</li> <li>• BNC connector</li> <li>• DAC: AD9739 + Amplifier (-2dB .. 30dB)</li> <li>• 50 MHz – 1000 MHz</li> </ul>
FPGA	<ul style="list-style-type: none"> <li>• Arria II GX 125</li> <li>• 124 000 LE's</li> <li>• 576 18x18 bit Multiplier</li> <li>• 18.1 MBit internal memory</li> <li>• 6 PLLs</li> <li>• 4 x 6.375-Gbps transceivers</li> <li>• Framework to support customers VHDL development</li> </ul>
AMC Connector	<ul style="list-style-type: none"> <li>• GbE port 0 - 1</li> <li>• SERDES to port 2 – 3</li> <li>• Telecom clock</li> </ul>
Front side interfaces	<ul style="list-style-type: none"> <li>• RF</li> <li>• 2 Ethernet</li> </ul>
Part number	<ul style="list-style-type: none"> <li>• AixTC-DAC (available Q3'11)</li> </ul>

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