Customer case study

MERIDIAN SAVES 70% ON COMPONENT COSTS

ST Micro ST32M

Freescale DSP56371

Analog Devices AD1895 Sample rate convertor

Altera EPM5128

Cirrus Logic CS8406-I2S

32 bit compute

Complex peripherals

DSP
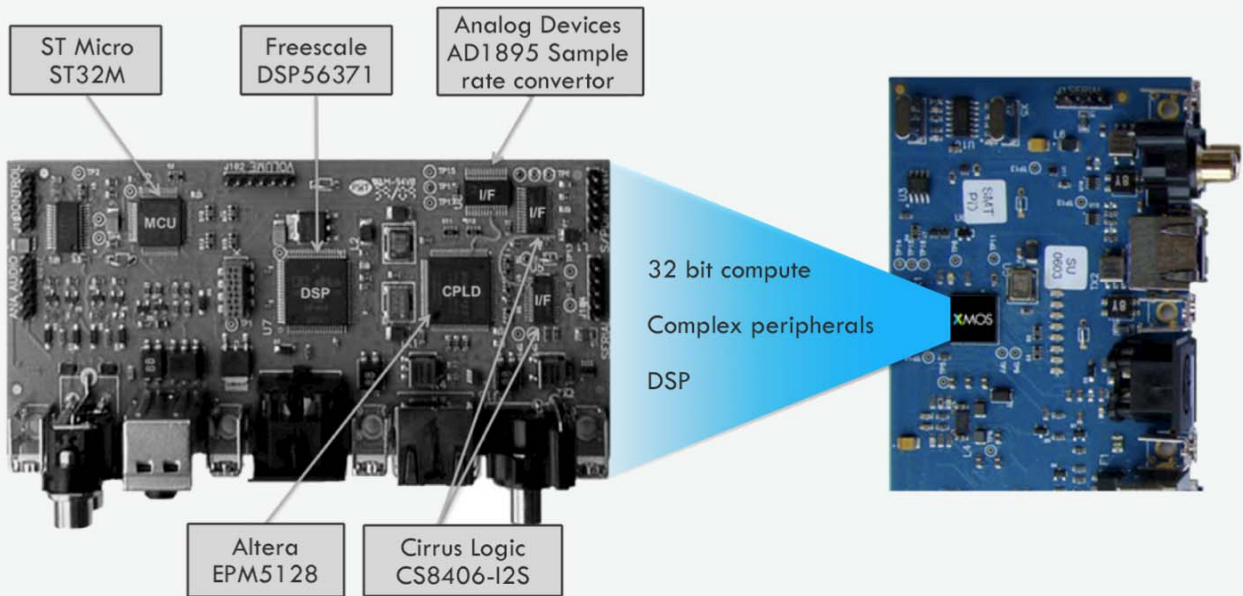
Meridian, a producer of state-of-the-art audio and video home entertainment systems, has employed the xCORE multicore microcontroller in a range of products including the Meridian Control 15 Media Server. Renowned for its ability to faithfully reproduce input from the signal source to deliver the highest quality audio performance, Meridian chose to use xCORE technology due to its ability to deliver extremely efficient solutions with flexibility and in a small footprint.

Using xCORE devices, Meridian's engineering team combined multiple functionalities on one chip, particularly digital signal processing and real-time functions. If implemented using multiple DSP, CPLD and FPGA devices, Meridian estimates it would have cost ten times more than using a single xCORE device. Designing for a single device also meant they could replace three development systems with the xTIMEcomposer tools, saving many months in development time.

"At Meridian, our standard is to combine premium sound devices with leading-edge design, and XMOS let us continue this legacy at a low cost and in a short development time, especially considering the degree of integration required with the Control 15," said Richard Hollinshead, director of engineering at Meridian. "By exchanging multiple silicon pieces for a single XMOS chip, we have lowered costs and harnessed the flexibility to integrate specific, differentiating functionality in the Control 15 that other chips simply didn't allow. Developing on xCORE multicore microcontrollers showed us the next generation of programmable silicon."

See the Meridian video case study at: xmos.com/meridian-case-study