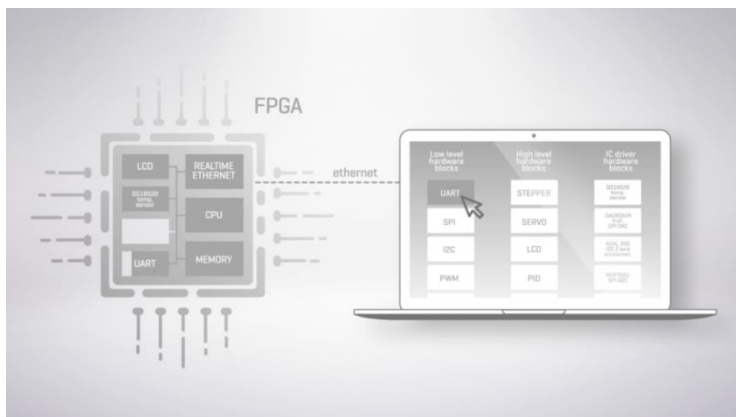


Liquid board – FPGA programming can be easy

Liquid board is an FPGA based development board, which can be used as a standard microcontroller-based development board. Furthermore, Liquid board is also supporting the change of internal hardware, typical for the FPGAs, but without the complicated HDL coding. It is a microcontroller - FPGA hybrid with all the advantages of the FPGA and all the simplicity of a microcontroller.



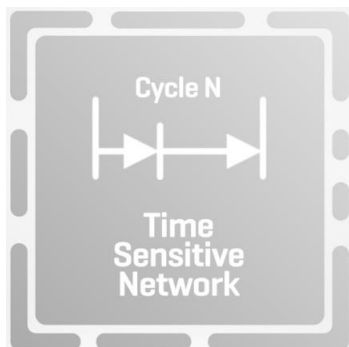
Loading of a hardware block on the fly

Instead of typical basic standard peripheral hardware blocks (I2C, SPI, UART, etc) which could be find in a microcontroller, there are empty hardware block spaces. Those can be filled up with an arbitrary hardware block which suits to a specific task. Hardware blocks are loaded on the fly to a particular location, simply by choosing a desired hardware.

Such design has many advantages:

- Loading of required hardware blocks only and positioning them on the arbitrary pin location,
- No need for low level interface programming. Interfacing external devices can be achieved simply by loading the appropriate hardware block,
- Higher performance through hardware acceleration,
- Faster clock rate and application speed due to CPU offloading.

System supports hardware blocks configuration, CPU programming and on system remote debugging over Ethernet connection (no additional cable is required).



Fast (up to 1Gb/s) hard real-time network data exchange can be achieved through dedicated hardware block with Time Sensitive Network (TSN) support of:

- Time synchronization,
- Trigger synchronization,
- Traffic shaping to deliver data without interference,
- Latency bounding for time critical applications.