

**reflex ces** employs 100 people, enjoys an annual revenue of 15M Euros and is based in France (Paris area). Founded in 2000, reflex ces' main core activity is the design and production of FPGA based Custom Embedded Systems.

Our R&D team of 70 highly skilled engineers is focused on designing mid-to-highly complex boards and systems thanks to their expertise in Hardware, Firmware, Software, Mechanics, CAD and Signal integrity.

In addition, reflex ces is a unique One-Stop Shop partner with all our manufacturing capabilities at the same site. As a result, we are able to produce any number of boards from just a few units to 1000s, with more than 15 000 boards produced per year.

Typical markets include: Military & Defense, Security, Video processing, Test & Measurement, Machine & Intelligent Visison, Medical, High Speed Data Communication, High Performance Computing, Finance, Industrial, and Automotive.

We offer solutions for COTS, Modified-COTS (MOTS), Standard FMC, Custom FMC or other format daughter board designs, and Full Turnkey Designs as below:

## **COTS** solutions

- XpressSX AGI-FH400G, the Agilex<sup>™</sup> I-Series SoC 2700KLE PCIe board, CXL<sup>™</sup> standard, with 400GbE and 3x DDR4 banks
- Zeus, the Zynq® UltraScale+™ MPSoC SoM, featuring 304 SE IOs total, 16GTY @25.78Gbps, 32 GTH @12.5Gbps, and 3x DDR4
- Sargon Instant-DevKit, the Stratix® 10 FPGA & SoC FMC+ PCIe Gen3 x16 board
- XpressGX/SX S10-FH200G, the Stratix® 10 GX or SX 2800 KLE PCIe board, featuring 200G Ethernet
- XpressGX S10-FH800G, the Stratix® 10 GX 2800 KLE PCIe board, featuring 800G Ethernet
- COMXpressSX Stratix 10, the Stratix® 10 COM Express basic form factor Module, Type 7
  standard
- Achilles Instant-DevKit, the Arria® 10 SX SoM & Starter Board / A10 SOM available for production volume / PCIe Gen3 x8 Carrier board available / Custom Carrier boards on request
- Alaric Instant-DevKit, the Arria® 10 SX PCIe Gen3 x8 board
- XpressVUP-LP9PT/LP5PT, Low Profile PCIe Virtex UltraScale Plus<sup>™</sup> VU9P/VU5P FPGA boards, available with 2 banks DDR4, 2 banks QDR2+ and 8x transceivers expansion port
- XpressGXA10-LP1150T / XpressGXA10-LP1151B, Low Profile PCIe Arria® 10 GX 1150 KLE boards, available either with 4GB DDR4 and 4 banks QDR2+ up to 144Mb each, and 16x transceiver expansion port / or with 8GB DDR4 and a QSFP+ cage, 10x transceiver expansion port and 10 GPIO expansion port

## **Modified-COTS solutions**

All of the above COTS boards may be modified to better fit your FPGA or memory density needs, or de-populated for lower cost constraints so long as the PCB and main functionalities are not compromised, and so long as this makes sense from a business standpoint.









## **Custom FMC or daughter-board Design**

The goal of providing DevKits and open COTS hardware platforms is to allow most customers to access high end FPGA processing carrier boards without having to make their own. The onboard FMC and Extension connectors on our COTS can be used to connect front-end daughter-boards for signal and data acquisition and other such client application interfacing.

reflex ces offers to design Custom FMC or Daughter-Boards based on customer specific requirements.



## **Full Turnkey Designs**

60% of reflex ces activity is to develop Full Turnkey Design based on customer specific requirements. As we understand the level of customer knowledge to define boards may vary, we can also assist in this task.

We have the capabilities to address full systems as well as partial design services such as: Hardware, Firmware, Software (BSP, OpenCL), Mechanics, CAD P&R, PCB stacking definition, Signal integrity with HyperLynx simulations, certifications, etc.

