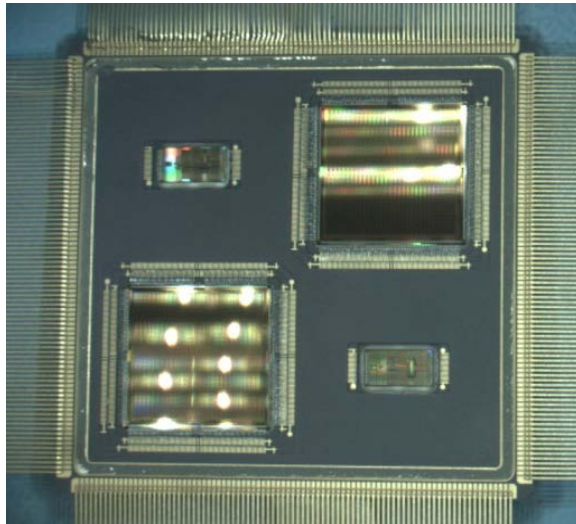# SEFUW FPGA Workshop

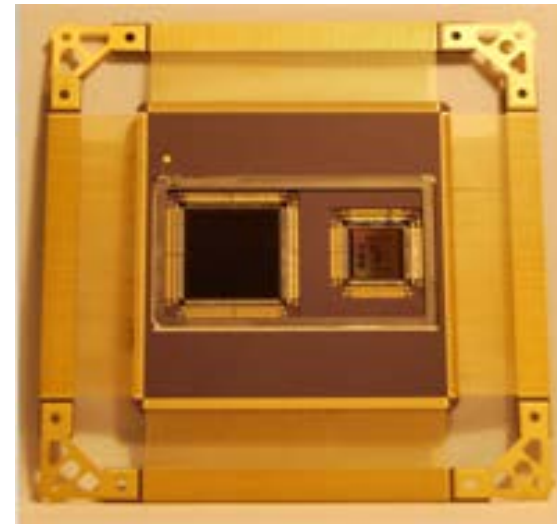**6th November 2012**

ESTEC

Status:

Following the introduction of ATF280F, ATMEL is now developing FPGA-based modules Steropes & Brontes, and ATFS450E.

Brontes

(2x ATF280F FPGA + 2x AT69170E EEPROM)

Steropes

(LEON2 AT697F µP + ATF280F FPGA)

All these developments are under CNES contracts, and Evaluation Kits are available.

For many users, one weakness of the Atmel FPGA offering is the use of the software tools.

In order to improve the software tools, CNES has launched an additional contract with ATMEL in October 2009:

Optimization of Atmel's IDS (Integrated Development System) tools

<u>Outputs:</u>

- ✦ Validation and improvements of ATMEL Figaro IDS tool (Back-End)
- ✦ New releases of Mentor Precision synthesis tool (Front-End)
- ✦ User-Group and Forum set up: http://spacefpga.atmel-nantes.fr/spacefpga/index.html
- ✦ Got users feedbacks and improvements via regular workshops:
  - » 1st workshop hold in 2009: in CNES the 29th of November 2009
  - » 2nd workshop hold in 2010: in ESTEC the 3rd of March 2010
  - » 3rd workshop hold in 2010: in ATMEL Nantes the 3rd of June 2010
  - » 4th workshop hold in 2011: in CNES the 31st of March 2011

On-going FPGA activities in CNES (1/2):

✦ **Promote the organization of FPGA users workshop on a regular basis: (at least 1 per year)**

  ● SEFUW FPGA workshop co-organization with ESA and ATMEL

✦ **Follow the development of the ATFS450E and manage JAXA/HIREC collaboration with ATMEL:**

  ● Next silicon Tape-Out: January 2013, E.S.: Q2 2013, F.M.: Q1 2014

✦ **Evaluation of current ATFS450E samples:**

  ● Internal work in CNES DCT/TV/AV (avionics and electrical architecture) department

  ● Starter Kit pre-evaluation with Steel Electronique

On-going FPGA activities in CNES (2/2):

✦ **MUSE NG-FPGA project**
   (2.5 Mgates complexity FPGA based on NanoXplore architecture – ST 65nm):

   » Project launched on CNES side for Hardware development !!

   ● CNES CCTP issued end of Sept. 2012, Contract to be signed beginning of Nov. 2012

   - Budget: 2M€ (2012 R-CS1 Strategic Components Action Plan)

   » Project to be launched in the very near future on ESA side.