Design with the Zynq™ UltraScale+ RFSoC

COURSE DURATION

3 days - 21 hours

TARGET OBJECTIVES AND SKILLS

- 1 - Describe the RFSoC family in general
- 2 - Identify applications for RF Data Converter blocks
- 3 - Configure, simulate and implement the blocks
- 4 - Verify RF Data Converters on real hardware

CONCERNED PUBLIC

- Technicians and Engineers in Digital Electronics
- All our training courses are given at a distance and are accessible to people with reduced mobility.
- People with disabilities may have special training needs. Our partner AGEFIPH accompanies us to implement the necessary adaptations related to your disability. Don't hesitate to to discuss your requirements.

PREREQUISITES

- Understanding of the Zynq™ MPSoC architecture
- Basic familiarity with data converter terms and principles

NOTES

- Release date: 15/11/2024

COURSE CONTENT

DAY 1

- Objective 1
  - Zynq UltraScale+ RFSoC Overview {Lecture, Demo}
- Objective 2
  - RF-ADC Hardware {Lecture, Demo, Lab}

DAY 2

- Objective 2
  - RF-DAC Hardware {Lecture, Demo, Lab}
  - RFSoC Hardware {Lecture, Demo}
- Objective 3
  - Data Converter Design {Lecture, Demo, Lab}

DAY 3

- Objective 4
  - Practice on ZCU111 {Lecture, Demo, Lab}

TEACHING METHODS AND SUPPORT - ASSESSMENT & RECOGNITION

- **Teaching methods :**
  - Alternating lectures, technical questionnaires and exercises on individual machines.
- **Pedagogical follow-up :**
  - Signed attendance sheet
- **Pedagogical assessment :**
  - Continuous assessment and progress sheet :
    - Technical questionnaire
    - Practical work results
    - Validation of objectives
- **Satisfaction survey :**
  - At the end of training: assessment form completed by the trainee
  - At 3 months: evaluation form completed by the trainee after application to the company
- **Certificate :**
  - Training certificate with assessment of learning provided to trainee
  - Certificate of completion provided to employer

TEACHING METHODS

- **Inter-company online training :**
  - Fast Internet connection, webcam, headset
  - Presentation by Webex by Cisco
  - Provision of course material in PDF format
  - Labs on individual Cloud PC by RealVNC
- **Intra-company face-to-face training on customer site : (details to be confirmed prior to training)**
  - Suggested supply by the customer :
    - Training room
    - Video projector
    - Whiteboard
    - Individual PC with AMD tools
  - Provided by MVD Training :
    - Course material in PDF format
    - Practical work on individual PCs (loan of equipment available on request)

RECOMMENDED COMPUTER HARDWARE

- **Formation Inter-entreprise en distanciel :**
  - Ordinateur récent OS Linux ou Windows 64-bits
  - Internet rapide, webcam, casque micro
  - Outil logiciel WebEx Cisco
  - ***Outils logiciels AMD à distance :***
    - Outil logiciel RealVNC Viewer
  - ***Outils logiciels AMD en local :***
    - Outil logiciel AMD Vitis 2024.1
- **Formation en présentiel sur site client :**
  - Ordinateur récent OS Linux ou Windows 64-bits
  - Outil logiciel AMD Vitis 2024.1

TEACHING STAFF

- **William Duluc, Electronics and Telecoms Engineer, AMD Expert since 2009 and AMD Trainer since 2017 :**
  - Expert AMD FPGA - Language VHDL/Verilog - RTL Design
  - Expert AMD SoC & MPSoC - Language C/C++ - System Design
  - Expert DSP & AMD RFSoC – HLS - Matlab - Design DSP RF
  - Expert AMD Versal – AI Engines – Heteregenous System Architect

TECHNICAL, EDUCATIONAL, ADMINISTRATIVE AND FINANCIAL CONTACT

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