

Designing with Versal™ Serial Transceivers

GENERAL OBJECTIVE OF THE TRAINING

Learn how to use Versal™ GTY and GTM serial transceivers

COURSE DURATION



2 days - 14 hours

PREREQUISITES

- Knowledge of Verilog or VHDL
- Familiarity with logic design (state machines and synchronous design)
- Some experience with AMD Vivado™ implementation
- Some experience with a simulation tool, preferably the Vivado simulator
- Familiarity with serial I/O basics and high-speed serial I/O standards is also helpful

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 discuss your requirements.



NOTES

- Release date: 03/10/2025

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 - Heterogenous System Architect

TARGET OBJECTIVES AND SKILLS

- 1 - Describe and utilize the transceivers
- 2 - Know how to design, simulate, implement and debug transceivers
- 3 - Identify transceiver use cases and describe board design requirements

COURSE CONTENT



DAY 1

- Objective 1
 - Serial Transceiver Shared Features {Lecture}
 - Serial Transceiver Architecture {Lecture}
- Objective 2
 - Transceiver IP Generation {Lecture, Lab}

DAY 2

- Objective 2
 - Transceiver IP Simulation {Lecture, Lab}
 - Transceiver IP Implementation {Lecture, Lab}
- Objective 3
 - Transceiver Use Cases {Lecture}
 - Transceiver Board Design {Lecture}

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

- **Inter-company online training :**
 - Recent computer OS Linux or Windows 64-bits
 - Fast Internet, webcam, headset
 - Software tool WebEx Cisco
 - **AMD remote tools :**
 - Software tool RealVNC Viewer
 - **AMD local tools :**
 - Software tool AMD Vivado
- **Face-to-face training on customer site :**
 - Recent computer OS Linux or Windows 64-bits
 - Software tool AMD Vivado

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

TECHNICAL, EDUCATIONAL, ADMINISTRATIVE AND FINANCIAL CONTACT

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