



## IC2 - Compact PCI

*This course is an extension to the PCI course*

### Objectives

- This course highlights the new hardware features / constraints of CompactPCI with regard to PCI.
- Hardware and software additional requirements to support hot swap are explained.
- Implementation of a non-transparent 21554 intel PCI-to-PCI bridge frequently used in Compact PCI systems.

A more detailed course description is available on request at [formation@ac6-formation.com](mailto:formation@ac6-formation.com)

### Prerequisites

- Knowledge of PCI 3.0: see our course reference [IC1 - PCI 3.0](#) course

### Course Environment

- Theoretical course
  - PDF course material (in English) supplemented by a printed version for face-to-face courses.
  - Online courses are dispensed using the Teams video-conferencing system.
  - The trainer answers trainees' questions during the training and provide technical and pedagogical assistance.
- At the start of each session the trainer will interact with the trainees to ensure the course fits their expectations and correct if needed

### Target Audience

- Any embedded systems engineer or technician with the above prerequisites.

## Course Outline

### THE CompactPCI SPECIFICATION

- Backplane design rules
- Board design rules
- Clocking
- Interrupt lines
- Electrical requirements on the system board

### HOT SWAP

- Architecture model, compliance levels
- Hot swap additional signals
- Insertion & extraction sequences

### THE NON-TRANSPARENT 21554 PCI-TO-PCI BRIDGE

- Address decoding
- Data path inside the bridge
- Consequences of PCI transaction ordering rules
- I2O specification objectives, implementation in the 21554