

# 02.2.1 INTRODUCTION TO AURIX TRACE



# Introduction to AURIX Trace

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# 01 AURIX Debug and Trace Architecture

Infineon 32-bit AURIX production devices provide debug capability (OCDS) by default while they don't provide a Trace functionality.

Infineon offers a dedicated pin compatible **Emulation Device (ED)**, which features also the Trace functionality.

iSYSTEM BlueBox connects to the OCDS debug module through fast DAP debug interface or optional slower JTAG debug interface.

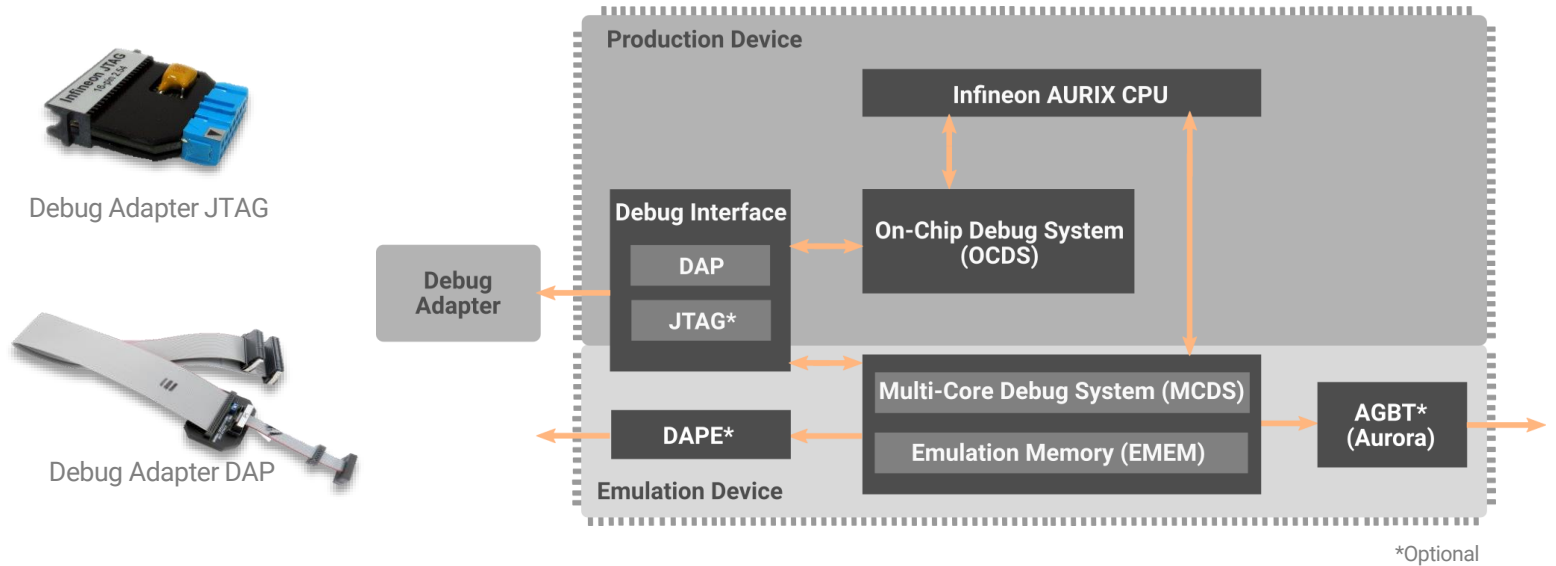
Trace on the Emulation Device is built around the MCDS and the EMEM subsystems. The MCDS is the core component and connects to all internal buses being visible to the trace and on the other side to the EMEM, a trace storage buffer from where the trace data is uploaded to the PC.

Typically EMEM trace data is uploaded off the chip through the DAP debug interface.

Due to a limited bandwidth and being also shared with the OCDS module, optionally a dedicated DAPE debug interface is available for uploading the trace data from EMEM.

Another alternative to the DAPE debug interface, is a high-speed serial AGBT interface, which allows trace uploads at transfer rates of several Gbit/s.

\* Check if your Emulation Device provides DAPE or AGBT interface.



Infineon DAP/DAPE Active Probe



Infineon AGBT Active Probe

## 02 Connecting to the Target

iSYSTEM Debug and Trace solutions:

- DAP Debug Adapter
- JTAG Debug Adapter
- Infineon DAP/DAPE Active Probe
  - ✓ DAP Debug interface up to 160 MHz
  - ✓ DAPE Trace interface up to 160 MHz
- Infineon AGBT Active Probe
  - ✓ DAP Debug interface up to 160 MHz
  - ✓ AGBT Trace interface

Interface	iC5700	iC5700 Active Probe	iC5000	iC6000
JTAG	✓		✓	✓ DTM Aurora JTAG
DAP	✓	✓	✓	✓ DTM Aurora DAP
DAPE (TC3xx)		✓ Infineon DAP/DAPE Active Probe		
AGBT (Aurora)		✓ Infineon AGBT Active Probe		✓



# Further Reading

For more information refer to our online resources:

- Hardware Solutions:
  - On-Chip Analyzer BlueBox [iC5700](#)
  - [Active Probes](#)
  - [Debug Adapters](#)
- winIDEA Online Help:
  - winIDEA [Analyzer](#)
  - Infineon TriCore [Online Help](#)
  - Plugins [TriCore](#) and [AURIX](#)
- iSYSTEM Infineon Microcontrollers [overview](#)
- Application Note – [AURIX Trace Overview and Use-Cases](#)
- [Knowledge Base](#)