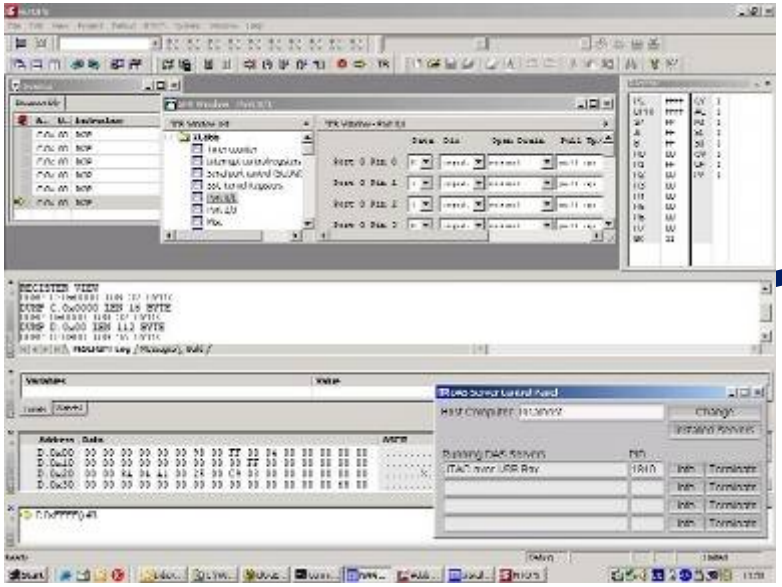
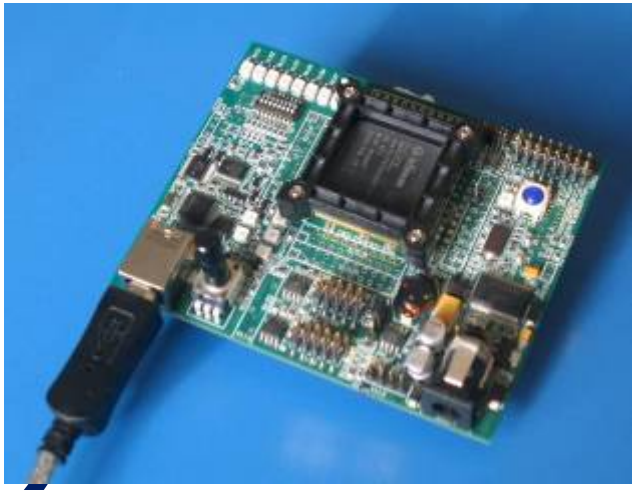
Device Access Server Introduction

http://www.infineon.com/DAS

DAS Device Access Server



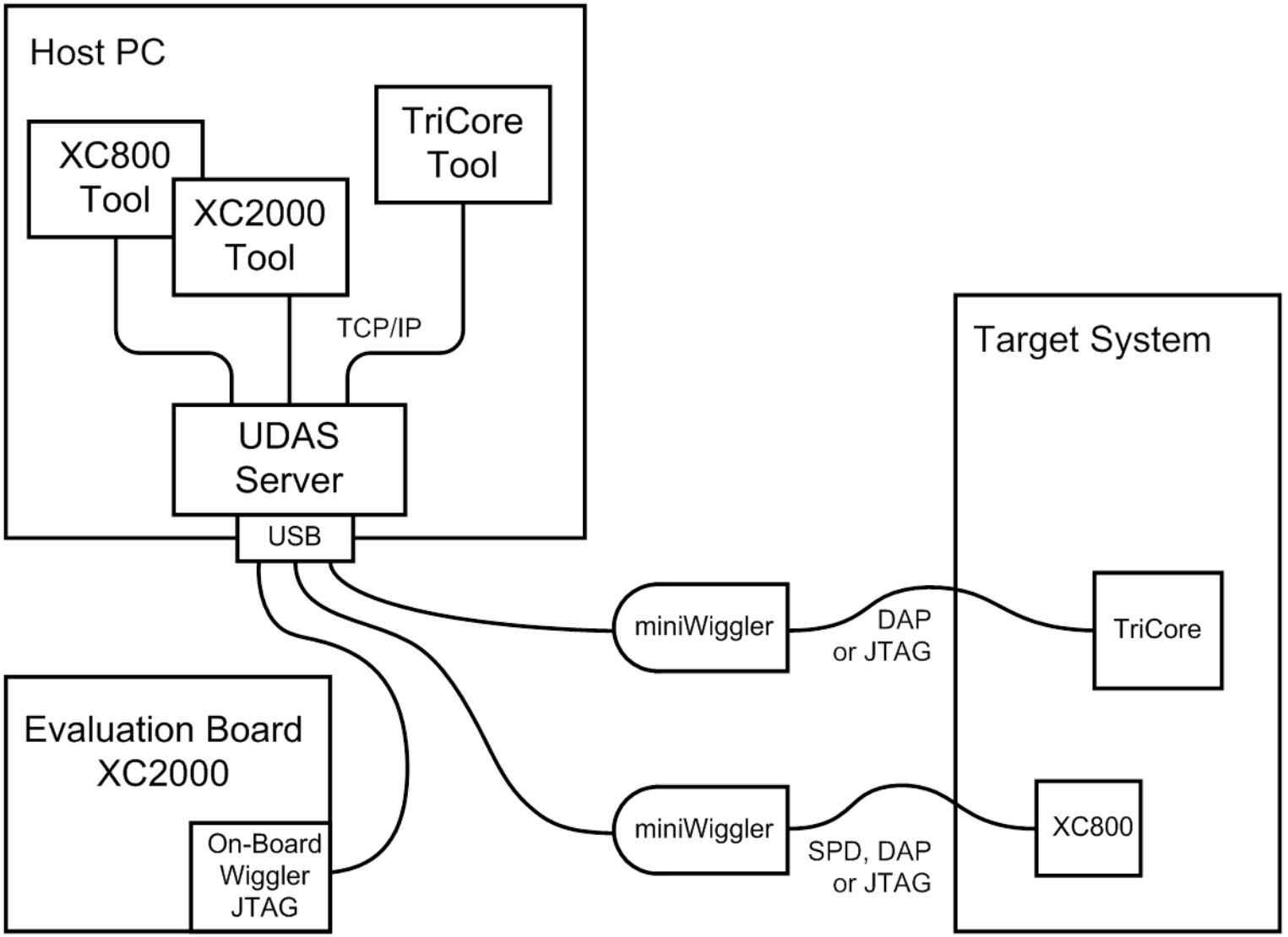
Tool
to
Device



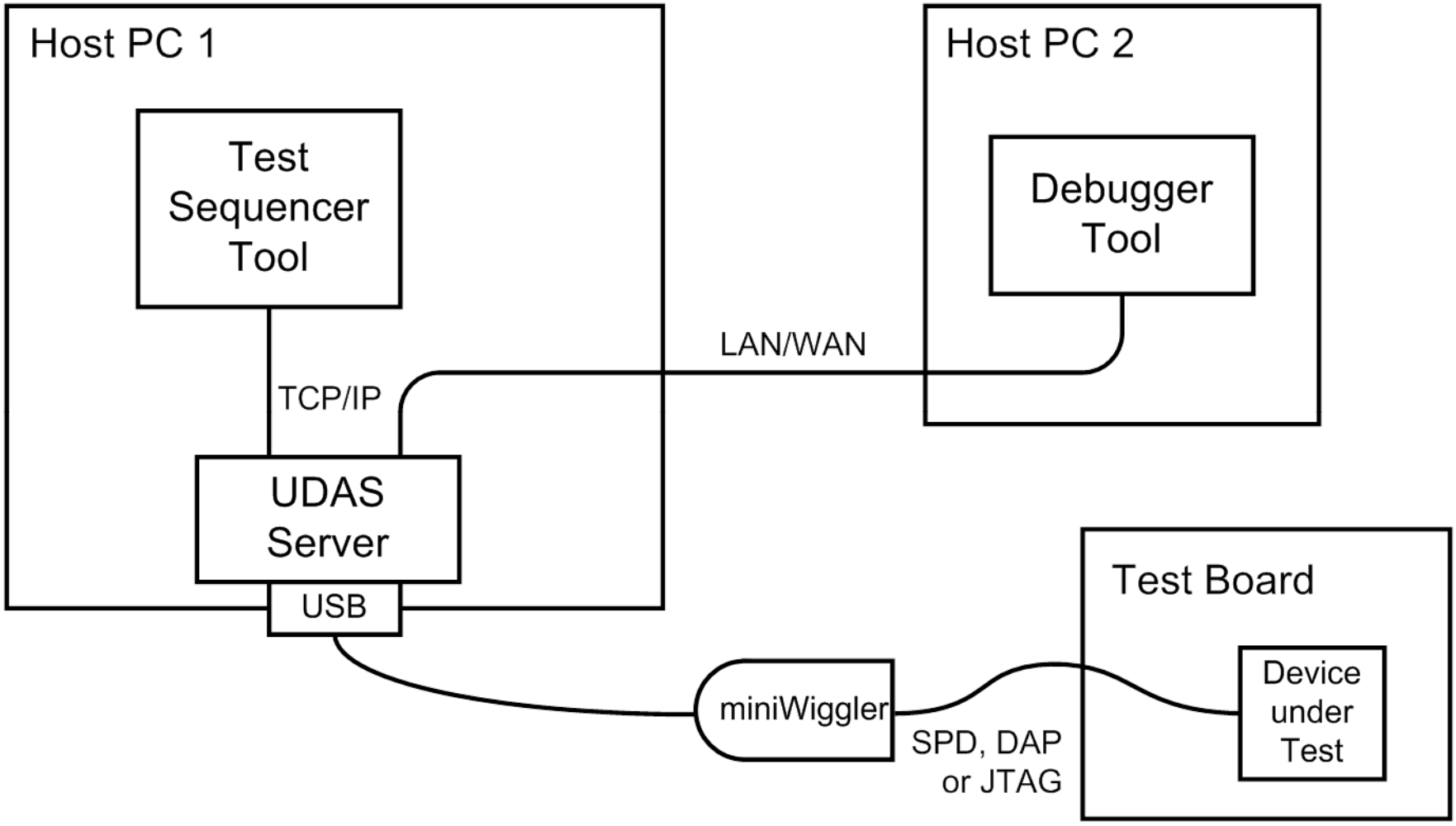
DAS
=
Abstraction
of physical
connection

DAS Mission

DAS Use Case



DAS Multi-Tool Operation



DAS Implementations

Interfaces

- JTAG
- DAP
- SPD
- ARM SWD
- Simulator (C-Models)

Supported Devices

- XC800
- XC166, XE166/XC2000
- TriCore
- XMC4000

DAS Hardware

DAS Hardware

JTAG/DAP/SPD On-Board Wiggler

- UCAN Stick, XC800 Sticks
- Easykit boards, TriBoards

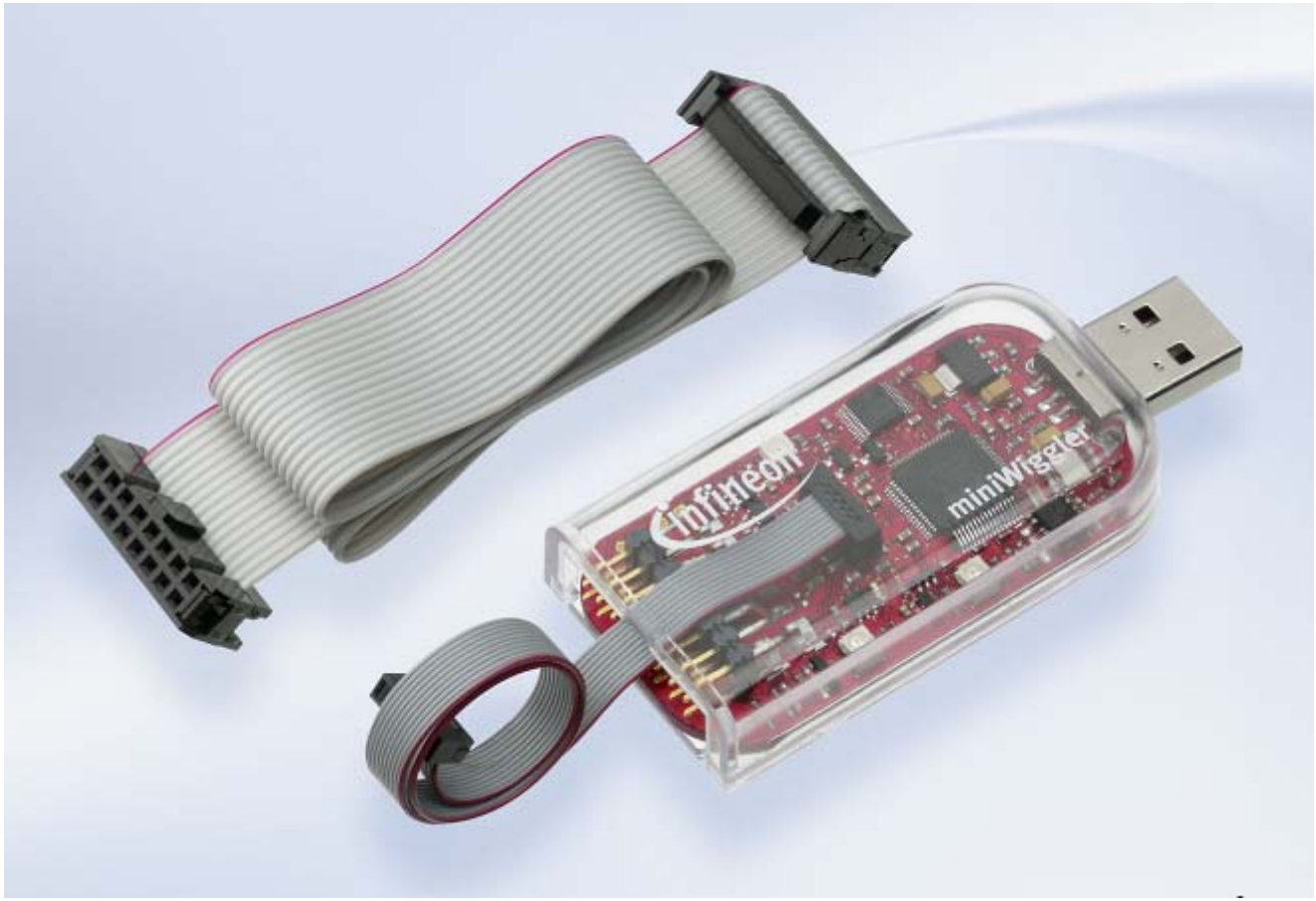
JTAG Wiggler

- Old miniWiggler
- JTAG over USB wiggler box (phased out)

JTAG/DAP/SPD/SWD

- DAP miniWiggler V2.0
- Hitex Tantino

DAP miniWiggler

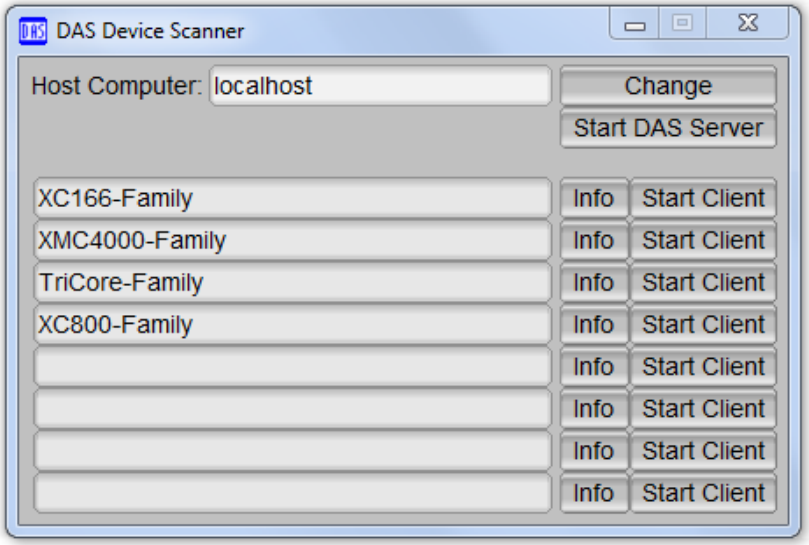


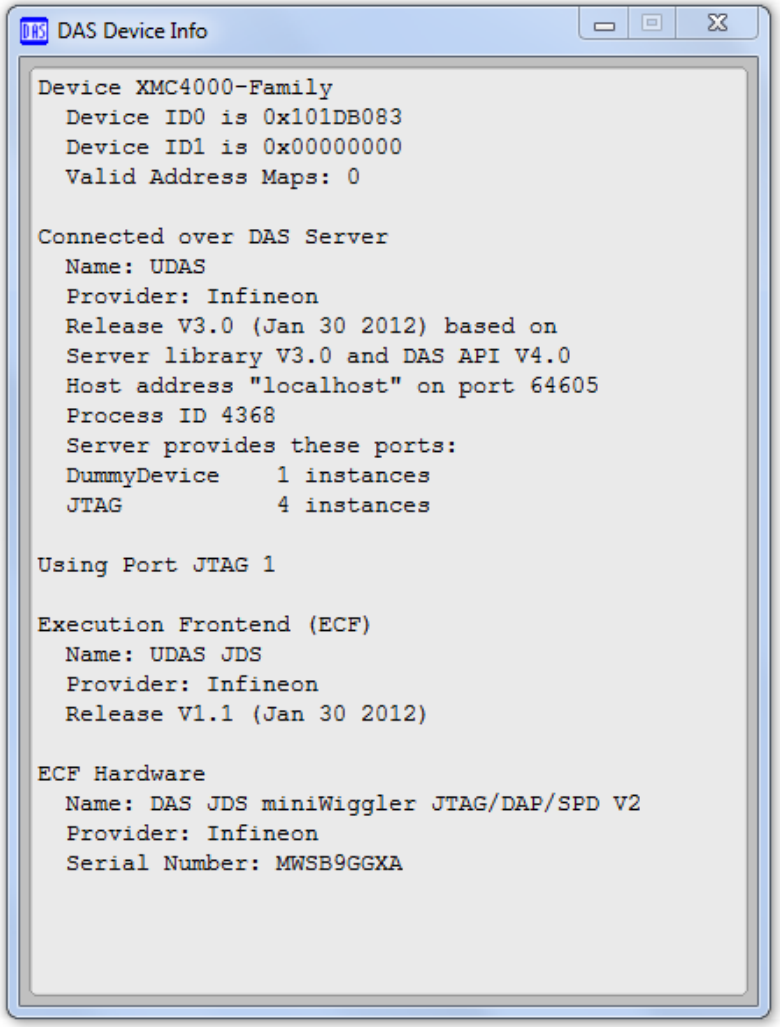
- Up to 1 MByte/s, low latency (< 200 µs for single access)
- For buying google “DAP-miniWiggler” → Hitex web shop

DAS Tools

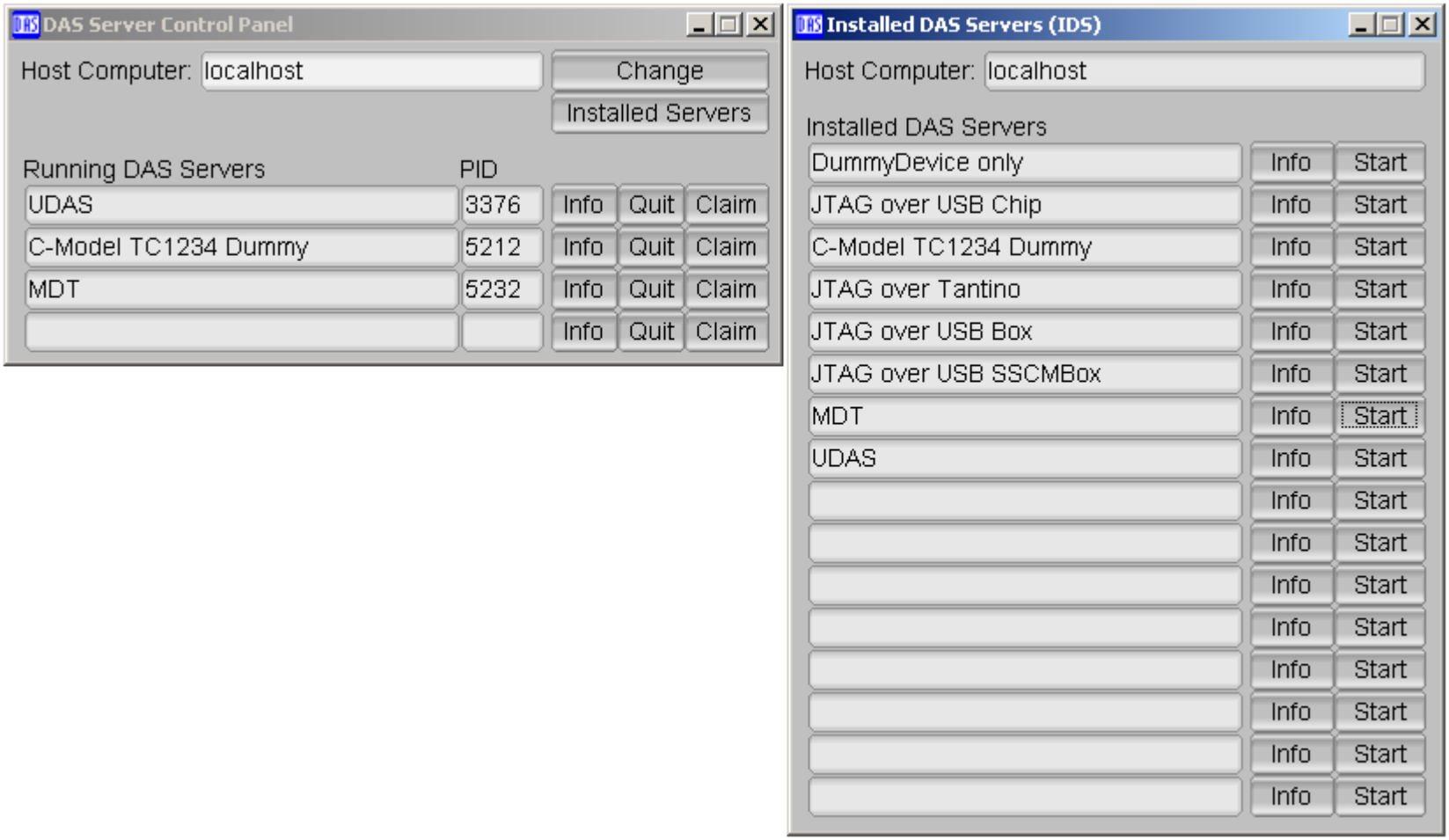
- Part of DAS Installation
- Allow to demonstrate and check the DAS operation
- All tools are fully generic
  (no interface type or device type specific adaptation code inside)
- MCD Basic Client uses the MCD library on top of DAS
  - MCD implements run control (start, stop, breakpoints, etc.)
  - MCD API is core centric and generic
  - MCD implementation is device specific

DAS Tools
Device Scanner for Multi Device

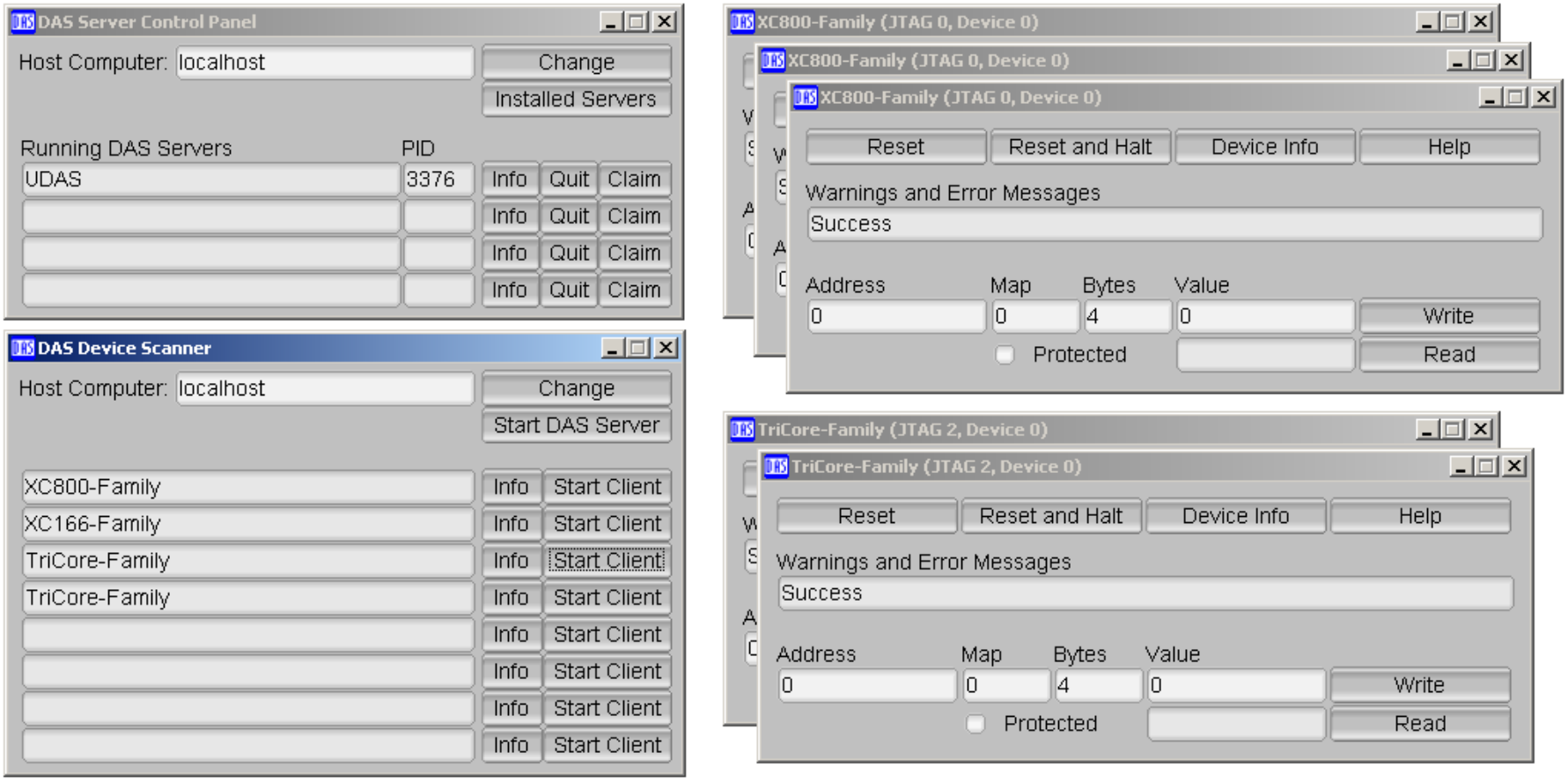




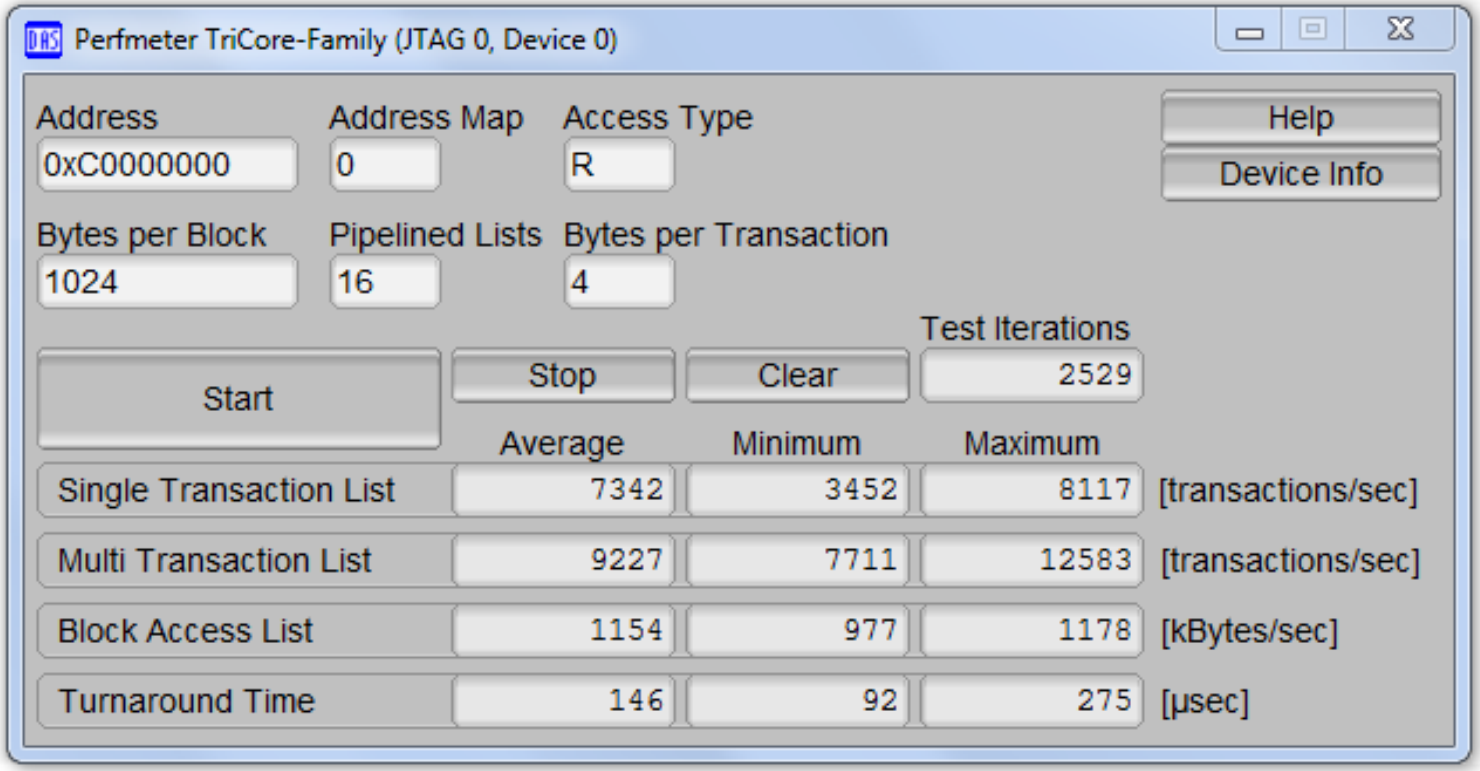
DAS Tools: Multi Server



DAS Tools: Multi Client

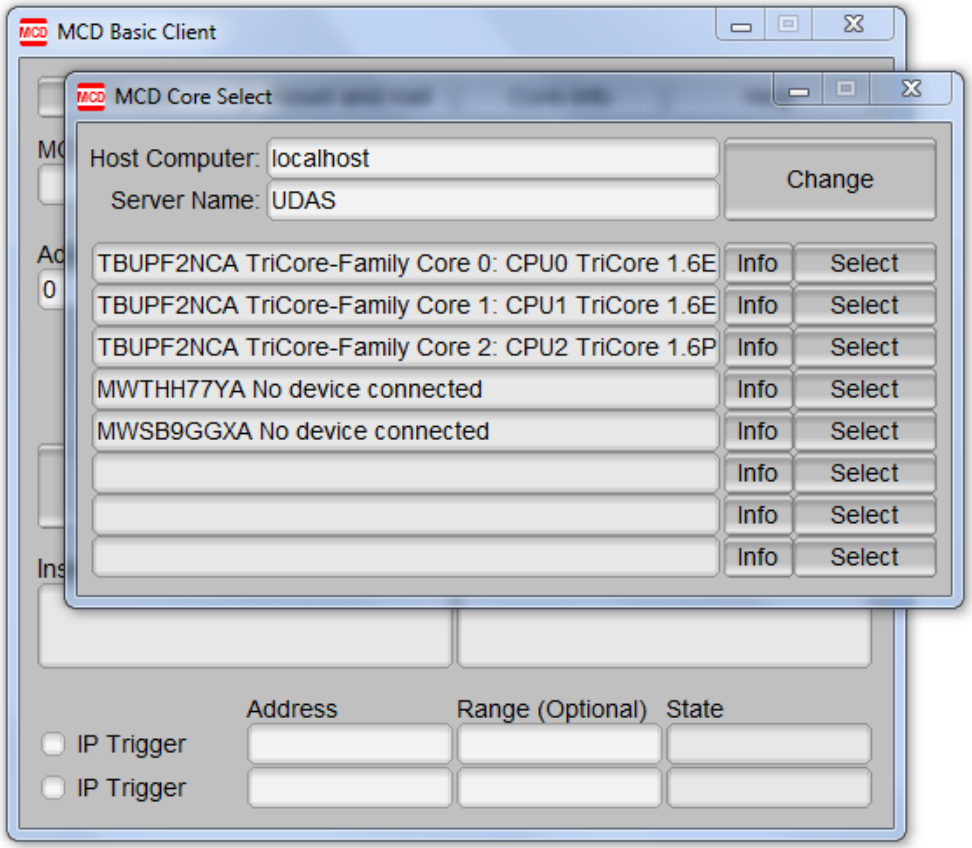


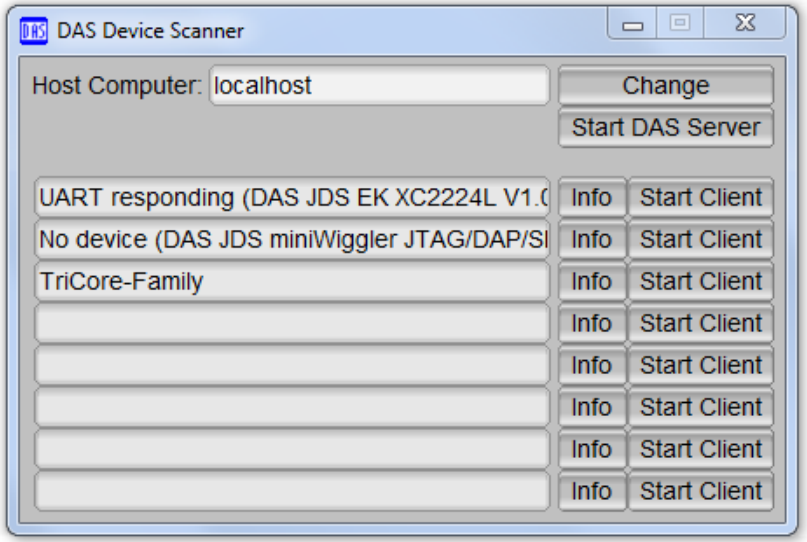
DAS Perfmeter



- Measures key performance figures
- Allows quantitative comparison of DAS implementations
- Part of the standard DAS installation

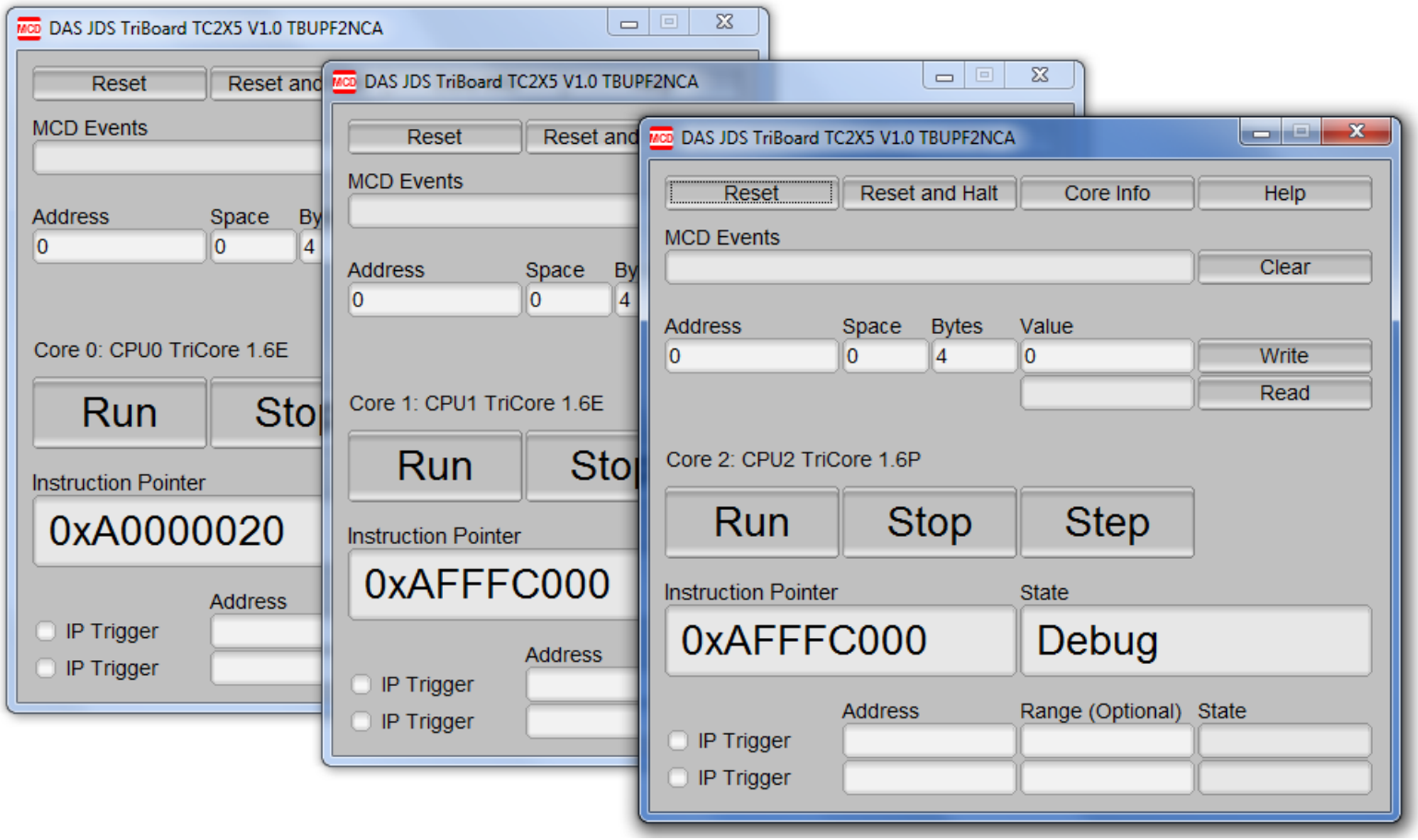
Parallel View with DAS and MCD Basic Client





- MCD API is core centric
- DAS device/access HW centric

MCD Basic Client

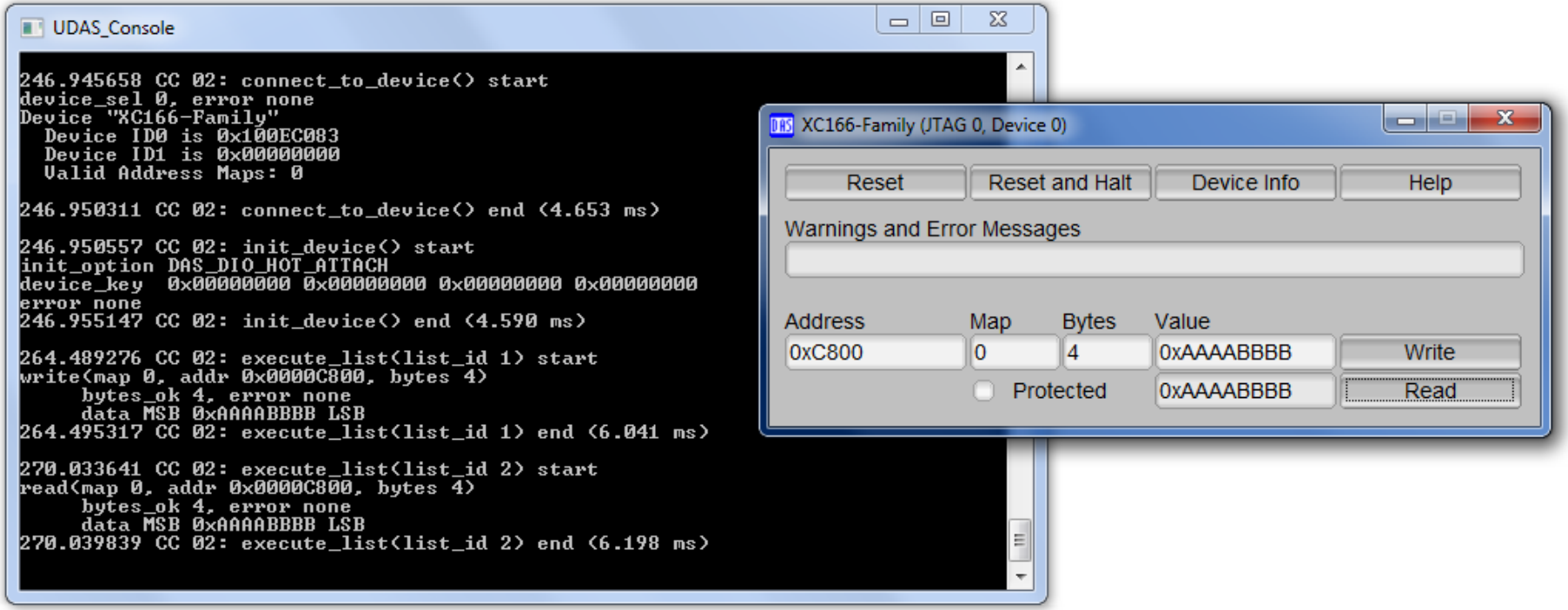


- Open one instance per core
- Supports remote connection via TCP/IP

DAS Installer

- Removes automatically old USB drivers
- Configures firewall

UDAS_Console Server



- Allows analysis of tool and device behavior
  e.g. for debugging of the multi-tool setup itself
- Needs to be started manually from DAS directory
- Factor 10x-40x for DAS latency between visible and minimized console window → Tool becomes slow when not minimized

DAS Installer and Support

Installer Edition V4.0

DAS Tools

- Server Control Panel
- Device Scanner
- Basic Client
- Perfmeter
- MCD Basic Client

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DAS 3.3 → DAS V4.0

- Robustness and responsiveness improved
- DAS Device Scanner shows Access HW name if no device is responding
- Support for latest devices added, including XMC4000 family
- Supports Windows 7, Vista and XP.
  - Windows 2000 is not supported anymore.
  - Windows XP and Vista will show warnings during the USB driver installation
- Latest USB drivers and libs for FTDI chip are used in UDAS

Summary

- DAS as tool connection is a standard for Infineon
  - On-board wiggler for evaluation boards
  - miniWiggler for customer boards
- Supports JTAG, DAP, SPD and SWD
- DAS hides the details of the device connection from the tool
- Proven technology broadly used internally and by customers

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