

ICD In-Circuit Debugger



Introduction

The PowerTools line of ICD modules integrates high-performance controller and FPGA technology with fast network access.

TRACE32 PowerTools are the fastest debuggers for 32-Bit RISC controllers available now.

The tool line integrates debugging, program and data trace as well as logic analysis (off and on-chip) in one system.

Highlights

- Easy high-level and assembler debugging
- Interface to all compilers
- RTOS awareness
- Interface to all hosts
- Quick download
- Display of internal and external peripherals at a logical level
- Flash programming
- Powerful script language
- Hardware breakpoints and trigger (if supported by on chip debug interface)
- Multiprocessor debugging
- Trace and trigger extension possible
- Logic analyzer
- Software compatible to all TRACE32 tools

Concept

The ICD PowerTools product line covers high-performance tools for hardware/software integration with high-speed 16 and 32-bit microcontrollers and cores.

The debugger and trace system is driven by a high-speed powerpc with 260 MIPS performance and connected to USB or ETHERNET. Download speed up to 2 MByte/sec through JTAG interface is possible, the analyzer data can be uploaded with an effective data rate of 20 MByte/sec. by using 100 MHz Ethernet and compressing technologies.

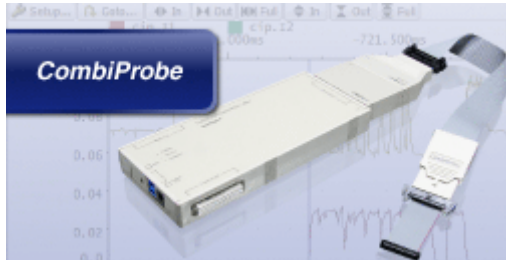
Hardware



High-Speed Debugger

- Support for over 80 microprocessor architectures, e.g. ARM, Cortex, Power Architecture, Intel x86/x64, etc.
- Universal debug module, connect to target via architecture-dependent debug cables
- Universal debug module, connect to target via CombiProbe for debugging and 4-bit System Trace
- USB3.0 interface to all hosts
- PODBus interface to Logic Analyzer modules, e.g. PowerProbe, PowerIntegrator
- Trigger connector to send and receive trigger pulses

CombiProbe



- Debug cable and 128 MB of trace memory
- Supports standard JTAG, Serial Wire Debug and cJTAG (IEEE 1149.7)
- For trace ports with up to 4 trace data channels
- Bandwidth of 200 MBit/s per trace channel
- Supports 4-bit MIPI System Trace
- Adapter for SD or Micro SD socket to support MIPI NIDnT
- Supports ITM over Serial Wire Output or 4-bit TPIU
- Supports 4-bit ETMv3 in Continuous Mode
- Adapters are available for most common connectors
- Voltage range 0.3 V to 3.3 V (5V tolerant)

Realtime Trace Tool



- 512 MByte trace memory with max. bandwidth 7.4 Gbit/s
- Universal trace module, connect to target via architecture-dependent trace probes (Preprocessor)
- Support for 16 bit parallel trace ports up to 225 MHz DDR
- Support for serial trace ports for AURIX up to 2.5 Gbit/s and MPC57xx up to 5 Gbit/s
- Support for Streaming speed up to 320 Mbit/s
- PODBus Express interface to PowerDebug PRO (successor of PowerDebug II)



- PODBUS and PODBUS Express interfaces to Logic Analyzer modules, e.g. PowerProbe, PowerIntegrator

PowerProbe - Medium Speed Logic Analyzer



- Timing Analyzer up to 400 MHz
- State Analyzer up to 100 MHz
- 64 Input Channels
- Transient Recording
- Time Correlation with RISC Trace
- Clock Qualifier for State Clock
- Mixed State and Timing Mode
- 4 State Clock Inputs
- Optional FPGA Onchip Trace
- Optional Pattern Generator
- Protocol Support for CAN, USB, etc.



PowerIntegrator - High Speed Logic Analyzer

- Timing Analyzer with 500 MHz on all Channels
- State Analyzer up to 200 MHz DDR
- 204 Input Channels
- Transient Recording
- Time Correlation with other Tracetools
- Clock Qualifier for State Clock
- Mixed State and Timing Mode
- 4 Clock Inputs
- MICTOR and Standard Probes (single ended)
- MICTOR differential Probes
- Analog Voltage and Current Probe
- 3G/DigRF Protocol Support

DISTRIBUTOR

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