Ultra-XD for ARC

Trace probe for Synopsys DesignWare ARC embedded systems

Overview

Ultra-XD is a powerful high-speed trace and run-time control debug probe for embedded development on Synopsys DesignWare® ARC® configurable RISC processors with the Real-time Trace extensions (RTT). Ultra-XD works with Synopsys MetaWare IDE for advanced embedded system debugging and analysis.
Ultra-XD allows:

- Capture and viewing of program-flow and data-accesses in real-time, non-intrusively
- Download program from host PC to target embedded system
- Exercise program in target (go, step, halt, breakpoints, interrogate memory, registers and variables)

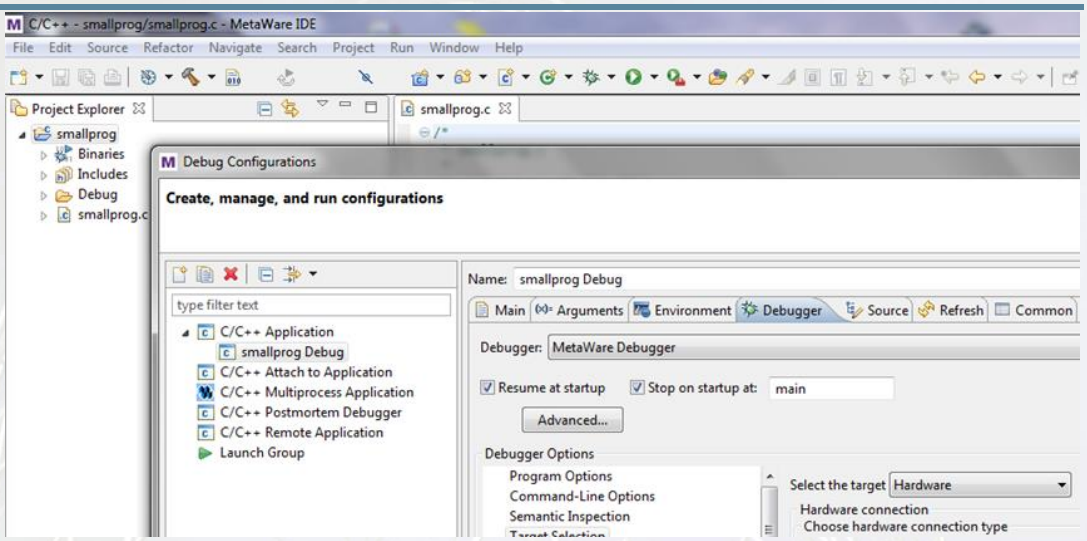
Synopsys MetaWare IDE is a complete development environment for embedded C/C++ development on ARC® and includes an Eclipse based Integrated Development Environment, Compiler, and Debugging and Analysis tools.

Ultra-XD Features

- Supports all ARC® EM and HS processors
- Fast, trouble-free "plug-and-play" installation using high-speed USB2.0 or Gigabit Ethernet host interfaces
- Up to 3MB/s download speed particularly suitable for large, complex projects
- World's fastest trace capture rates:
  - Parallel (up to 16-bits) trace up to 400MHz double-data rate (DDR)
  - Serial Gigabit trace – up to 4 lanes supported at speeds of up to 25.6Gb/s divided by number of lanes e.g. 6.4Gb/s for 4 lanes
  - Captured data can be independently time-stamped using Ultra-XD's 50-bits, 5ns resolution timestamp generator
- Large trace storage:
  - 4GB on-board trace storage memory which may be configured as a circular buffer
  - Automatic trace clock/data skew adjustment ("AUTOLOCK") to ensure integrity of captured high-speed data; Ultra-XD automatically calibrates itself to your target's trace data port
- Supports all ARC® hardware-debug standards including cJTAG, JTAG and NEXUS (Trace)
- Fine-grained adjustment of cJTAG/JTAG clock frequency from 1kHz to 100MHz; RTCK support
- Multi-core support with full cJTAG/JTAG scan-chain configurability
- Hot-plug support allows connection to a running target without resetting or halting
- 38-way Mictor target connector support
- Detects and automatically configures for the appropriate target voltage from 0.4V to 3.6V
- Support for all on-chip hardware breakpoints; unlimited number of software breakpoints
- Configurable Target-Reset and Test-Port-Reset, under full user control
- Universal Hardware-Debug platform for all popular target architectures
- Compact form factor

MetaWare IDE

With the MetaWare IDE you can develop embedded systems for bare metal and Linux based applications. MetaWare IDE is a validated and robust development toolchain and enables C/C++ development, debug and analysis on ARC® architectures.



Configuration and use of Ultra-XD is fully integrated into the MetaWare IDE thus providing full hardware-based debug and Real-time Trace (RTT) capabilities including:

- JTAG based board initialization
- Board reset control
- Hardware (ROM/flash) and software (RAM) based breakpoints
- Hardware watchpoints (break on data-access)
- Go, Halt and Step control
- Trigger setup (i.e. specify rules for RTT capture)
- RTT capture, upload and display

Please note: MetaWare IDE version MWDT J-2014.06 or later is required for Ultra-XD and RTT support

Order Codes

Product	Order Code
Ultra-XD for ARC® (includes all necessary cables, software and documentation)	Ultra-XD-ARC
38-way Mictor debug cable for use with Ultra-XD probe	TPA-ULT-ARC-NXS38C
38-way Mictor extension cable for use with Ultra-XD probe	AD-ULT-ARC-NXS38C

Ashling USA - HQ
44901 Falcon Place
Sterling, VA 20166
USA

Ashling USA
303 Twin Dolphin Drive
Redwood Shores, CA 94065
USA

Ashling UK
5 Vermont Place
Michigan Drive
Buckinghamshire, MK15 8JA

Ashling Ireland
National Technology Park
Limerick, V94 W9FP
Ireland

Ashling Germany
Carl-Zeiss-Straße 1
64404 Bickenbach
Germany

Ashling India
Ikeva Business Centre
Perungudi, Chennai
Tamil Nadu 600096, India