

Debug & Trace Probe for Synopsys ARC & ARC-V Processors



Vitra-XS is Ashling's Debug & Trace Probe for embedded development with support for multiple target architectures including Synopsys ARC & ARC-V powered systems.

Vitra-XS works with Synopsys' MetaWare Development Toolkit & Ashling's [RiscFree™](#) SDK for advanced embedded system debugging, tracing, profiling & analysis.

Vitra-XS supports:

- Capturing & viewing of program-flow & data-accesses in real-time, non-intrusively.
- Program downloading from the host PC to the target embedded system.
- Exercising program in the target (go, step, halt, breakpoints, interrogate memory, registers & variables etc).



Features

- Fast, trouble-free "plug-&-play" installation using *SuperSpeed* USB3.0.
- Supports all ARC® EM, EV, HS, NPX & VPX processors with the ARC Real-Time Trace (RTT) module (8-bit or dual 8-bit ports) & the ARC-V RMX, RHX & RPX RISC-V ISA based processor series.
- Heterogeneous (e.g., ARC + RISC-V) & homogeneous debug & trace support for multi-core SoCs sharing a single debug & trace interface.
- "Soft" **Vitra-XS** FPGA/firmware-based design allows rapid adaptation and configuration for different trace protocols including non-standard.
- 38-way Mictor target connector support with adapter support for other connector types.
- Detects & automatically configures for the appropriate target voltage (from 1.2V to 3.3V).
- Automatic trace clock & data skew adjustment ("AUTOLOCK") to ensure integrity of captured high-speed data. **Vitra-XS** automatically calibrates itself to your target's trace data port.
- Parallel (up to 16-bits data & additional control) trace capture up to 400MHz.
- On-board trace storage memory (up to 512MB) which may be configured as a circular buffer to allow continuous trace capture up to a defined event (e.g., a breakpoint).
- Unlimited trace storage supported via high-speed, real-time streaming over *SuperSpeed* USB to host PC hard disk.
- Optional Gigabit Ethernet interface & compact form factor.
- In addition to the ARC Real-time Trace (RTT) protocol, **Vitra-XS** also supports multi-core, homogenous SoCs using RISC-V (E-Trace & N-Trace trace standards) and Arm (using CoreSight trace standards such as ETM, PTM, STM & CTI) sharing a single debug & trace interface.

Product and Vitra-XS Options	Order Code
Vitra-XS Debug & Trace Probe (comes with 38-way Mictor debug & trace interface)	VITRA-XS
Optional Vitra-XS Gigabit 1000BASE-T Ethernet interface	VITRA-XS-ETH
Optional MIPI/CoreSight 10-way (debug only) & 20-way (debug & 4-bit trace) 0.05" adapters	AD-VXS-M38-CS10_20
Optional Arm Embedded ICE old-school 20-way (debug only) 0.1" adapter	AD-VXS-M38-ARM20
Optional Digilent ARTY FPGA Board PMOD C & PMOD D adapter (for SiFive RISC-V soft cores with debug & 4-bit SiFive Insight Trace and Debug IP)	AD-VXS-M38-2xPMOD2x6
Optional adapter to configure DEBUG_VTREF & TRACE_VTREF between target and Vitra-XS	AD-VXS-M38-VTREF_DEBUG_TRACE
Optional MIPS PDTRACE footprint adapter	AD-VXS-M38-PDT-M38

