

# Vitra-XS

## Debug & Trace Probe



### Overview

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

**Vitra-XS** works with 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)



### Vitra-XS Features

- Fast, trouble-free "plug-&-play" installation using *SuperSpeed* USB3.0
- Supports RISC-V debug & trace standards including E-Trace & N-Trace (including SiFive Insight Trace and Debug IP)
- Supports Arm CoreSight™ debug & trace standards including SWD, DAP, ETM, PTM, STM & CTI
- Supports Synopsys ARC Real-Time Trace (RTTv2 or greater with 8-bit or dual 8-bit ports)
- Heterogeneous (e.g. Arm + 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

### Order Codes

Product	Order Code
Vitra-XS Debug & Trace Probe (comes with 38-way Mictor debug & trace interface)	VITRA-XS
Optional Gigabit 1000BASE-T Ethernet interface	VITRA-XS-ETH
MIPI/CoreSight 10-way (debug only) & 20-way (debug & 4-bit trace) 0.05" adapters	VITRA-XS-CS-AD
Arm Embedded ICE old-school 20-way (debug only) 0.1" adapter	VITRA-XS-EI-AD
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)	VITRA-XS-ARTY-S5-AD