UAD3+

The **Universal Access Device3+**, a further development of the already established UAD2 family, was particularly optimized for use in multicore and multi-target systems with high clock frequencies. Thanks to the flexible pod and connector designs, up to eight various cores and targets respectively can be controlled with different debug protocols. A consistent further development of the JTAG extender technology by PLS permits connection lengths of up to 5 meters to the base unit. The extenders are optionally available with galvanic electrical isolation. Furthermore, with the flexible design, the pods can also carry out tasks such as CAN interface or logic analyzer probe.

Access to the targets can take place with up to **100 MHz clock frequency** optionally via various serial interfaces such as **JTAG**, **cJTAG**, Device Access Port (**DAP/DAP2**) or Serial Wire Debug (**SWD**). Synchronization during debugging of several core/targets is achieved by the UAD3+ hardware and firmware. Two different input voltage ranges - **1.6 to 5.5 Volts** as standard or **optionally 0.8 to 3.3 Volts** - cover all possible applications.

In high end real-time trace, the highly flexible pod and connector designs ensure a simple and, at the same time, efficient support of various trace protocols (e.g. **Aurora**, **CoreSight ETM**, **Nexus** or **OCDS L2**). Here too, the distance between the trace pod on the target and the base unit may also be up to 5 meters. The recorded data can be complemented by automatically generated time stamps. With a trace memory of up to **4 GBytes**, a maximal trace stream width of **32-bit** and possible trace signals up to **500 MHz** and **3.125 Gbit/s** in serial trace, the UAD3+ is also ideally equipped for future tasks.

For debugging microcontroller boards with high-voltage components, as is common for instance with motor or inverter controls, target adapters with an electrical isolation of up to 1,000 VRMS can optionally also be used with the UAD3+.

The **UAD3+** is based on a modular concept and offers high-speed debug access to PowerPC, Arm7, Arm9, Arm11, Cortex-M3, Cortex-M4, Cortex-R4, Cortex-R52, Cortex-A8, Cortex-A9 and further microcontrollers MCU architectures as a modular concept. Multiple JTAG extender pods can be connected via a long cable to ensure a flexible adaptation with the target connector. The UAD3+ is designed for best class performance.

- High-speed JTAG debug access with up to **100 MHz shift clock**
- **Multi Target / Multi System Access - Up to 8 multiple JTAG interfaces** supported (up to 4 JTAG extender pods possible, up to 2 JTAG interfaces per JTAG extender pod possible)
- Standard I/O ring voltage **1.6 - 5.5 Volts**, extended I/O ring voltage 0.8 - 3.3 Volts optional
- Supported debug connectors:
    - **JTAG/Device Access Port** (DAP/DAP2) connector
    - **Arm JTAG and CoreSight Serial Wire Debug** (SWD) connector, 10- & 20-pin
    - **cJTAG** (IEEE1149.7) connector
    - **Nexus Debug port** (OnCE) connector
    - Additional customer specific debug connectors
    - Optional galvanic isolation
- Separate **JTAG extender pods** are connected to the UAD3+ by a Gigabit serial cables up to 5 meters long (0.5 m, 1 m - default, 2 m and 5 m)
- **Wide range of host interfaces**, USB2.0 HS, Gigabit-Ethernet (10/100/1000Mbps), IEEE1394b (FireWire-800)
- Works under Windows® 7, Windows® 8.1, Windows® 10 (32- and 64-bit)
- Automatic firmware update of UAD3+
- Sizes:
    - Standalone Communication device 17 x 14.5 x 8.5 cm³ (W x D x H w/o connectors)
    - JTAG pod 5.5 x 10.5 x 3 cm³ (W x D x H w/o connectors)
    - Trace pod 7.5 x 13 x 4 cm³ (W x D x H w/o connectors).

The Universal Access Device 3+ allows the recording of real-time trace information up to **500 MHz** in parallel and **3.125 Gbit/s** in serial trace.

- **ETM Mictor** and **Nexus class 3 Mictor** connetcor
- **Aurora trace** connector (up to 4 lanes)
    - Samtec ERF8 HS22 ASP-137969-01
    - Samtex ERF8 HS34 ASP-137973-01
    - Samtec ERF8 HS40 ASP-133811-01
    - Additional custommer specific trace connectors
- Trace memory up to **4 GByte** available
- **Time-endless** trace for a continuous tracing and observation
- Trace up to 32-bit wide, Half Rate clock mode up to 250 MHz
- Wide range for I/O voltage on the target hardware, 0.8 - 3.3 Volts supported
- Variable time stamps possible, inserted by the trace board frontend
- Intelligent trace filter for optimal trace utilization, Automatic edge detection
- Separate **Trace pod** is connected to the UAD3+ by a Gigabit serial multi-lane cable up to 5 meters long (0.5 m, 1 m - default, 2 m and 5 m)
- External Trigger Pins.