

BEYOND DEBUG KEY

Software Development Utility Enabling UART and JTAG Debug

OVERVIEW

Beyond Debug Key is an essential tool for embedded software development, enabling access to processor debug features through JTAG interface and simultaneous connection to UART serial console.

Featuring USB 2.0 connection to PC and wide target IO voltage range it is a compact debug and diagnostics tool. Beyond Debug Key is fully compatible with Beyond BA2x™ processor family as well as majority of other processors.

In addition to IEEE 1149.1 and IEEE 1149.7 standard JTAG signal set it also supports proprietary One Wire Debug and Two Wire Debug protocols. With appropriate software it can be used to perform various IC level and board level diagnostics.



FEATURES

Performance

- Transfer rate in excess of 600 kB/s
- 30MHz maximum JTAG clock
- Less than 20 μ W current drawn from target board

Compatibility

- Fully compatible with Beyond BA2x™ processor family
- Access any 8-bit, 16-bit, 32-bit or 64-bit processors via JTAG
- Works with all JTAG compliant devices

Software Support

- OpenOCD for access to a range of CPLD, FPGA, flash and processor devices
- BeyondStudio™ for graphical debugging of Beyond BA2x™ processors

Diagnostics

- 7 autonomous status LEDs for power and flow control diagnostics

Target Debugging Integrated in BeyondStudio™

- Eclipse-based integrated development environment
- Simplified and straightforward setup of target connection in just few clicks
- Modern source-level debugger with hardware breakpoint, watchpoint and single step features
- Integrated target console

Interfaces

- USB 2.0 Hi-speed 480Mbps connection to PC
- IEEE 1149.1 and IEEE 1149.7 JTAG interface standard pinout
- RS232/RS422/RS485 UART Transfer Data Rate up to 12Mbaud
- Simultaneous JTAG and UART operation
- IO voltage range from 1.2V to 3.3V and including 5V CMOS compliant signaling
- Independently controlled SRST and TRST signals
- One Wire Debug™ (OWD) and Two Wire Debug™ (TWD) protocols support