

# CodeWarrior™ USB TAP

## Run Control for Freescale™ Processors



The CodeWarrior™ USB TAP host target interface is a feature-packed, no nonsense run-control tool that allows developers to save precious development time during target bring-up and debug providing visibility into and control of Freescale™ on-chip debug (OCD) features. The USB TAP integrates

seamlessly with the CodeWarrior integrated development environment, giving the developer a powerful tool for complex debug tasks. The USB TAP features broad Freescale processor support, complete run-control functionality and flash programming for fast downloads and convenient production testing.

### Highlights

- > High-speed USB 2.0 download
- > Device is self-powered requiring no external power supply
- > Run-control visibility and control
- > Flash memory programming
- > Low voltage target support
- > Fully integrated with CodeWarrior tools and supports all CodeWarrior run-control debug features

### Detailed Features

- > Gain optimal performance:
  - Split-second single-step execution
  - Fast code download to target, depending on processor and target design
  - Control and debug your software running in-target, with minimal intrusion into target operation

- > Use software or hardware breakpoints
- > Crash-proof control of the target processor
- > Obtain and modify register contents
- > Display and modify memory
- > Control instruction execution
- > Run/stop/step/reset
- > Available with a variety of connectors to support a wide array of Freescale processor families
- > The combination of USB TAP and CodeWarrior Development Studio provides:
  - Powerful C/C++ C/C++ source correspondence
  - Debug in ROM, RAM, and flash memory

### Benefits

**Visibility** — In conjunction with the CodeWarrior debugger, the USB TAP makes it possible for a developer to view registers and the current state of target memory. Program execution can be halted at predefined states, and data for a particular program state can be examined.

**Control** — The state of the target system can be conveniently controlled by downloading code, manually modifying processor registers and memory, single-stepping through the code, or setting breakpoints.

**Transparency** — When using the USB TAP it is virtually indistinguishable from non-debug target execution.

### Companion Products

For network or Ethernet debug capability, the CodeWarrior Ethernet TAP run-control product allows you to tap into the full potential of your chosen Freescale microprocessor and associated peripherals providing you with an Ethernet-connected, crash-proof development environment to conduct processor system test, debug and integration.

### Part Numbers

USBTAP DPI (PQI) CWH-UTP-PPCD-HE  
USBTAP JTAG (PQ II/III) CWH-UTP-PPCC-HE  
USBTAP JTAG (ColdFire) CWH-UTP-CF-HE  
USBTAP ONCE (DSC) CWH-UTP-ONCE-HE

**Learn More:** For more information about Freescale products, please visit [www.freescale.com/codewarrior](http://www.freescale.com/codewarrior)