

SDI™ Interface

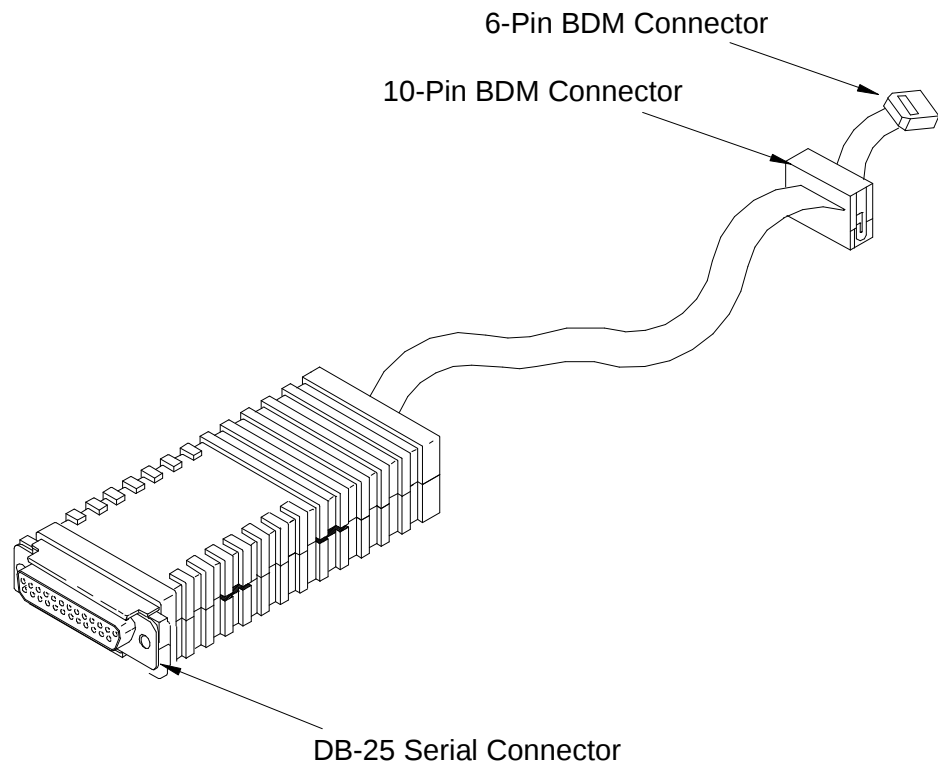
Motorola's SDI interface is an serial in-circuit debugger that makes use of the background debug mode (BDM) on M68HC12, M68HC16, and M68300 microcontrollers, allowing quick verification and updating of embedded software applications. The interface, when used with compatible debug software, allows users to view and modify their application on the fly - resulting in reduced development times and faster time to market.

The BDM interface found on Motorola's M68HC12, M68HC16, and M68300 microcontrollers allows a host computer to control the microcontroller's embedded breakpoint and trace hardware. The BDM interface is either a 6-pin or 10-pin connection between the MCU control signals and the users' test control logic.

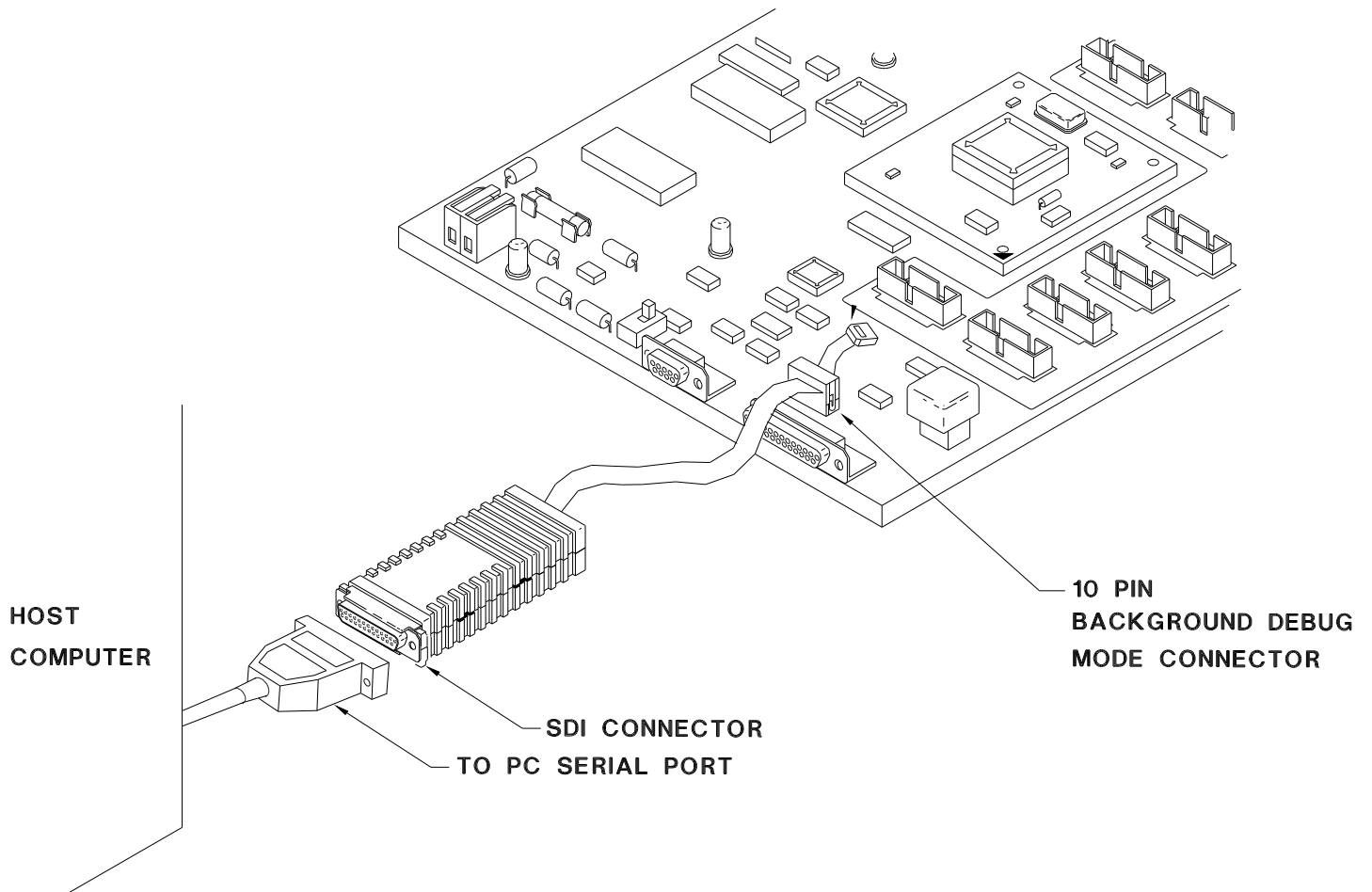
The interface is connected in-line between the computer's serial port either a 6-pin or 10-pin background mode connector on the target system (see the figure detailing interface system configuration on the next page). The interface is available in both 5Vdc only and low voltage (2.7 to 5.5Vdc) versions.

Features

- **Source-level debugging**
- **On-board device and flash EEPROM programming**
- **Background mode operation**
- **Low voltage (2.7 to 5.5Vdc) version**
- **6-pin interface connector for M68HC12 MCU devices**
- **10-pin interface connector for M68HC16 or M68300 MCU devices**



SDI INTERFACE SYSTEM CONFIGURATION



SPECIFICATIONS SUMMARY

SDI Interface Specifications

Characteristic	Specification
Operating power	+ 5Vdc @ 0.25 amps
Operating temperature	0°C to 40°C
Storage temperature	0°C to 85°C
Shell dimensions	3.63 x 2.13 x 0.75 inches (92.2 x 54.1 x 19.0 mm)
10-lead ribbon cable dimensions	0.5 inches (12.7 mm) wide, approximately 10 inches (254 mm) long
Weight	2.1 ounces (59.54 g)

SDI Interface System Requirements

Characteristic	Specification
Host	486-based PC or higher
Operating System	DOS 5.0 or later
Communications I/O	RS-232C serial port
Power Supply	+5V (low voltage version only)

ORDERING INFORMATION

SDI Interface Part Numbers

MCU	Voltage	Hardware Part Number	Software Part Number
M68HC12	5V	M68SDI	M68SDBUG12AB
M68HC12	2.7-5.5V	M68SDIL	M68SDBUG12AB
M68HC16	5V	M68SDI	M68SDBUG16AB
M68HC16	2.7-5.5V	M68SDIL	M68SDBUG16AB
M68300	5V	M68SDI	M68SDBUG32AB
M68300	2.7-5.5V	M68SDIL	M68SDBUG32AB

WARRANTY INFORMATION:

Motorola provides a one year limited warranty.

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