

## How to use the DNP/5280 BDM Interface

The DIL/NetPC DNP/5280 offers a BDM (Motorola Background Debug Mode) connector for the use of external debugger interfaces which follows the Motorola BDM specifications for ColdFire MCUs. **Make sure that the DNP/5280 power supply is off before following the next steps.**

- **1. Step:** Use a standard BDM interface product for Motorola ColdFire MCUs. Some vendors offers 3,3 V and 5 V BDM interface products for ColdFire platforms. The DNP/5280 needs a 3,3 V version.



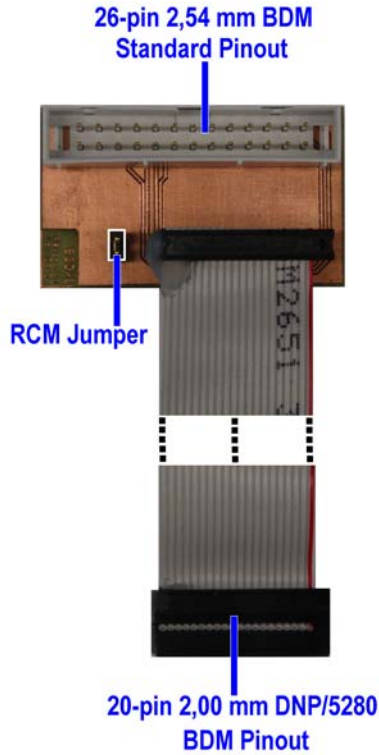
**Picture 1:** The P&E BDM Interface for 3,3 V ColdFire MCUs

Most BDM interface products for Motorola ColdFire MCU comes with a 26-pin connector with a 2,54 mm grid for the BDM interface on one side. Table 1 shows the common pinout.

Pin	Function	Pin	Function
1	NC	14	PST1
2	BKPT	15	PST0
3	GND	16	DDATA3
4	DSCLK	17	DDATA2
5	GND	18	DDATA1
6	NC	19	DDATA0
7	RESET	20	GND
8	DSI	21	NC
9	Vcc	22	NC
10	DSO	23	GND
11	GND	24	CLK
12	PST3	25	Vcc
13	PST2	26	TEA

**Table 1:** 26-pin P&E BDM Pinout

- 2. Step:** The DNP/5280 offers a 20-pin BDM connector with a 2,00 mm grid. Use the original DNP/5280 BDM interface adapter for converting the 26-pin BDM pinout with the 2,54 mm grind to the 20-pin DNP/5280 BDM pinout with 2,00 mm grid.



**Picture 2:** The DNP/5280 BDM Interface Adapter Converter from 2,54 mm to 2,00 mm

Pin	Name
1	VIO (3.3 VDC I/O Voltage)
2	GND
3	TA#
4	BKPT#
5	Reset#
6	DSCLK#
7	DSI#
8	TCLK
9	PST3
10	DS0
11	PST2
12	DDATA3
13	PST1
14	DDATA2
15	PST0
16	DDATA1
17	PSTCLK
18	DDATA0
19	GND
20	RCM

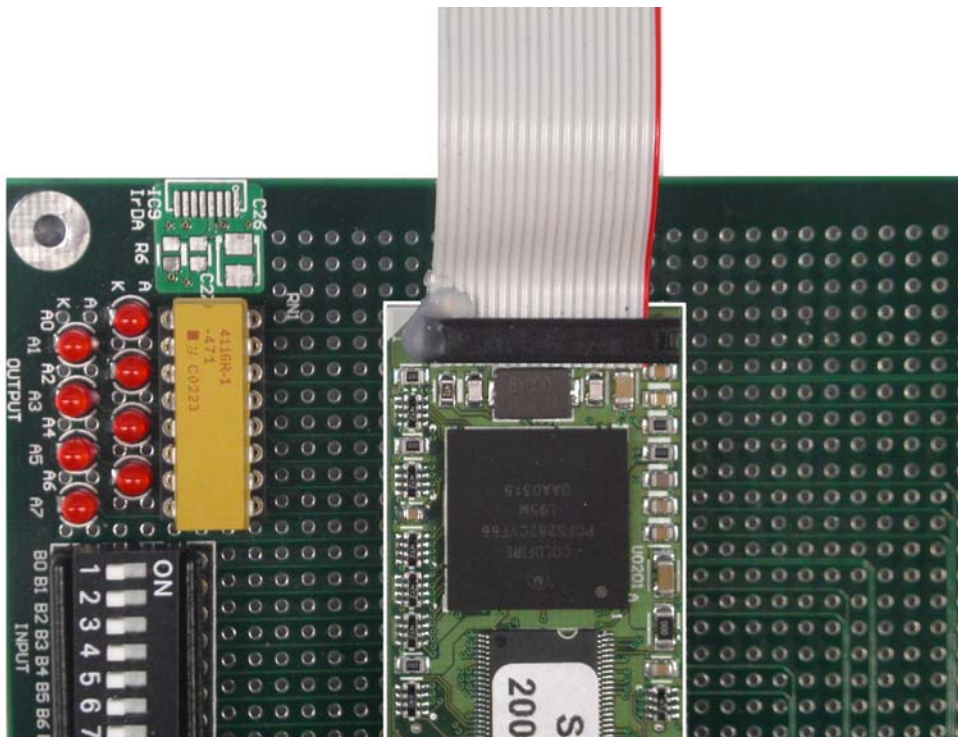
**Table 2:** DNP/5280 BDM Connector Pinout (J1 Pinout)

- **3. Step:** Connect the 26-pin BDM interface connector with the DNP/5280 BDM Interface Adapter board.



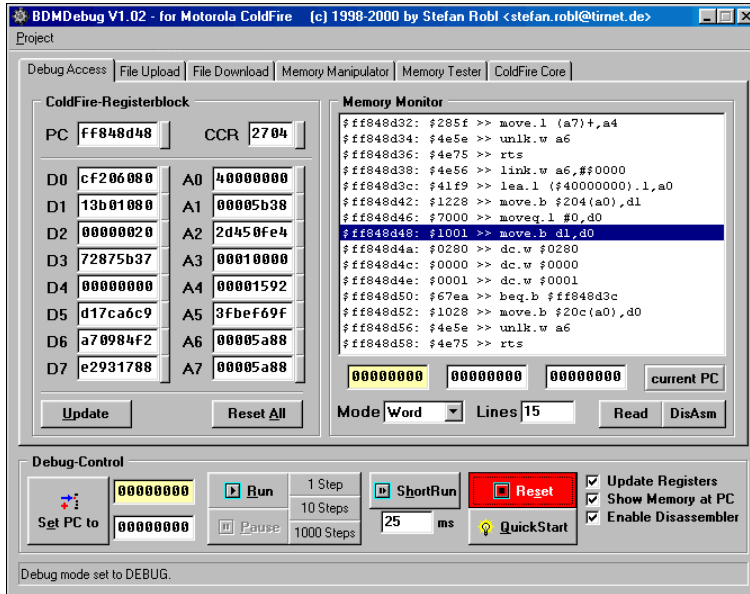
**Picture 3:** Connection between P&E BDM Interface and DNP/5280 BDM Interface Adapter

- **4. Step:** Remove the DNP/5280 RCM jumper if available. Then connect one end of the DNP/5280 BDM Interface Adapter to the DNP/5280 connector J1.



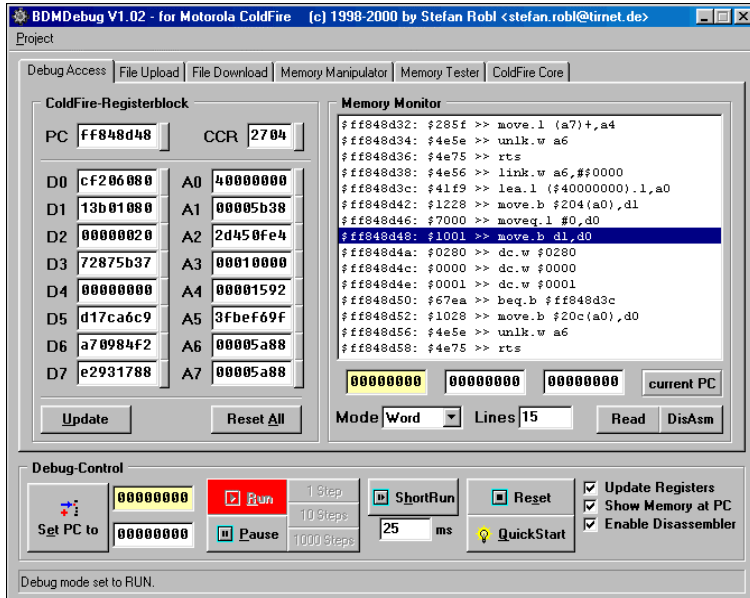
**Picture 4:** Connect the other end of the DNP/5280 BDM Interface Adapter to the DNP/5280

- **5. Step:** Now power-up the DNP/5280. Then run your BDM interface software. The following picture shows the Win32 BDM software *BDMDebug*.



**Picture 5:** Reset the DNP/5280 over the BDM connection

- **6. Step:** *BDMDebug* offers a Run button. If a user press this button the DNP/5280 runs in normal operation under control of the BDM debugger.



**Picture 6:** Run the DNP/5280 over the BDM connection