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Device Programmers and Development Tools for Microcontrollers

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AS-ISP-ARM

ChipProg-ISP BH14/BH20 specialized adapter for in system programming of ARM microcontrollers.
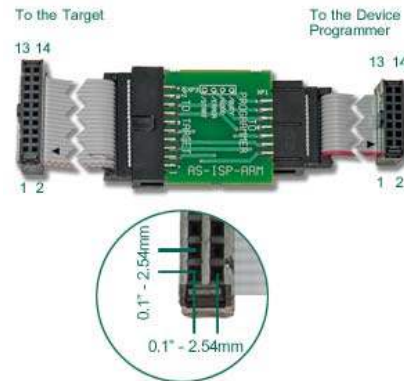
Description:

ChipProg-ISP BH14/BH20 specialized adapter for in system programming of ARM microcontrollers.

Supported Devices:

Click the device programmer model below to get an appropriate list of the devices supported by this programmer with this adapter:

• ChipProg-ISP

Adapter wiring diagram

Connections to the target devices:

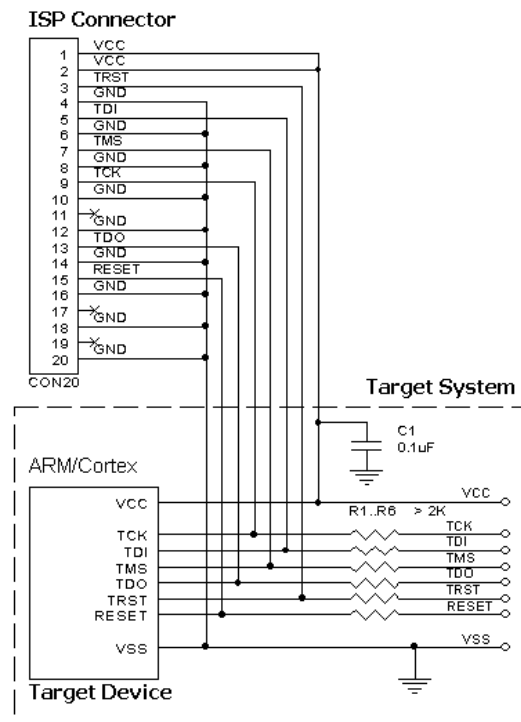• AS-ISP-ARM connection for ARM/Cortex microcontrollers

AS-ISP-ARM connection for ARM/Cortex microcontrollers

Supported Devices:

Click the programmer model below to get an appropriate list of the devices supported by the adapter:

• ChipProg-ISP

Recommended connection:

Powering the target device:
There are two alternative options for powering the targets:
1. The target gets power from the programmer (Vdd). This is possible only if the target does not consume too much energy. A capacity of the target power circuitry should not exceed 50 uF.
2. The target gets power from a built-in or external power supply. In this case the power output from the programmer should not be connected with the target. The target system should be tolerant to applying logical signals with the voltage levels exceeding the voltages on the target.
NOTE! It is strictly prohibited to power the target from both the programmer and built-in or external power supply simultaneously.

Isolating resistors:
Purpose of the R1..R6 resistors is to isolate the programmed chip from rest of target system. Recommended value of resistors R1..R6 is 2k or more. You can also use jumpers instead of the resistors.

ISP characteristics:
1. Programmer's output capability:
1.1 Vcc - 80 mA;
1.2 Vpp - 50 mA;
1.3 logical pins - 5 mA.
2. The cable length should be less then one foot.

Table of connections of the adapter output socket to the device pins:

Adapter Output connector, BH-20	Target Device
1	VCC
2	VCC
3	TRST
4	GND
5	TDI
6	GND
7	TMS
8	GND
9	TCK
10	GND
11	-
12	GND
13	TDO
14	GND
15	RESET
16	GND
17	-
18	GND
19	-
20	GND

Adapter Connection Table:

From Programmer Output Connector, BH-14	To the Target Device BH-20	Status and Control Signals from Programmer	Program Signals
1	1,2		VCC
2	9		TCK
3	5		TDI
4	7		TMS
5	13		TDO
6	3		TRST
7	-		-
8	-		-
9	4,6,8,10,12,14,16,18,20		GND
10	15		RESET
11		/Start	
12		/Error	
13		/Good	
14		/Busy	

/Start is the input signal, active state is 0. This signal works as the Start button on the programmer.
/Error, /Good, /Busy are output logical signals, active state is 0. They indicate the programmer status and work as the corresponding LEDs on the programmer case.