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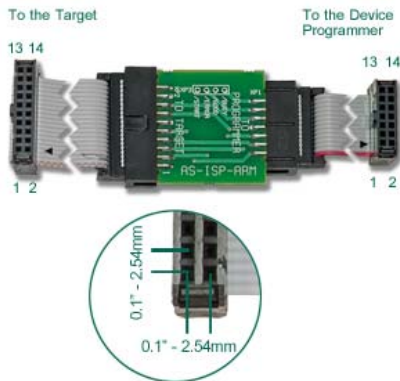
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AS-ISP-ARM

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:

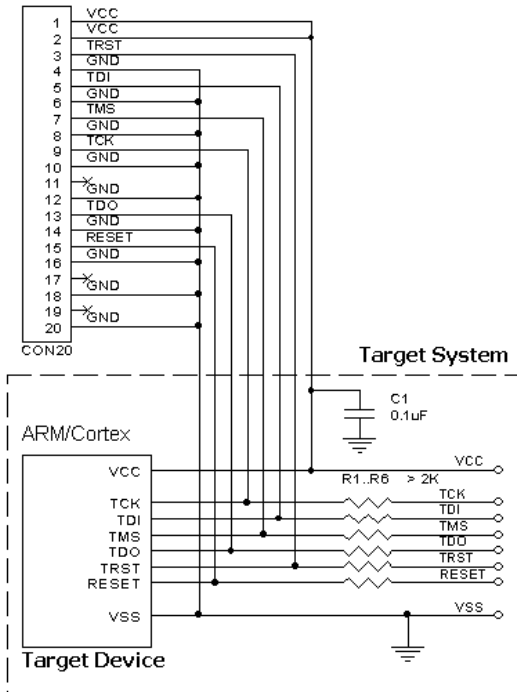
- [ChipProg-ISP](#)

Recommended connection:

ISP Connector

1	VCC
2	VCC
3	TRST
4	GND
5	TDI
6	GND
7	TMS
8	GND
9	TCK
10	GND
11	TDO
12	GND
13	RESET
14	GND
15	GND
16	GND
17	GND
18	GND
19	GND
20	GND

Target System



The diagram shows the following connections:

- ISP Pin 1 (VCC) to Target System VCC
- ISP Pin 2 (VCC) to Target System VCC
- ISP Pin 3 (TRST) to Target System TRST
- ISP Pin 4 (GND) to Target System GND
- ISP Pin 5 (TDI) to Target System TDI
- ISP Pin 6 (GND) to Target System GND
- ISP Pin 7 (TMS) to Target System TMS
- ISP Pin 8 (GND) to Target System GND
- ISP Pin 9 (TCK) to Target System TCK
- ISP Pin 10 (GND) to Target System GND
- ISP Pin 11 (TDO) to Target System TDO
- ISP Pin 12 (GND) to Target System GND
- ISP Pin 13 (RESET) to Target System RESET
- ISP Pin 14 (GND) to Target System GND
- ISP Pin 15 (GND) to Target System GND
- ISP Pin 16 (GND) to Target System GND
- ISP Pin 17 (GND) to Target System GND
- ISP Pin 18 (GND) to Target System GND
- ISP Pin 19 (GND) to Target System GND
- ISP Pin 20 (GND) to Target System GND

Target Device connections:

- VCC to Target System VCC
- TCK to Target System TCK
- TDI to Target System TDI
- TMS to Target System TMS
- TDO to Target System TDO
- TRST to Target System TRST
- RESET to Target System RESET
- VSS to Target System VSS

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.