
Hardware Reference

ColdFire iCARD Debug Module

Ordering code	IC30114
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iCard General Notes

The iC3000 and iC4000 support a wide range of serial debug interfaces like Motorola's Background Debug Mode (BDM), the Serial Debug Interface (SDI) and the On-Chip Emulation (OnCE) interface. JTAG based debug interfaces are also supported by these Emulators. For each specific debug interface a special iCARD is available.

The iCARD is a PCMCIA-style interface card which contains all necessary adaptations including the target interface cable for a selected serial debug interface. The iCARD plugs into the PCMCIA-style card slot of the iC3000 unit. Features like on-chip-, in-system programming and programming voltage generation are standard features.

Note: Whenever connecting to the target both target and the Emulator must be switched off. The Emulator is first switched on, and the target right afterwards. Note that otherwise during connecting the target a massive current spike may flow during static discharge or ground potential equalization.

When not in use, the iCARD should be kept in its protective antistatic bag to ensure its dependability and keep the 68-pin PC-Card connector clean.

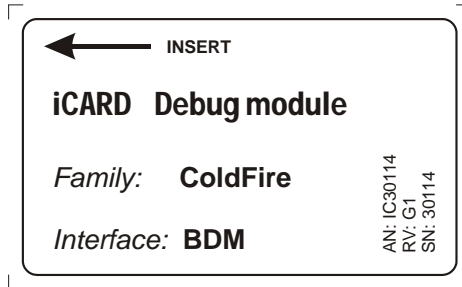
The iCard is a delicate piece of equipment. Always handle it with care, make sure not to bend it or deform it in any way, to keep it clean, etc. If these instructions are not followed, damage to the iCard or the Emulator can occur.

Note: Despite using the same format, iCARDS are not pin compatible with PCMCIA cards. Do NOT use iCARDS in PCMCIA slots and vice-versa! If the iCARD is inserted into a PCMCIA slot, damage to the iCARD and/or the PCMCIA slot will occur. If a PCMCIA card is inserted into the iCARD slot, damage to the PCMCIA card and/or the Emulator will occur.

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Dimensions (WxLxH, mm)	54x84x5



Supported CPUs		
CF5211	CF5212	CF5213
CF5214	CF5216	CF52230
CF52233	CF52234	CF52235
CF5232	CF5233	CF5234
CF5235	CF5270	CF5271
CF5272	CF5274	CF5274L
CF5275	CF5275L	CF5280
CF5281	CF5282	CF5307
CF5327	CF5328	CF5407
CF5470	CF5471	CF5472
CF5473	CF5474	CF5475
CF5480	CF5481	CF5482
CF5483	CF5484	CF5485
CF5206		

Note: for the latest list of supported CPUs please check the iSYSTEM Web site.

The following pinout is valid on the target side:

Signal direction	Signal name	Pin	Pin	Signal name	Signal direction
	Developer Reserved	1	2	~BKPT	IN
OUT	GND	3	4	DSCLK	IN
OUT	GND	5	6	Developer Reserved	
IN/OUT	RESET	7	8	DSI	IN
OUT	VDD_IO	9	10	DSO	OUT
OUT	GND	11	12	PSTDDATA7	OUT
OUT	PSTDDATA6	13	14	PSTDDATA5	OUT
OUT	PSTDDATA4	15	16	PSTDDATA3	OUT
OUT	PSTDDATA2	17	18	PSTDDATA1	OUT
OUT	PSTDDATA0	19	20	GND	OUT
	Motorola Reserved	21	22	Motorola Reserved	
OUT	GND	23	24	PSTCLK	OUT
OUT	VDD_CPU	25	26	~TEA	

Motorola Coldfire 26-pin target connector

Emulation Notes

An active adapter is delivered beside the ColdFire iCARD. In general, it is recommended to use it only when the debugging using iCARD only fails. It has been confirmed that the debugging on ColdFire CF5235 CPU running at 150MHz fails without using the active adapter. Use the active adapter whenever the initial debug connection fails or the debugging is unstable.



Important iCard information

Note that despite using the same format, iCARDS are not pin compatible with PCMCIA cards. Do NOT use iCARDS in PCMCIA slots and vice-versa!

Note also the direction in which the iCARD is inserted into the iCARD slot. The side with the label is the top side; the arrow shows the direction in which the iCARD should be inserted.