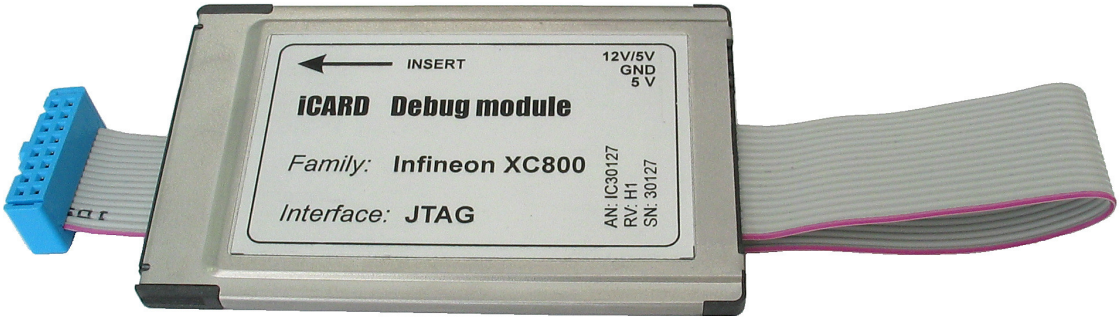
Infineon XC800 family iCARD Debug module

Ordering code	IC30127



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iCard

The iC3000 supports 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.

On debugging iCards beside the interface specific cable there's a 3-pin connector. The 5V/300mA output provides power to small low-power targets. On some iCards, also the 12V/60mA programming voltage is available and also generated by the iC3000/4000 development system and routed to the iCARD's 3-pin connector. Note that the 12V output is controlled by the software. The output defaults to 5V. On the iC3000 the current for 12V flows from the 5V source. Thus, a 12V/50mA load represents 120mA load on the 5V power source. Note that on interface cards for ActiveEmulator, iTRACE and similar this connector is not available, and also on some iCards, the 12V output is not available since it is not needed.

Also, a number of iCARD devices is available, that are not designed to be used directly with the iC3000 emulator, but must be plugged in an iTRACE PRO or iTRACE GT device. These devices can not be used without the appropriate iTRACE device and should not be plugged into the Emulator directly.

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.

Temperature range

All iSYSTEM devices, unless explicitly otherwise noted, are specified to operate at room temperatures (specifically, between 10°C/50°F and 40°C/105°F).

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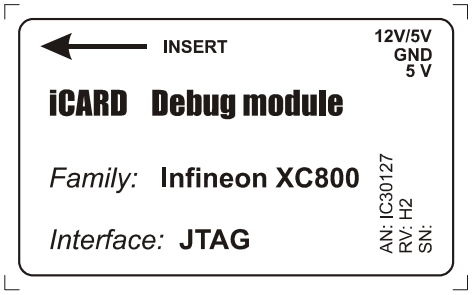
Dimensions (WxLxH, mm)	54x84x5



Supported CPU family
TLE7824
TLE9832 A
TLE9832 B *
XC864
XC866
XC885
XC886
XC888

* TLE9832 step B is supported only with iCARD revision I2 or newer.

Check with iSYSTEM for the latest list of supported devices.

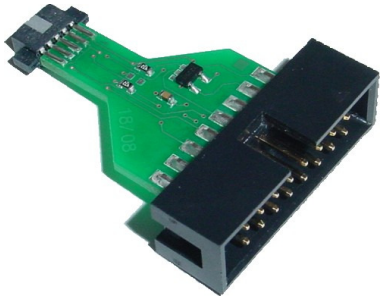
The following pinout is valid on the target side:

2	4	6	8	10	12	14	16
Vcc	GND	GND	RESET	Brk_Out	GND	n.c.	n.c.
TMS (JTAG)	TDO (JTAG)	n.c.	TDI (JTAG)	n.c.	TCLK (JTAG)	Brk_in	n.c.
1	3	5	7	9	11	13	15

Infineon 16-pin OCDS target connector

The debugger provides 10k pull-ups on TRST, TMS and TCLK lines and 1k pull-up on the RESET line.

To connect to the target CPU (TLBE9832 step B) featuring a DAP debug interface, a DAP debug adapter (ordering code: IAPIN16PIN10DAP) must be ordered separately.



IAPIN16PIN10DAP

The following pinout is valid on the target side for the DAP debug interface:

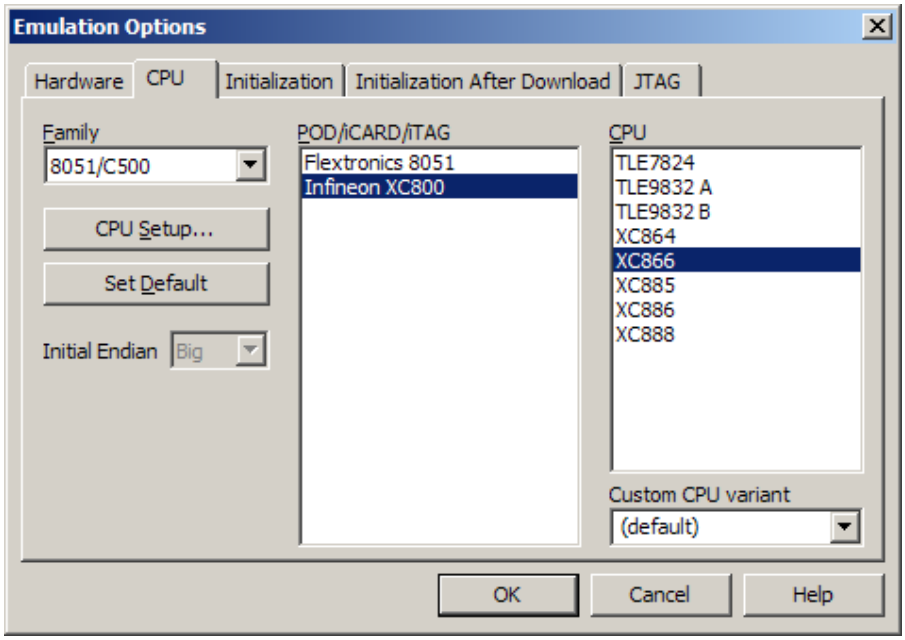
2	4	6	8	10
DAP1	DAP0	USER_IO	USER_IN	RESET
V_{REF}	GND	GND	NC	GND
1	3	5	7	9

Infineon 10-pin DAP debug target connector (1.27mm)

For debugging, at least DAP0, DAP1 and RESET signals must be connected between the development tool and the CPU. The debugger provides 4k7 pull-up on DAP0 signal and 1k pull-up on the RESET line.

Selecting the appropriate CPU

The XC800 Family CPUs are members of the 8051 CPU family, therefore its selection in winIDEA is also done by selecting first '8051/C500' and then 'Infineon XC800'.



CPU Selection Dialog