

## How to use a CompactFlash Card from Linux

The embedded system-on-module eSOM/2586 comes with an on-board socket for CompactFlash cards. Before using this socket as an additional Linux solid state disk drive please enable the IDE interface of the eSOM/2586 BIOS.

To enter the eSOM/2586 BIOS setup, please use a RS232 serial link between the eSOM/2586 and your PC. Run a terminal emulation program with a VT100 emulation mode on your PC. Then set the RCM jumper and reset the eSOM/2586.

- **1. Step:** Remove the power from the eSOM/2586 and insert a FAT preformatted CompactFlash card to the on-board socket. Then power-up the eSOM/2586 again.
- **2. Step**: Please press the **F4** key of your VT100 emulation direct after the eSOM/2586 power-up to enter the BIOS setup.
- **3. Step**: Select the menu item *Advanced* → *IDE configuration*. Then set the *Onboard PCI IDE Controller* form *Disabled* to *Primary* as shown in the next picture.

SCOM7:115200baud - Tera Term VT						
File Edit Setup Control Window Resize Help						
Advanced			~			
*****	*****	*****	*****			
* IDE Configuration		* OI	otions *			
	****	₩ ₩ D::	*			
* UnBoard PUI IDE Controller LF	Primary」	* Disabled * Drimary	*			
* * Primary IDE Master [H	Hard Disk]	* Secondary				
* * Primary IDE Slave [N	Not Detected]	* Both	*			
* * Secondáry IDE Master[N	Not Detected]	* <u></u>	ж			
* * Secondary IDE Slave ***	Options ***	ж	*			
* Used Disk Usite Destant * Disa	abled *	*	*			
* Hard Disk write Protect * Prim * IDE Detect Time Out (Sec) * Sec	nary *	*	*			
* ATA(PI) 80Pin Cable Detecti* Both		*	*			
* Hard Disk Delay	****	* ** Se	lect Screen *			
* OnBoard IDE Opérate Mode	Legacy Model	*** Se.	lect Item *			
* Not Program PIO mode [[	Disabled]	* <u>+-</u> Cha	ange Option *			
* Primary IDE Pin Select LF	Parallel IDEJ		neral Help *			
*			ve and Exit *			
*		* <u>LOU LX</u> . *	LL ***			
*		*	*			
*****	*****	****	* * * * * * * * * * * * * * * * * * *			
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• **4. Step**: Select the main menu item *Boot* and change the boot device sequence to the following state:

1st Boot Device [USB: SMI USB DISK]
2nd Boot Device [Disabled]

**Please note:** "USB: SMI USB DISK" is the eSOM/2586 on-board 1 Gbyte NAND flash disk. This is the default boot drive for the eSOM/2586 Linux operating system.



🚨 COM7:115200baud - Tera Term VT	
File Edit Setup Control Window Resize Help	
Main Advanced PCIPnP Boot Security Chipset Exit	~
***************************************	<
* Boot Settings *	*
	*
	× ¥
* 1st Boot Device [USB:SMI USB DISK]	*
* 2nd Boot Device [Disabled] *	*
* *	ж
* Options****	ж
* HDD:PM-SanDisk SDCFX-2048 *	ж
* USB:SMI USB DISK *	*
	*
	¥
* ** Select Item	*
* * +- Change Option	ж
* * F1 General Help	ж
* <u>F10</u> Save and Exit	ж
* * ESC Exit	ж
	*
* * * * * * * * * * * * * * * * * * * *	*
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- **5.** Step: Leave the eSOM/2586 BIOS setup with the menu item *Exit*  $\rightarrow$  *Save Changes and Exit*. This stores the new setup to the internal BIOS flash and boots the eSOM/2586 Linux O/S.
- **6. Step**: After the Linux boot finish's please mount the CompactFlash card to the Linux file system:

## mount -t vfat /dev/hda1 /mnt

If this mount is successful the new disk drive is useable within the Linux root file system.

🖳 COM7:115200baud - Tera Term VT				
File Edit Setup Control Window Resize Help	)			
Debian GNU/Linux 4.0 e	emblinux ttyS0			^
emblinux login: root Password:				
emblinux:~# mount -t v	fat /dev/hda1 /mnt			
ide: Assuming 33MHz sy	stem bus speed for	PIO modes; ov	naz /erride with idebus=x>	
hda: SanDisk SDCFX-204	18, CFA DISK drive			
hda: max request size:	128KiB			
hda: 4001760 sectors ( hda: hda1	2048 MB) w/1KiB Ca	che, CHS=3970	/16/63	
hda: p1 exceeds devic	e capacity			
Filesystem 1	K-blocks Used	Available Use	2% Mounted on	
/dev/sda5 tmpfs	953416 419220 63308 0	485764 4	7% / 7% /lib/ipit/cw	
tmpfs	63308 4	63304	L/ /dev/shm	
/dev/sdb1 /dev/sdb1	953416 419220	485764 4	/% /media 7% /media	
/dev/hda1	2000608 32	2000576	12 /mnt	
emblinux:~#	2000608 32	2000376 .	LZ /MNT	~

That's all.