

## FDC37C666 DISABLE AND LOW POWER MODE

This note discusses the proper way to disable the floppy disk, serial ports and parallel ports using the FDC37C651, FDC37C661, FDC37C663 and FDC37C665.

### OVERVIEW

The floppy disk, parallel port, and serial ports can be disabled or placed into low power mode. In disabled mode, each logical block will:

1. Not respond to any addresses and will not drive the data bus.
2. The interrupt and/or DMA request line is driven.

In low power mode, each logical block will:

1. Not respond to any addresses and will not drive the data bus.
2. The interrupt and/or DMA request is tri-stated. For the floppy disk to be guaranteed to have the interrupt and/or DMA in tri-state, the programmer must ensure that the last write to the 3F2H register was a 04H.

**Placing the logical block into both disabled and low power mode is the proper way to turn off a logical block.**

PART (REV)	FLOPPY DISABLE ONLY		FLOPPY DISABLE AND LOW POWER	
	FINTER	FDRQ	FINTER	FDRQ
651(B)	active	active	tri-state	tri-state (Note 2)
661(B,C)	active	active	tri-state	Notes 1,2
663(A)	active	active	tri-state	Notes 1,2
665(B)	active	active	tri-state	Notes 1,2

Note 1: FDRQ depends on the last write to the DOR register before the FDC is disabled.

Note 2: For all chips, the chip must be in the AT mode for FINTER and FDRQ to tri-state.

The recommended software for disabling the floppy disk through the configuration registers are:

```
;
; ENTER CONFIGURATION MODE
;
MOV  DX,3F0H
MOV  AX,055H      ;use 044H for FDC37C666
CLI                      ; disable interrupts
OUT  DX,AL
OUT  DX,AL
STI                      ; enable interrupts
;
; CONFIGURE REGISTERS CRO-CRx
;
MOV  DX,3F0H
MOV  AL,00H
OUT  DX,AL ; Point to CRO
MOV  DX,3F2H      ;
MOV  AL,04H; Disable DMA and IRQ in DOR *****
CLI                      ; disable interrupts          *****
OUT  DX,AL ; Update Digital Output Register          *****
MOV  DX,3F1H
MOV  AL,23H
OUT  DX,AL ; Update CRO
STI                      ; enable interrupts          *****
;
MOV  DX,3F0H      ;
MOV  AL,01H
OUT  DX,AL ; Point to CR1
MOV  DX,3F1H
MOV  AL,9FH
OUT  DX,AL ; Update CR1
;
; Update other CRx registers
;
; EXIT CONFIGURATION MODE
;
MOV  DX,3F0H
MOV  AX,0AAH
OUT  DX,AL
```

PART	SERIAL PORTS	
	DISABLE ONLY	DISABLE AND LOW POWER
	IRQx	IRQx
651	active	tri-state
661	active	tri-state
663	active	tri-state
665	active	tri-state

Part	SERIAL PORTS
	DISABLE ONLY
	IRQx
652	tri-state
662	tri-state
664	tri-state
666	tri-state

PART	PARALLEL PORTS	
	DISABLE ONLY	DISABLE AND LOW POWER
	PINTER	PINTER
651	active	tri-state
661	active	tri-state
663	active	tri-state
665	active	tri-state

Part	PARALLEL PORTS
	DISABLE ONLY
	PINTER
652	tri-state
662	tri-state
664	tri-state
666	tri-state



80 Arkay Drive  
 Hauppauge, NY 11788  
 (631) 435-6000  
 FAX (631) 273-3123

Copyright © SMSC 2004. All rights reserved.

Circuit diagrams and other information relating to SMSC products are included as a means of illustrating typical applications. Consequently, complete information sufficient for construction purposes is not necessarily given. Although the information has been checked and is believed to be accurate, no responsibility is assumed for inaccuracies. SMSC reserves the right to make changes to specifications and product descriptions at any time without notice. Contact your local SMSC sales office to obtain the latest specifications before placing your product order. The provision of this information does not convey to the purchaser of the described semiconductor devices any licenses under any patent rights or other intellectual property rights of SMSC or others. All sales are expressly conditional on your agreement to the terms and conditions of the most recently dated version of SMSC's standard Terms of Sale Agreement dated before the date of your order (the "Terms of Sale Agreement"). The product may contain design defects or errors known as anomalies which may cause the product's functions to deviate from published specifications. Anomaly sheets are available upon request. SMSC products are not designed, intended, authorized or warranted for use in any life support or other application where product failure could cause or contribute to personal injury or severe property damage. Any and all such uses without prior written approval of an Officer of SMSC and further testing and/or modification will be fully at the risk of the customer. Copies of this document or other SMSC literature, as well as the Terms of Sale Agreement, may be obtained by visiting SMSC's website at <http://www.smsc.com>. SMSC is a registered trademark of Standard Microsystems Corporation ("SMSC"). Product names and company names are the trademarks of their respective holders.

**SMSC DISCLAIMS AND EXCLUDES ANY AND ALL WARRANTIES, INCLUDING WITHOUT LIMITATION ANY AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, AND AGAINST INFRINGEMENT AND THE LIKE, AND ANY AND ALL WARRANTIES ARISING FROM ANY COURSE OF DEALING OR USAGE OF TRADE.**

**IN NO EVENT SHALL SMSC BE LIABLE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, PUNITIVE, OR CONSEQUENTIAL DAMAGES; OR FOR LOST DATA, PROFITS, SAVINGS OR REVENUES OF ANY KIND; REGARDLESS OF THE FORM OF ACTION, WHETHER BASED ON CONTRACT; TORT; NEGLIGENCE OF SMSC OR OTHERS; STRICT LIABILITY; BREACH OF WARRANTY; OR OTHERWISE; WHETHER OR NOT ANY REMEDY OF BUYER IS HELD TO HAVE FAILED OF ITS ESSENTIAL PURPOSE, AND WHETHER OR NOT SMSC HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.**