

\$40	(read_n / write)	ID ID	\$08 \$D4	MSX2+ FS-A1 Series 1chipMSX / Zemmix Neo	Z80B 5.37MHz OCM-PLD v2.4 or later
\$41	(read_n / write)	BIT 0		Smart Command ID	CPL or SFF (Null)
		BIT 1			
		BIT 2			
		BIT 3			
		BIT 4			
		BIT 5			
		BIT 6			
\$42	(read / write_n)	BIT 7		CPU Clock	Virtual DIP-SW1
		BIT 1			
		BIT 2			
		BIT 3			
		BIT 4			
		BIT 5			
		BIT 6			
\$43	(read / write_n)	BIT 7		Video Output (MSB)	Virtual DIP-SW2
		BIT 1			
		BIT 2			
		BIT 3			
		BIT 4			
		BIT 5			
		BIT 6			
\$44	(read / write_n)	BIT 7		Video Output (LSB)	Virtual DIP-SW3
		BIT 1			
		BIT 2			
		BIT 3			
		BIT 4			
		BIT 5			
		BIT 6			
\$45	(read / write_n)	BIT 7		Cartridge Slot-1	Virtual DIP-SW4
		BIT 1			
		BIT 2			
		BIT 3			
		BIT 4			
		BIT 5			
		BIT 6			
\$46	(read / write_n)	BIT 7		Cartridge Slot-2 (MSB)	Virtual DIP-SW5
		BIT 1			
		BIT 2			
		BIT 3			
		BIT 4			
		BIT 5			
		BIT 6			
\$47	(read / write_n)	BIT 7		Cartridge Slot-2 (LSB)	Virtual DIP-SW6
		BIT 1			
		BIT 2			
		BIT 3			
		BIT 4			
		BIT 5			
		BIT 6			
\$48	(read / write_n)	BIT 7		Current Mapper Size	Virtual DIP-SW7
		BIT 1			
		BIT 2			
		BIT 3			
		BIT 4			
		BIT 5			
		BIT 6			
\$49	(read / write_n)	BIT 7		Current MegaSD Mode	Virtual DIP-SW8
		BIT 1			
		BIT 2			
		BIT 3			
		BIT 4			
		BIT 5			
		BIT 6			
\$4A	(read / write_n)	BIT 7		Lock Mak for Toggles	Cartridge Slot-1
		BIT 1			
		BIT 2			
		BIT 3			
		BIT 4			
		BIT 5			
		BIT 6			
\$4B	(read / write_n)	BIT 7		Cartridge Slot-2	Cartridge Slot-2
		BIT 1			
		BIT 2			
		BIT 3			
		BIT 4			
		BIT 5			
		BIT 6			
\$4C	(read / write_n)	BIT 7		Hard Reset Key	Internal Mapper
		BIT 1			
		BIT 2			
		BIT 3			
		BIT 4			
		BIT 5			
		BIT 6			
\$4D	(read / write_n)	BIT 7		Internal Mapper	Internal MegaSD
		BIT 1			
		BIT 2			
		BIT 3			
		BIT 4			
		BIT 5			
		BIT 6			
\$4E	(read / write_n)	BIT 7		PSG Volume Level	BIT 0 (LSB)
		BIT 1			
		BIT 2			
		BIT 3			
		BIT 4			
		BIT 5			
		BIT 6			
\$4F	(read / write_n)	BIT 7		PSG Mute	BIT 2 (MSB)
		BIT 1			
		BIT 2			
		BIT 3			
		BIT 4			
		BIT 5			
		BIT 6			

SMART COMMANDS TABLE			
\$00	(000)	Null Command (reserved)	
\$01	(001)	Set Turbo Pana Redirection OFF (default)	
\$02	(002)	Set Turbo Pana Redirection ON	
\$03	(003)	Set Standard Speed 3.58MHz	
\$04	(004)	Set Custom Speed 4.10MHz	
\$05	(005)	Set Custom Speed 4.48MHz	
\$06	(006)	Set Custom Speed 4.90MHz	
\$07	(007)	Set Custom Speed 5.39MHz	
\$08	(008)	Set Custom Speed 6.10MHz	
\$09	(009)	Set Custom Speed 6.96MHz	
\$0A	(010)	Set Custom Speed 8.06MHz (aka "Turbo 10MHz") (default)	
\$0B	(011)	Set Turbo MegaSD OFF	
\$0C	(012)	Set Turbo MegaSD ON (default)	
\$0D	(013)	Set External Slot-1 + External Slot-2	
\$0E	(014)	Set Internal SCC-I Slot-1 + External Slot-2	
\$0F	(015)	Set External Slot-1 + Internal SCC-I Slot-2	
\$10	(016)	Set Internal SCC-I Slot-1 + Internal SCC-I Slot-2	
\$11	(017)	Set External Slot-1 + Internal ASCII-8K Slot-2	
\$12	(018)	Set Internal SCC-I Slot-1 + Internal ASCII-8K Slot-2	
\$13	(019)	Set External Slot-1 + Internal ASCII-16K Slot-2	
\$14	(020)	Set Internal SCC-I Slot-1 + Internal ASCII-16K Slot-2	
\$15	(021)	Set Japanese Keyboard Layout	
\$16	(022)	Set Non-Japanese Keyboard Layout	
\$17	(023)	Set Display Mode 15KHz Composite/S-Video	
\$18	(024)	Set Display Mode 15KHz RGB w/ Audio Out (requires a VGA to SCART cable)	
\$19	(025)	Set Display Mode 31KHz VGA for LED TV or LED Display (50Hz+60Hz)	
\$1A	(026)	Set Display Mode 31KHz VGA+ for CRT Monitor (legacy output) (50Hz+60Hz)	
\$1B	(027)	Set VDP Speed Normal Mode (default)	
\$1C	(028)	Set VDP Speed Fast Mode (V9958 only)	
\$1D	(029)	Reserve MegaSD OFF (warm reset to set)	
\$1E	(030)	Reserve MegaSD ON (warm reset to set)	
\$1F	(031)	Set MegaSD Blink OFF	
\$20	(032)	Set MegaSD Blink ON (default)	
\$21	(033)	Set Lights Mode OFF w/ Auto LEDs Control (default)	
\$22	(034)	Set Lights Mode ON + Red Led OFF	
\$23	(035)	Set Lights Mode ON + Red Led ON	
\$24	(036)	Internal Audio Preset #1 "Mute Sound"	
\$25	(037)	Internal Audio Preset #2 "Middle Sound"	
\$26	(038)	Internal Audio Preset #3 "High Sound" (default)	
\$27	(039)	Set CMT OFF (default) (disabled w/ MSX turbo-R BIOS)	
\$28	(040)	Set CMT ON (requires a cassette recorder) (disabled w/ MSX turbo-R BIOS)	
\$29	(041)	Lock Turbo Toggles	
\$2A	(042)	Unlock Turbo Toggles	
\$2B	(043)	Lock Display Toggles	
\$2C	(044)	Unlock Display Toggles	
\$2D	(045)	Lock Audio Mixer & CMT Toggles	
\$2E	(046)	Unlock Audio Mixer & CMT Toggles	
\$2F	(047)	Lock Slot-1 Toggles	
\$30	(048)	Unlock Slot-1 Toggles	
\$31	(049)	Lock Slot-2 Toggles	
\$32	(050)	Unlock Slot-2 Toggles	
\$33	(051)	Lock Slot-1 & Slot-2 Toggles	
\$34	(052)	Unlock Slot-1 & Slot-2 Toggles	
\$35	(053)	Lock Hard Reset Key	
\$36	(054)	Unlock Hard Reset Key	
\$37	(055)	Lock Mapper Toggle	
\$38	(056)	Unlock Mapper Toggle	
\$39	(057)	Lock MegaSD Toggle	
\$3A	(058)	Unlock MegaSD Toggle	
\$3B	(059)	Lock All Toggles	
\$3C	(060)	Unlock All Toggles (default)	
\$3D	(061)	Set Pseudo-Stereo OFF (default)	
\$3E	(062)	Set Pseudo-Stereo ON (requires an external sound cartridge)	
\$3F	(063)	Sync External Bus Clock to CPU Speed (default)	
\$40	(064)	Set External Bus Clock 3.58MHz	
\$41	(065)	Set Turbo Pana 5.37MHz	
\$42	(066)	Set Right Inverse Audio OFF (default)	
\$43	(067)	Set Right Inverse Audio ON	
\$44	(068)	Internal Audio Preset #4 "Emphasis PSG Sound"	
\$45	(069)	Internal Audio Preset #5 "Emphasis SCC-I Sound"	
\$46	(070)	Internal Audio Preset #6 "Emphasis OPLL Sound"	
\$47 ... \$4F	(071 ... 079)	Vertical Offset 16 (useful for Ark-A-Noah) ... 19 (default) ... 24 (useful for Space Manbow)	
\$7F	(127)	Pixel Ratio 1:1 for LED Display (default is 0) (range 0-7) (60Hz only)	
\$80	(128)	Null Command (useful for programming)	
\$81	(129)	Assign Legacy Output to VGA	
\$82	(130)	Assign Legacy Output to VGA+ (default)	
\$80 ... \$87	(176 ... 183)	Set Master Volume 0 ... 7 (default level is 7)	
\$88 ... \$8F	(184 ... 191)	Set PSG Volume 0 ... 7 (default level is 4)	
\$C0 ... \$C7	(192 ... 199)	Set SCC-I Volume 0 ... 7 (default level is 4)	
\$C8 ... \$CF	(200 ... 207)	Set OPLL Volume 0 ... 7 (default level is 4)	
\$D0	(208)	Force NTSC Mode	
\$D1	(209)	Standard NTSC/PAL Mode (bound by Control Register 9) (default)	
\$D2	(210)	Force PAL Mode	
\$D3	(211)	Restore Default Keyboard Layout only	
\$D4	(212)	Null Command (reserved)	
\$D5	(213)	Restore Default Turbo Mode only	
\$D6	(214)	Set Centering YJK Modes/R25 Mask OFF (default)	
\$D7	(215)	Set Centering YJK Modes/R25 Mask ON	
...	...	Reserve Slot-0 Primary Mode (warm reset to set) (internal OPLL disabled)	
\$F9	(249)	Reserve System Logo ON (warm reset only)	
\$FA	(250)	Cold Reset	
\$FB	(251)	Warm Reset	
\$FC	(252)	Warm Reset w/ Mapper 2048kB	
\$FD	(253)	Warm Reset	
\$FE	(254)	Warm Reset w/ Mapper 4096kB	
\$FF	(255)	Restore All Default + Reserve Default Mapper & MegaSD	
I/O Reserved to IPL-ROM			
\$4E	(write_n only)	BIT 0 - 6 BIT 7	Free JIS2 Enabler \$FF (Null) 0=JIS1+JIS2, 1=JIS1 only
\$4F	(write_n only)	BIT 0 - 6 BIT 7	Free F4 Device Mode \$FF (Null) 0=Normal, 1=inverted
More info at MSX Assembly Page! < http://map.grauw.nl/resources/msx_io_ports.php#switch_io >			
R/W Logic	Positive	0 = OFF 1 = ON	(read / write)
	Negative	0 = ON 1 = OFF	(read_n / write_n)
Toggles	CPU Clock	[F12] or [DIP-SW1]	
	Video Output	[[SHIFT+]PRNSCR] or [DIP-SW2/3]	
	Audio Mixer & CMT	[[SHIFT+]PGUP/PGDOWN/F9/F10/F11] & [SCRLCK]	
	Cartridge Slot-1	[[SHIFT+F12] or [DIP-SW4]	
	Cartridge Slot-2	[SHIFT+SCRLCK] or [DIP-SW5/6]	
	System Reset	[HARD RESET KEY] Fast or Long-Click (normal or full reboot)	
	Internal Mapper	[DIP-SW7] only	
Internal MegaSD	[DIP-SW8] only		