10 Command

10.1 System function Command List and Description

Table 10.1.1 System Function command List (1)

Instruction	Refer	D/CX	WRX	RDX	D17-8	D7	D6	D5	D4	D3	D2	D1	D0	Hex	Function
NOP	10.1.1	0	↑	1	-	0	0	0	0	0	0	0	0	(00h)	No Operation
SWRESET	10.1.2	0	↑	1	-	0	0	0	0	0	0	0	1	(01h)	Software reset
RDDID	10.1.3	0	↑	1	-	0	0	0	0	0	1	0	0	(04h)	Read Display ID
		1	1	↑	-	-	-	-	-	-	-	-	-		Dummy read
		1	1	↑	-	ID17	ID16	ID15	ID14	ID13	ID12	ID11	ID10		ID1 read
		1	1	↑	-	1	ID26	ID25	ID24	ID23	ID22	ID21	ID20		ID2 read
		1	1	↑	-	ID37	ID36	ID35	ID34	ID33	ID32	ID31	ID30		ID3 read
RDDST	10.1.4	0	↑	1	-	0	0	0	0	1	0	0	1	(09h)	Read Display Status
		1	1	↑	-	-	-	-	-	-	-	-	-		Dummy read
		1	1	↑	-	BSTON	MY	MX	MV	ML	RGB	MH	ST24		-
		1	1	↑	-	ST23	IFPF2	IFPF1	IFPF0	IDMON	PTLON	SLOUT	NORON		-
		1	1	↑	-	VSSON	ST14	INVON	ST12	ST11	DISON	TEON	GCS2		-
		1	1	↑	-	GCS1	GCS0	TELOM	ST4	ST3	ST2	ST1	ST0		-
RDDPM	10.1.5	0	↑	1	-	0	0	0	0	1	0	1	0	(0Ah)	Read Display Power
		1	1	↑	-	-	-	-	-	-	-	-	-		Dummy read
		1	1	↑	-	BSTON	IDMON	PTLON	SLPOUT	NORON	DISON	-	-		-
RDD MADCTL	10.1.6	0	↑	1	-	0	0	0	0	1	0	1	1	(0Bh)	Read Display
		1	1	↑	-	-	-	-	-	-	-	-	-		Dummy read
		1	1	↑	-	MY	MX	MV	ML	RGB	MH	-	-		-
RDD COLMOD	10.1.7	0	↑	1	-	0	0	0	0	1	1	0	0	(0Ch)	Read Display Pixel
		1	1	↑	-	-	-	-	-	-	-	-	-		Dummy read
		1	1	↑	-	0	0	0	0	-	IFPF2	IFPF1	IFPF0		-
RDDIM	10.1.8	0	↑	1	-	0	0	0	0	1	1	0	1	(0Dh)	Read Display Image
		1	1	↑	-	-	-	-	-	-	-	-	-		Dummy read
		1	1	↑	-	VSSON	D6	INVON	-	-	GCS2	GCS1	GCS0		-
RDDSM	10.1.9	0	↑	1	-	0	0	0	0	1	1	1	0	(0Eh)	Read Display Signal
		1	1	↑	-	-	-	-	-	-	-	-	-		Dummy read
		1	1	↑	-	TEON	TELOM	-	-	-	-	-	-		-

"-": Don't care

Table 10.1.2 System Function command List (2)

Instruction	Refer	D/C	WR	RDX	D17-	D7	D6	D5	D4	D3	D2	D1	D0	Hex	Function
SLPIN	10.1.10	0	↑	1	-	0	0	0	1	0	0	0	0	(10h)	Sleep in & booster off
SLPOUT	10.1.11	0	↑	1	-	0	0	0	1	0	0	0	1	(11h)	Sleep out & booster on
PTLON	10.1.12	0	↑	1	-	0	0	0	1	0	0	1	0	(12h)	Partial mode on
NORON	10.1.13	0	↑	1	-	0	0	0	1	0	0	1	1	(13h)	Partial off (Normal)
INVOFF	10.1.14	0	↑	1	-	0	0	1	0	0	0	0	0	(20h)	Display inversion off
INVON	10.1.15	0	↑	1	-	0	0	1	0	0	0	0	1	(21h)	Display inversion on
GAMSET	10.1.16	0	↑	1	-	0	0	1	0	0	1	1	0	(26h)	Gamma curve select
		1	↑	1	-	-	-	-	-	GC3	GC2	GC1	GC0		-
DISPOFF	10.1.17	0	↑	1	-	0	0	1	0	1	0	0	0	(28h)	Display off
DISPON	10.1.18	0	↑	1	-	0	0	1	0	1	0	0	1	(29h)	Display on
CASET	10.1.19	0	↑	1	-	0	0	1	0	1	0	1	0	(2Ah)	Column address set
		1	↑	1	-	XS15	XS14	XS13	XS12	XS11	XS10	XS9	XS8		X address start: 0≦XS≦X
		1	↑	1	-	XS7	XS6	XS5	XS4	XS3	XS2	XS1	XS0		
		1	↑	1	-	XE15	XE14	XE13	XE12	XE11	XE10	XE9	XE8		X address end: S≦XE≦X
		1	↑	1	-	XE7	XE6	XE5	XE4	XE3	XE2	XE1	XE0		
RASET	10.1.20	0	↑	1	-	0	0	1	0	1	0	1	1	(2Bh)	Row address set
		1	↑	1	-	YS15	YS14	YS13	YS12	YS11	YS10	YS9	YS8		Y address start: 0≦YS≦Y
		1	↑	1	-	YS7	YS6	YS5	YS4	YS3	YS2	YS1	YS0		
		1	↑	1	-	YE15	YE14	YE13	YE12	YE11	YE10	YE9	YE8		Y address end:S≦YE≦Y
		1	↑	1	-	YE7	YE6	YE5	YE4	YE3	YE2	YE1	YE0		
RAMWR	10.1.21	0	↑	1	-	0	0	1	0	1	1	0	0	(2Ch)	Memory write
		1	↑	1	-	D7	D6	D5	D4	D3	D2	D1	D0		Write data
RAMRD	10.1.22	0	↑	1	-	0	0	1	0	1	1	1	0	(2Eh)	Memory read
		1	1	↑	-	-	-	-	-	-	-	-	-		Dummy read
		1	1	↑	-	D7	D6	D5	D4	D3	D2	D1	D0		Read data

"-": Don't care

Table 10.1.3 System Function command List (3)

Instruction	Refer	D/CX	WRX	RDX	D17-8	D7	D6	D5	D4	D3	D2	D1	D0	Hex	Function
PTLAR	10.1.23	0	↑	1	-	0	0	1	1	0	0	0	0	(30h)	Partial start/end address set
		1	↑	1	-	PSL15	PSL14	PSL13	PSL12	PSL11	PSL10	PSL9	PSL8		Partial start address (0,1,2, ..P)
		1	↑	1	-	PSL7	PSL6	PSL5	PSL4	PSL3	PSL2	PSL1	PSL0		
		1	↑	1	-	PEL15	PEL14	PEL13	PEL12	PEL11	PEL10	PEL9	PEL8		Partial end address (0,1,2, .., P)
		1	↑	1	-	PEL7	PEL6	PEL5	PEL4	PEL3	PEL2	PEL1	PEL0		
TEOFF	10.1.24	0	↑	1	-	0	0	1	1	0	1	0	0	(34h)	Tearing effect line off
TEON	10.1.25	0	↑	1	-	0	0	1	1	0	1	0	1	(35h)	Tearing effect mode set & on
		1	↑	1	-	-	-	-	-	-	-	-	TELOM		Mode1: TELOM="0" Mode2: TELOM="1"
MADCTL	10.1.26	0	↑	1	-	0	0	1	1	0	1	1	0	(36h)	Memory data access control
		1	↑	1	-	MY	MX	MV	ML	RGB	MH	-	-		-
IDMOFF	0	0	↑	1	-	0	0	1	1	1	0	0	0	(38h)	Idle mode off
IDMON	10.1.28	0	↑	1	-	0	0	1	1	1	0	0	1	(39h)	Idle mode on
COLMOD	10.1.29	0	↑	1	-	0	0	1	1	1	0	1	0	(3Ah)	Interface pixel format
		1	↑	1	-	-	-	-	-	-	IFPF2	IFPF1	IFPF0		Interface format
RDID1	10.1.30	0	↑	1	-	1	1	0	1	1	0	1	0	(DAh)	Read ID1
		1	1	↑	-	-	-	-	-	-	-	-	-		Dummy read
		1	1	↑	-	ID17	ID16	ID15	ID14	ID13	ID12	ID11	ID10		Read parameter
RDID2	10.1.31	0	↑	1	-	1	1	0	1	1	0	1	1	(DBh)	Read ID2
		1	1	↑	-	-	-	-	-	-	-	-	-		Dummy read
		1	1	↑	-	1	ID26	ID25	ID24	ID23	ID22	ID21	ID20		Read parameter
RDID3	10.1.32	0	↑	1	-	1	1	0	1	1	1	0	0	(DCh)	Read ID3
		1	1	↑	-	-	-	-	-	-	-	-	-		Dummy read
		1	1	↑	-	ID37	ID36	ID35	ID34	ID33	ID32	ID31	ID30		Read parameter

"-": Don't care

Note 1: After the H/W reset by RESX pin or S/W reset by SWRESET command, each internal register becomes default state (Refer "RESET TABLE" section)

Note 2: Undefined commands are treated as NOP (00 h) command.

Note 3: B0 to D9 and DA to F are for factory use of driver supplier.

Note 4: Commands 10h, 12h, 13h, 20h, 21h, 26h, 28h, 29h, 30h, 33h, 36h (ML parameter only), 37h, 38h and 39h are updated during V-sync when Module is in Sleep Out Mode to avoid abnormal visual effects. During Sleep In mode, these commands are updated immediately. Read status (09h), Read Display Power Mode (0Ah), Read Display MADCTL (0Bh), Read Display Pixel Format (0Ch), Read Display Image Mode (0Dh), Read Display Signal Mode (0Eh).

10.1.1 NOP (00h)

00H	NOP (No Operation)												
Inst / Para	D/CX	WRX	RDX	D17-8	D7	D6	D5	D4	D3	D2	D1	D0	HEX
NOP	0	↑	1	-	0	0	0	0	0	0	0	0	(00h)
Parameter	No Parameter												-
Description	This command is empty command.												

"-" Don't care