

SSD202D I2C Module Description







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1. MODULE DESCRIPTION

1.1. Overview

The inter-integrated circuit (I2C) controller provides the master I2C transfer protocol. It contains engine system control by CPU access or DMA transfer. This chip provides two I2C controllers.

1.2. Function Description

The I2C controller has the following features:

- Flexible setting for I2C high and low
- Supports DMA read/write
- Supports 7-bit standard and 10-bit extended address
- Supports n write mode in DMA write mode
- Supports clock stretching

1.3. Operating Mode

1.3.1 General I2C Initialization

- Set I2C configure register
- Set high/low/start/stop count

1.3.2 General I2C Start

- Send start command
- Wait for ready and clear flag

1.3.3 General I2C Write

- Write to the device with Write ID
- Wait for ready and clear flag
- Write address or data into data register
- Wait for ready and clear flag
- Check acknowledgement from slave

1.3.4 General I2C Read

- Read to the device with Write ID
- · Wait for ready and clear flag
- · Set read ack and trigger read command
- Wait for ready and clear flag
- Read data from register

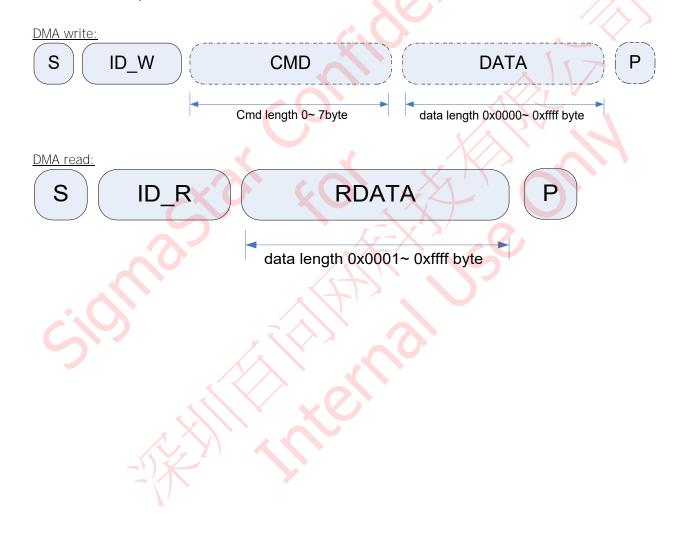


1.3.5 General I2C Stop

- Send stop command
- · Wait for ready and clear flag

1.3.6 I2C DMA Mode

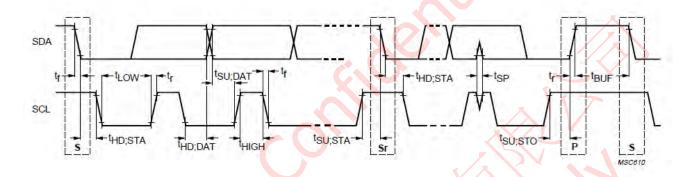
- Enable DMA mode
- Set DRAM address
- Set I2C configuration register (read/write, transfer format, slave ID...)
- Trigger DMA mode to start engine
- Wait for Interrupt and clear it





2. AC/DC SPECIFICATION

2.1. AC Timing Diagram



2.2. Standard Mode

	10 - W	Standard	Standard mode	
Parameter	Symbol	Min	Max	Unit
Clock Frequency	fSCL		100	kHz
Re-start Hold Time	tHD;STA	4	-	μs
SCL Low Period	tLOW	4.7	-	μs
SCL High Period	tHIGH	4.0	-	μs
RE-start Set-up Time	tSU;STA	4.7	-	μs
SDA Hold Time	tHD; DAT	5	-	μs
SDA Set-up Time	tSU;DAT	250	-	ns
Rise Time of Signals	tr	-	1000	ns
Fall Time of Signals	tf	-	300	ns
STOP Set-up Time	tSU;STO	4.0	-	μs
Bus Free High Time between STOP and START Condition	tBUF	4.7	-	μs



2.3. Fast Mode

		Fast mode		
Parameter	Symbol	Min	Max	Unit
Clock Frequency	fSCL	-	400	kHz
Re-start Hold Time	tHD;STA	0.6	-	μs
SCL Low Period	tLOW	1.3	-	μs
SCL High Period	tHIGH	0.6	-	μs
RE-start Set-up Time	tSU;STA	0.6	- ,	μs
SDA Hold Time	tHD;DAT	0	0.9-	μs
SDA Set-up Time	tSU; DAT	100	-	ns
Rise Time of Signals	tr	20+0.1Cb	300	ns
Fall Time of Signals	tf	20+0.1Cb	300	ns
STOP Set-up Time	tSU;STO	0.6	<u> </u>	μs
Bus Free High Time between STOP and START Condition	tBUF	1.3		μs

Note: Cb = total capacitance of one bus line in pF



3. REGISTER DESCRIPTION

3.1. MIICO Register (Bank = 1118)

MIICO Regis	ster (Bank = 1118)		(0	
Index (Absolute)	Mnemonic	Bit	Description	
00h	REG111800	7:0	Default: 0x01	Access : R/W
(111800h)	MIIC_CFG[7:0]	7:0	MIIC configuration register. Bit[7]: reg_error_det_en. 0: Disable. 1: Enable. Bit[6]: reg_oen_push_en. 0: Disable. 1: Enable. Bit[5]: Enable filter. 0: Disable. 1: Enable. Bit[4]: Enable timeout interror. 0: Disable. 1: Enable. Bit[3]: Enable clock stretchin. 0: Disable. 1: Enable. Bit[2]: Interrupt enable. 0: Disable. 1: Enable. Bit[1]: Enable DMA. 0: Disable. 1: Enable. Bit[0]: Reset. 0: Reset.	upt.
01h	REG111802	7:0	1: Not reset. Default: 0x00	Access : WO
(111802h)	-	7:1	Reserved.	•
	CMD_START	0	MIIC command. [0]: Start.	
01h	REG111803	7:0	Default: 0x00	Access : WO
(111803h)	=	7:1	Reserved.	



MIICO Regi	ster (Bank = 1118)				
Index (Absolute)	Mnemonic	Bit	Description		
	CMD_STOP	0	MIIC command. [1]: Stop.		
02h	REG111804	7:0	Default: 0x00 Access: R/W		
(111804h)	WDATA[7:0]	7:0	I2C write data.		
02h	REG111805	7:0	Default: 0x00 Access: RO		
(111805h)	-	7:1	Reserved.		
	WRITE_ACK	0	I2C ACK for write data from slave IIC.		
03h	REG111806	7:0	Default: 0x00 Access: RO		
(111806h)	RDATA[7:0]	7:0	I2C read data.		
03h	REG111807	7:0	Default: 0x00 Access: R/W		
(111807h)	-	7:2	Reserved.		
	ACK_BIT	1	I2C ACK for read data to slave IIC.		
	RDATA_EN	0	I2C read data trigger.		
(111808h)	REG111808	7:0	Default: 0x00 Access: R/W		
	-	7:1	Reserved.		
	FLAG	0	MIIC interrupt flag.		
05h	REG11180A	7:0	Default: 0x00 Access: RO		
(11180Ah)		7:5	Reserved.		
	MIIC_STATE[4:0]	4:0	MIIC final state machine (debug only).		
05h	REG11180B	7:0	Default: 0x00 Access: RO		
(11180Bh)	-	7	Reserved.		
	MIIC_INT_STATUS[6:0]	6:0	<pre>interrupt status. [0]: Ic_start_det_intr. [1]: Ic_stop_det_intr. [2]: Ic_rx_done_intr. [3]: Ic_tx_done_intr. [4]: Clock_stretching_intr. [5]: Scl_error_inte. [6]: Time_out_intr.</pre>		
06h	REG11180C	7:0	Default: 0x00 Access: RO		
(11180Ch)	-	7:5	Reserved.		
	SCLO	4	Pad_SCLO.		
	-	3:2	Reserved.		
	SDAI	1	Pad_SDAI.		
	SCLI	0	Pad_SCLI.		



MIICO Regi	ster (Bank = 1118)				
Index (Absolute)	Mnemonic	Bit	Description		
08h	REG111810	7:0	Default : 0x00 Access : R/W		
(111810h)	STOP_CNT[7:0]	7:0	This register sets the SCL and SDA count for stop.		
08h	REG111811	7:0	Default: 0x00 Access: R/W		
(111811h)	STOP_CNT[15:8]	7:0	See description of '111810h'.		
09h	REG111812	7:0	Default : 0x00 Access : R/W		
(111812h)	HCNT[7:0]	7:0	This register sets the SCL clock high-period count.		
09h	REG111813	7:0	Default: 0x00 Access: R/W		
(111813h)	HCNT[15:8]	7:0	See description of '111812h'.		
0Ah	REG111814	7:0	Default : 0x00 Access : R/W		
(111814h)	LCNT[7:0]	7:0	This register sets the SCL clock low-period count.		
0Ah	REG111815	7:0	Default: 0x00 Access: R/W		
(111815h)	LCNT[15:8]	7:0	See description of '111814h'.		
OBh	REG111816	7:0	Default: 0x00 Access: R/W		
(111816h)	SDA_CNT[7:0]	7:0	This register sets the clock count between falling edge SCL and SDA.		
0Bh	REG111817	7:0	Default : 0x00 Access : R/W		
(111817h)	SDA_CNT[15:8]	7:0	See description of '111816h'.		
0Ch	REG111818	7:0	Default : 0x00 Access : R/W		
(111818h)	START_CNT[7:0]	7:0	This register sets the SCL and SDA count for start.		
OCh	REG111819	7:0	Default: 0x00 Access: R/W		
(111819h)	START_CNT[15:8]	7:0	See description of '111818h'.		
0Dh	REG11181A	7:0	Default : 0x00 Access : R/W		
(11181Ah)	DATA_LAT_CNT[7:0]	7:0	This register sets the data latch timing.		
ODh	REG11181B	7:0	Default: 0x00 Access: R/W		
(11181Bh)	DATA_LAT_CNT[15:8]	7:0	See description of '11181Ah'.		
0Eh	REG11181C	7:0	Default : 0x00 Access : R/W		
(11181Ch)	TIMEOUT_CNT[7:0]	7:0	This register sets timing delay of timeout interrupt occurred.		
0Eh	REG11181D	7:0	Default: 0x00 Access: R/W		
(11181Dh)	TIMEOUT_CNT[15:8]	7:0	See description of '11181Ch'.		
OFh	REG11181E	7:0	Default: 0x00 Access: R/W		
(11181Eh)	-	7:3	Reserved.		
	SCLI_DELAY[2:0]	2:0	Reserved.		



MIICO Regis	ster (Bank = 1118)				
Index (Absolute)	Mnemonic	Bit	Description		
20h	REG111840	7:0	Default: 0x1A	Access: RO, R/W	
(111840h)	=	7:6	Reserved.		
	MIU_NS	5	MIU secure bit.		
	MIU_PRIORITY	4	Set MIU priority.		
	MIU_RST	3	MIU software reset.		
	DMA_CFG[2:0]	2:0	DMA configuration register. Bit[2]: Interrupt enable. 0: Disable. 1: Enable. Bit[1]: DMA software Reset. 0: Reset. 1: Not reset.		
21h	REG111842	7:0	Default: 0x00	Access : R/W	
(111842h)	MIU_ADDR[7:0]	7:0	Get tx data or put rx data ad	dress in DRAM.	
21h	REG111843	7:0	Default: 0x00	Access: R/W	
(111843h)	MIU_ADDR[15:8]	7:0	See description of /111842h'.		
	REG111844	7:0	Default: 0x00	Access : R/W	
(111844h)	MIU_ADDR[23:16]	7:0	See description of '111842h'.		
22h	REG111845	7:0	Default : 0x00	Access : R/W	
(111845h)	MIU_ADDR[31:24]	7:0	See description of '111842h'.		
23h	REG111846	7:0	Default : 0x00	Access : R/W	
(111846h)	MIU_SEL	7	MIIC channel select.		
	READ_CMD	6	MIIC transfer format. 1: Read. 0: Write.		
	STOP_DISABLE	5	MIIC transfer format. 1: S + data 0: S + data + P.		
	-	4:0	Reserved.	<u> </u>	
24h	REG111848	7:0	Default: 0x00	Access: R/W	
(111848h)	-	7:1	Reserved.		
	DMA_TRANSFER_DONE	0	SW needs to set this bit to clinterrupt in order to receive transfer_done flag or interrupt	the subsequent DMA	
25h	REG11184A	7:0	Default: 0x00	Access : R/W	



MHCO Regi	ster (Bank = 1118)				
Index (Absolute)	Mnemonic	Bit	Description		
(11184Ah)	CMD_DATA[7:0]	7:0	12C Tx Data Buffer and Command.		
25h	REG11184B	7:0	Default : 0x00 Acce	ess : R/W	
(11184Bh)	CMD_DATA[15:8]	7:0	See description of '11184Ah'.		
26h	REG11184C	7:0	Default: 0x00 Acce	ess : R/W	
(11184Ch)	CMD_DATA[23:16]	7:0	See description of '11184Ah'.		
26h	REG11184D	7:0	Default: 0x00 Acce	ess : R/W	
(11184Dh)	CMD_DATA[31:24]	7:0	See description of '11184Ah'.		
27h	REG11184E	7:0	Default: 0x00 Acce	ess : R/W	
(11184Eh)	CMD_DATA[39: 32]	7:0	See description of '11184Ah'.		
27h	REG11184F	7:0	Default : 0x00 Acce	ess : R/W	
(11184Fh)	CMD_DATA[47:40]	7:0	See description of '11184Ah'.		
28h	REG111850	7:0	Default: 0x00 Acce	ess : R/W	
(111850h)	CMD_DATA[55:48]	7:0	See description of '11184Ah'.		
28h	REG111851	7:0	Default : 0x00 Acce	ess: R/W	
(111851h)	CMD_DATA[63: 56]	7:0	See description of '11184Ah'.		
	REG111852	7:0	Default: 0x00 Acce	ess : R/W	
(111852h)		7:4	Reserved.		
	CMD_LEN[3:0]	3:0	Transfer command register length	register length (0~8).	
2Ah	REG111854	7:0	Default: 0x00 Acce	ess : R/W	
(111854h)	DATA_LEN[7:0]	7:0	Transfer command register length		
2Ah	REG111855	7:0	Default: 0x00 Acce	ess : R/W	
(111855h)	DATA_LEN[15:8]	7:0	See description of '111854h'.		
2Bh	REG111856	7:0	Default: 0x00 Acce	ess : R/W	
(111856h)	DATA_LEN[23:16]	7:0	See description of '111854h'.		
2Bh	REG111857	7:0	Default: 0x00 Acce	ess : R/W	
(111857h)	DATA_LEN[31:24]	7:0	See description of '111854h'.		
2Ch	REG111858	7:0	Default: 0x00 Acce	ess : RO	
(111858h)	DMA_TC[7:0]	7:0	DMA transfer count register for MI	ICO (debug only).	
2Ch	REG111859	7:0	Default: 0x00 Acce	ess : RO	
(111859h)	DMA_TC[15:8]	7:0	See description of '111858h'.		
2Dh	REG11185A	7:0	Default : 0x00 Acce	ess : RO	
(11185Ah)	DMA_TC[23:16]	7:0	See description of '111858h'.		
2Dh	REG11185B	7:0	Default : 0x00 Acce	ess : RO	



MIICO Regi	ster (Bank = 1118)				
Index (Absolute)	Mnemonic	Bit	Description		
(11185Bh)	DMA_TC[31:24]	7:0	See description of '111858h'.		
2Eh	REG11185C	7:0	Default: 0x00	Access : R/W	
(11185Ch)	SAR[7:0]	7:0	I2C Slave Address.[9:0]: 10-bit mode slave address.[6:0]: Normal mode slave address.		
2Eh	REG11185D	7:0	Default: 0x00	Access : R/W	
(11185Dh)	-	7:3	Reserved.		
	10BIT_MODE	2	12C Slave Address mode setting.1: 10-bit mode slave address.0: Normal mode slave address.		
	SAR[9: 8]	1:0	See description of '11185Ch'.	XT.	
2Fh	REG11185E	7:0	Default: 0x00	Access : R/W	
(11185Eh)	-	7:1	Reserved.		
	DMA_TRIGGER	0	DMA transfer trigger.		
2Fh	REG11185F	7:0	Default: 0x00	Access: R/W	
(11185Fh)	-	7:1	Reserved.		
	RE_TRIGGER	0	DMA transfer RE_TRIGGER, to complete.	for data transfer not	
31h	REG111862	7:0	Default: 0x00	Access : RO	
(111862h)	STATE[7:0]	7:0	DMA FSM (debug only).		
31h	REG111863	7:0	Default: 0x00	Access : RO	
(111863h)	-	7:1	Reserved.		
	MIU_LAST_DONE_Z	0	MIU last done z (debug only)	·	

3.2. MIIC1 Register (Bank = 1119)

MIIC1 Register (Bank = 1119)					
Index (Absolute)	Mnemonic	Bit	Description		
00h	REG111900	7:0	Default : 0x01	Access : R/W	
(111900h)	MIIC_CFG[7:0]		MIIC configuration register. Bit[7]: reg_error_det_en. 0: Disable. 1: Enable. Bit[6]: reg_oen_push_en. 0: Disable.		



MIIC1 Regis	ster (Bank = 1119)			
Index (Absolute)	Mnemonic	Bit	Description	
			1: Enable. Bit[5]: Enable filter. 0: Disable. 1: Enable. Bit[4]: Enable timeout interr 0: Disable. 1: Enable. Bit[3]: Enable clock stretchir 0: Disable. 1: Enable. Bit[2]: Interrupt enable. 0: Disable. 1: Enable. Bit[1]: Enable DMA. 0: Disable. 1: Enable. Bit[0]: Reset. 0: Reset. 1: Not reset.	
01h	REG111902	7:0	Default : 0x00	Access : WO
(111902h)		7:1	Reserved.	
CiC	CMD_START	0	MIIC command. [0]: Start.	
01h	REG111903	7:0	Default: 0x00	Access : WO
(111903h)	- (//)	7:1	Reserved.	
	CMD_STOP	0	MIIC command. [1]: Stop.	
02h	REG111904	7:0	Default: 0x00	Access : R/W
(111904h)	WDATA[7:0]	7:0	I2C write data.	
02h	REG111905	7:0	Default: 0x00	Access : RO
(111905h)	-	7:1	Reserved.	
	WRITE_ACK	0	12C ACK for write data from	slave IIC.
03h	REG111906	7:0	Default: 0x00	Access : RO
(111906h)	RDATA[7:0]	7:0	I2C read data.	
03h	REG111907	7:0	Default: 0x00	Access : R/W
(111907h)	-	7:2	Reserved.	
	ACK_BIT	1	12C ACK for read data to sla	ve IIC.



MHC1 Regi	ster (Bank = 1119)				
Index (Absolute)	Mnemonic	Bit	Description		
	RDATA_EN	0	I2C read data trigger.		
04h	REG111908	7:0	Default: 0x00 Access: R/W		
(111908h)	-	7:1	Reserved.		
	FLAG	0	MIIC interrupt flag.		
05h	REG11190A	7:0	Default: 0x00	Access : RO	
(11190Ah)	-	7:5	Reserved.	7	
	MIIC_STATE[4:0]	4:0	MIIC final state machine (del	oug only).	
05h	REG11190B	7:0	Default: 0x00	Access : RO	
(11190Bh)	-	7	Reserved.	A 17	
	MIIC_INT_STATUS[6:0]	6:0	Interrupt status. [0]: Ic_start_det_intr. [1]: Ic_stop_det_intr. [2]: Ic_rx_done_intr. [3]: Ic_tx_done_intr. [4]: Clock_stretching_intr. [5]: Scl_error_inte. [6]: Time_out_intr.		
06h	REG11190C	7:0	Default: 0x00	Access : RO	
(11190Ch)		7:5	Reserved.		
	SCLO	4	Pad_SCLO.		
		3:2	Reserved.		
	SDAI	1	Pad_SDAI.		
	SCLI	0	Pad_SCLI.		
08h	REG111910	7:0	Default: 0x00	Access : R/W	
(111910h)	STOP_CNT[7:0]	7:0	This register sets the SCL and	d SDA count for stop.	
08h	REG111911	7:0	Default: 0x00	Access : R/W	
(111911h)	STOP_CNT[15:8]	7:0	See description of '111910h'.		
09h	REG111912	7:0	Default: 0x00	Access : R/W	
(111912h)	HCNT[7:0]	7:0	This register sets the SCL clo	ck high-period count.	
09h	REG111913	7:0	Default: 0x00	Access : R/W	
(111913h)	HCNT[15:8]	7:0	See description of '111912h'.		
OAh	REG111914	7:0	Default: 0x00	Access : R/W	
(111914h)	LCNT[7:0]	7:0	This register sets the SCL clo	ck low-period count.	
OAh	REG111915	7:0	Default: 0x00	Access : R/W	



MIIC1 Regi	ster (Bank = 1119)				
Index (Absolute)	Mnemonic	Bit	Description		
(111915h)	LCNT[15:8]	7:0	See description of '111914h'.		
OBh	REG111916	7:0	Default: 0x00	Access : R/W	
(111916h)	SDA_CNT[7:0]	7:0	This register sets the clock co	ount between falling edge	
0Bh	REG111917	7:0	Default: 0x00	Access : R/W	
(111917h)	SDA_CNT[15:8]	7:0	See description of '111916h'.		
OCh	REG111918	7:0	Default: 0x00	Access : R/W	
(111918h)	START_CNT[7:0]	7:0	This register sets the SCL and	d SDA count for start.	
OCh	REG111919	7:0	Default: 0x00	Access: R/W	
(111919h)	START_CNT[15:8]	7:0	See description of '111918h'.		
ODh	REG11191A	7:0	Default: 0x00	Access : R/W	
(11191Ah)	DATA_LAT_CNT[7:0]	7:0	This register sets the data lat	tch timing.	
ODh REG11191B 7:0 De		Default: 0x00	Access : R/W		
(11191Bh)	DATA_LAT_CNT[15:8]	7:0	See description of '11191Ah'.		
-	REG11191C	7:0	Default: 0x00 Access: R/W		
(11191Ch)	TIMEOUT_CNT[7:0]	7:0	This register sets timing delay of timeout interrupt occurred.		
0Eh	REG11191D	7:0	Default: 0x00	Access : R/W	
(11191Dh)	TIMEOUT_CNT[15:8]	7:0	See description of '11191Ch'.		
OFh	REG11191E	7:0	Default: 0x00	Access : R/W	
(11191Eh)	-	7:3	Reserved.		
	SCLI_DELAY[2:0]	2:0	Reserved.		
20h	REG111940	7:0	Default : 0x1A	Access: RO, R/W	
(111940h)	- 4	7:6	Reserved.		
	MIU_NS	5	MIU secure bit.		
	MIU_PRIORITY	4	Set MIU priority.		
	MIU_RST	3	MIU software reset.		
	DMA_CFG[2:0]	2:0	DMA configuration register. Bit[2]: Interrupt enable. 0: Disable. 1: Enable. Bit[1]: DMA software Reset. 0: Reset. 1: Not reset.		
21h	REG111942	7:0	Default: 0x00	Access: R/W	



MIIC1 Regis	MIIC1 Register (Bank = 1119)							
Index	Mnemonic	Bit	Description					
(Absolute)								
(111942h)	MIU_ADDR[7:0]	7:0	Get tx data or put rx data address in DRAM.					
21h (111943h)	REG111943	7:0	Default: 0x00	Access : R/W				
	MIU_ADDR[15:8]	7:0	See description of '111942h'.					
22h (111944h)	REG111944	7:0	Default : 0x00	Access : R/W				
	MIU_ADDR[23:16]	7:0	See description of '111942h'.					
22h (111945h)	REG111945	7:0	Default: 0x00	Access : R/W				
	MIU_ADDR[31:24]	7:0	See description of '111942h'.					
23h	REG111946	7:0	Default: 0x00	Access : R/W				
(111946h)	MIU_SEL	7	MIIC channel select.	A 117				
	READ_CMD	6	MIIC transfer format. 1: Read.					
			0: Write.					
	STOP_DISABLE	5	MIIC transfer format. 1: S + data 0: S + data + P.					
	~X, O, .	8(
		4:0	Reserved.					
24h	REG111948	7:0	Default : 0x00	Access : R/W				
(111948h)		7:1	Reserved.					
	DMA_TRANSFER_DONE	0	SW needs to set this bit to clear transfer_done flag or interrupt in order to receive the subsequent DMA					
	DIWIZ TIV (NOT EN_BOTVE							
		$\langle \rangle \rangle$	transfer_done flag or interrupt.					
25h	REG11194A	7:0	Default: 0x00	Access : R/W				
(11194Ah)	CMD_DATA[7:0]	7:0	12C Tx Data Buffer and Command.					
25h	REG11194B	7:0	Default: 0x00	Access : R/W				
(11194Bh)	CMD_DATA[15:8]	7:0	See description of '11194Ah'.					
26h	REG11194C	7:0	Default: 0x00	Access : R/W				
(11194Ch)	CMD_DATA[23:16]	7:0	See description of '11194Ah'.					
26h	REG11194D	7:0	Default: 0x00	Access : R/W				
(11194Dh)	CMD_DATA[31:24]	7:0	See description of '11194Ah'.					
27h (11194Eh)	REG11194E	7:0	Default: 0x00	Access : R/W				
	CMD_DATA[39: 32]	7:0	See description of '11194Ah'.					
27h	REG11194F	7:0	Default: 0x00	Access : R/W				
(11194Fh)	CMD_DATA[47:40]	7:0	See description of '11194Ah'.					
28h	REG111950	7:0	Default: 0x00	Access : R/W				



MIIC1 Register (Bank = 1119)						
Index (Absolute)	Mnemonic	Bit	Description			
(111950h)	CMD_DATA[55:48]	7:0	See description of '11194Ah'.			
28h (111951h)	REG111951	7:0	Default: 0x00	Access : R/W		
	CMD_DATA[63: 56]	7:0	See description of '11194Ah'.			
29h (111952h)	REG111952	7:0	Default: 0x00	Access : R/W		
	-	7:4	Reserved.			
	CMD_LEN[3:0]	3:0	Transfer command register length (0~8).			
2Ah	REG111954	7:0	Default: 0x00	Access : R/W		
(111954h)	DATA_LEN[7:0]	7:0	Transfer command register length.			
2Ah (111955h)	REG111955	7:0	Default: 0x00	Access: R/W		
	DATA_LEN[15:8]	7:0	See description of '111954h'.	VL V		
2Bh (111956h)	REG111956	7:0	Default: 0x00	Access : R/W		
	DATA_LEN[23:16]	7:0	See description of '111954h'.			
2Bh (111957h)	REG111957	7:0	Default: 0x00	Access: R/W		
	DATA_LEN[31:24]	7:0	See description of '111954h'.			
2Ch (111958h)	REG111958	7:0	Default: 0x00	Access : RO		
	DMA_TC[7:0]	7:0	DMA transfer count register f	for MIICO (debug only).		
2Ch	REG111959	7:0	Default: 0x00	Access : RO		
(111959h)	DMA_TC[15:8]	7:0	See description of '111958h'.			
2Dh	REG11195A	7:0	Default: 0x00	Access : RO		
(11195Ah)	DMA_TC[23:16]	7:0	See description of '111958h'.			
2Dh	REG11195B	7:0	Default: 0x00	Access : RO		
(11195Bh)	DMA_TC[31:24]	7:0	See description of '111958h'.			
2Eh	REG11195C	7:0	Default: 0x00	Access : R/W		
(11195Ch)	SAR[7:0]	7:0	I2C Slave Address.			
	-1)		[9:0]: 10-bit mode slave address.			
			[6:0]: Normal mode slave address.			
2Eh	REG11195D	7:0	Default: 0x00	Access: R/W		
(11195Dh)	-	7:3	Reserved.			
	10BIT_MODE	2	I2C Slave Address mode setting.			
			1: 10-bit mode slave address.0: Normal mode slave address.			
	SAR[9: 8]	1:0	See description of '11195Ch'.			
2Fh (11195Eh)	REG11195E	7:0	Default: 0x00	Access : R/W		
	-	7:1	Reserved.			
,		7.1	NGSGI VGU.			



MIIC1 Register (Bank = 1119)							
Index	Mnemonic	Bit	Description				
(Absolute)							
	DMA_TRIGGER	0	DMA transfer trigger.				
2Fh (11195Fh)	REG11195F	7:0	Default: 0x00	Access : R/W			
	-	7:1	Reserved.				
	RE_TRIGGER	0	DMA transfer RE_TRIGGER, for data transfer not complete.				
31h (111962h)	REG111962	7:0	Default: 0x00	Access : RO			
	STATE[7:0]	7:0	DMA FSM (debug only).				
31h (111963h)	REG111963	7:0	Default: 0x00	Access: RO			
	-	7:1	Reserved.				
	MIU_LAST_DONE_Z	0	MIU last done z (debug only)				