

CONFIDENTIAL

Table of Contents

1. Overview	1
1.1 Overview	1
1.2 Function	1
1.2.1 Driver Function	1
1.2.2 Transfer Speed	1
1.2.3 Connected Device	2
1.3 Reference	5
1.3.1 Standards	5
1.3.2 Related Documents	5
1.4 Restrictions	6
1.5 Notice	6
2. Terminology	7
3. Operating Environment	8
3.1 Hardware Environment	8
3.2 Module Configuration	9
3.3 State Transition Diagram	13
4. External Interface	14
4.1 Device Node	14
4.2 External Function	15
4.2.1 open	17
4.2.2 close	17
4.2.3 read	18
4.2.4 write	18
4.2.5 ioctl(I2C_RDWR)	19
4.2.6 ioctl(I2C_FUNCS)	20
4.2.7 ioctl(I2C_SLAVE)	20
4.2.8 ioctl(I2C_SMBUS)	21
4.2.9 i2c_new_probed_device	22
4.2.10 i2c_register_board_info	22
4.2.11 i2c_add_driver	23
4.2.12 i2c_del_driver	23
4.2.13 i2c_master_send	24
4.2.14 i2c_master_recv	24
4.2.15 i2c_transfer	25
4.2.16 i2c_get_functionality	25
4.2.17 i2c_smbus_read_byte	28
4.2.18 i2c_smbus_write_byte	28
4.2.19 i2c_smbus_read_byte_data	29
4.2.20 i2c_smbus_write_byte_data	29
4.2.21 i2c_smbus_read_word_data	30
4.2.22 i2c_smbus_write_word_data	30
4.2.23 i2c_smbus_read_block_data	31
4.2.24 i2c_smbus_write_block_data	31
4.2.25 i2c_smbus_read_i2c_block_data	32
4.2.26 i2c_smbus_write_i2c_block_data	32
4.3 Structure	33
4.3.1 struct i2c_adapter	33
4.3.2 struct i2c_client	34

CONFIDENTIAL

4.3.3	struct i2c_board_info.....	34
4.3.4	struct i2c_driver.....	35
4.3.5	struct i2c_msg	36
4.3.6	struct i2c_rdwr_ioctl_data.....	36
4.3.7	struct i2c_smbus_ioctl_data	36
4.3.8	union i2c_smbus_data	36
4.4	Global Variables and Constants	37
4.4.1	Global Variables.....	37
4.4.2	Global Constants	37
5.	Integration	38
5.1	Directory Configuration.....	38
5.2	Integration Procedure.....	38
5.3	Option Setting	39
5.3.1	Module Parameters.....	39
5.3.1.1	DT	39
5.3.1.2	Multi-master.....	41
5.3.2	Kernel Parameters	41