Drake I2C Register Map

Name	Address	bit 7	bit 6	bit 5	bit 4	bit 3	bit 2	bit 1	bit 0
PWR	0x00								SYS OFF
STATUS0	0x01							TPR	MPR
STATUS1	0x02			TOR	MOR			TDR	MDR
MDATA	0x03	MT_POS							
TDATA	0x04	TRV_DATA							
WHOAMI	0x05	WHO_AMI							
MTCFG0	0x06	DC_OPEN							
MTCFG1	0x07	DC_CLOSE							
MTCFG2	0x08	TIMEOUT_OPEN							
MTCFG3	0x09	TIMEOUT_CLOSE							
MTCAL0	0x0A			FOS	THS			FOC	THC
MTCAL1	0x0B				THR_LOW				
MTCAL2	0x0C				THR_UP				
MTCAL3	0x0D	FULL_OPEN_L							
MTCAL4	0x0E	FULL_OPEN_H							
TRVCAL0	0x0F								TOC
TRVCAL1	0x10	TRV_POST_L							
TRVCAL2	0x11	TRV_POST_H							
TRVCAL3	0x12	TRV_OFF_L							
TRVCAL4	0x13	TRV_OFF_H							
INDCFG0	0x14	OPEN_BLOCKING							
INDCFG1	0x15	CLOSE_TIMEOUT							
INDPOS0	0x16	INDEX_POS0							
INDPOS1	0x17	INDEX_POS1							
INDPOS2	0x18	INDEX_POS2							
INDPOS3	0x19	INDEX_POS3							

Drake I2C Register Description

PWR (0x00)

0	0	0	0	0	0	0	SYS_OFF

SYS_OFF	System off read/write default value: 0 0: system on; 1 system off write 1 to request system off mode, device will automatically wake up on bus activity

STATUS0 (0x01)

0	0	0	0	0	0	TPR	MPR

MPR	Motor position sensor present read only 0: sensor not present; 1: sensor present if sensor not present write operation to corresponding registers (MTCFG, MTCAL) have no effect
TDR	Travel sensor present read only 0: sensor not present; 1: sensor present if sensor not present write operation to corresponding registers (TRVCFG, TRVCAL) have no effect

STATUS1 (0x02)

0	0	TOR	MOR	0	0	TDR	MDR

MDR	Motor position data ready read only default value: 0 0: no new data; 1: new data available will be cleared by reading MDATA register
TDR	Travel data ready read only default value: 0 0: no new data; 1: new data available will be cleared by reading TDATA registers
MOR	Motor position data overrun read only 0: no overrun occurred; 1: previous data has been overwritten will be cleared by reading MDATA register
TOR	Travel data overrun read only 0: no overrun occurred; 1: previous data has been overwriten will be cleared by reading TDATA registers

MDATA (0x03)

Motor position sensor data
read only
represents the motor position in q8_t (255..0 → 100..0%)

TDATA (0x04)

Travel sensor data
read only
represents the travel in q8_t (255..0 → 100..0%)

WHOAMI (0x05)

Who Am I
read onla
default value: 0xDE

MTCFG0 (0x06)

Motor configuration register 0, duty cycle open
read/write
represents the duty cycle used when motor is opening

MTCFG1 (0x07)

Motor configuration register 1, duty cycle close
read/write
represents the duty cycle used when motor is closing

MTCFG2 (0x08)

Motor configuration register 2, timeout open
read/write
represents the motor timeout in 1/128s used when motor is opening

MTCFG3 (0x09)

Motor configuration register 3, timeout close
read/write
represents the motor timeout in 1/128s used when motor is closing

MTCAL0 (0x0A)

0	0	FOS	THS	0	0	FOC	THC

THC	Threshold calibration data clear write only 0: no change; 1: threshold calibration data will be cleared
FOC	Full open calibration data clear write only 0: no change; 1: full open calibration data will be cleared
THS	Threshold calibration start write only 0: no change; 1: start threshold calibration
FOS	Full open calibration start write only 0: no change; 1: start full open calibration

MTCAL1 (0x0B)

0	0	0	THR_LOW

THR_LOW	Lower threshold calibration data read only

MTCAL2 (0x0C)

0	0	0	THR_UP

THR_UP	Upper threshold calibration data read only

MTCAL3 (0x0D), MTCAL4 (0x0E)

Motor calibration register 3 and 4, full open calibration data
read only

TRVCAL0 (0x0F)

0	0	0	0	0	0	0	TOC

T=C	Travel Offset calibration data clear write only 0: no change; 1: offset calibration data will be cleared

TRVCAL1 (0x10), TRVCAL2 (0x11)

Travel calibration register 1 and 2, seatpost travel
read/write (write initiates offset calibration)
represents the total travel of the seatpost in mm

TRVCAL3 (0x12), TRVCAL4 (0x13)

Travel calibration register 3 and 4, travel sensor offset
read only
represents the offset in µm (might be changed in future)

INDCFG0 (0x14)

Indexed travel configuration register 0, opening blocking time
read/write
represents the opening blocking time in 1/64s

INDCFG1 (0x15)

Indexed travel configuration register 1, closing timeout
read/write
represents the closing timeout in 1/64s

INDPOS0 (0x16) - INDPOS3 (0x19)

Indexed travel position registers 0 to 3, indexed positions 0 - 3
read/write
represents indexed positions in q8_t