

I2C commands to set the MAXREFDES220 to stream data

Below is a capture of the I2C traffic between the example host microcontroller, MAX32630FTHR and the MAXREFDES220. In the Notes column, asterisk (*) means that the command is mandatory, plus (+) is a recommended command. Do not enable the accelerometer if your board does not have the accelerometer.

Host	MAXREFDES220		
Commands	Response	Command Description	Notes
AA 02 00	AB 00 00	(read mode)	+no errors, nothing in the FIFO
AA FF 07 04	AB 00 00 07 00	(read algo version)	
AA 42 03	AB 00 01 24	(Get MAX30101 register attributes)	1 byte, 24h registers available
AA 43 03	AB 00 00 01...	(Dump registers of MAX30101)	reads all register values
AA 41 03 07	AB 00 60	(Read reg from MAX30101, reg 7)	+value of this reg is 0x60
AA 10 00 03	AB 00	(set output mode for MAX30101 to both raw and algo)	*
AA 10 01 0F	AB 00	(set FIFO as almost full to 0xF)	*
AA 44 03 01	AB 00	(set MAX30101 sensor mode)	*
AA 44 04 01	AB 00	(set ACCEL sensor mode)	Only enable if your board has the KX-122 accelerometer
AA 52 02 01	AB 00	(enable WHRM algo)	*
AA 42 03	AB 00 01 24	(Get Attributes MAX30101 registers)	1 byte, 24h registers available
AA 43 03	AB 00 00 01	(Dump registers of MAX30101)	read all register values
AA 00 00 mode	AB 00 08	(read mode)	* DATA_RDY_INT bit set in the mode
AA 12 00	AB 00 0F	(get number of samples in FIFO)	* 0xF samples ready
AA 12 01	AB 00...	(read data stored in FIFO)	* FIFO data
AA 40 03 0D 32	AB 00	(set MAX30101's reg 0xD to 0x32)	* Set LED2 pulse amplitude to 0x32
AA 40 03 0C 32	AB 00	(set MAX30101's reg)	* Set LED1 pulse amplitude to 0x32
AA 40 03 0A 23	AB 00	(set MAX30101's reg)	* Set the SpO2, pulse width configuration

AA 40 03 08 2F	AB 00	(set MAX30101's reg)	* Set the MAX30101 fifo to 0xF, use an average of 1.
AA 00 00	AB 00 08	(read mode)	* DATA_RDY_INT bit is set in the mode register
AA 12 00	AB 00 0F	(get number of samples in FIFO)	* 0xF samples ready
AA 12 01	AB 00...	(read data stored in FIFO)	* FIFO data
AA 00 00	AB 00 08	(read mode)	* DATA_RDY_INT bit is set in the mode register
AA 12 00	AB 00 0F	(get number of samples in FIFO)	* 0xF samples ready
AA 12 01	AB 00...	(read data stored in FIFO)	* FIFO data