Strain Gauge Measurement System (SGMS) Register Information

Register

The following is the register used to convert analog inputs from the strain gauge circuit to I2C. This should be referenced when writing code on the master that interacts with the microcontroller. This register has a total packet size of 19 bytes.

Register Address	Register
0x00	STATUS
0x01	A0 - MSB
0x02	A0 - LSB
0x03	A1 - MSB
0x04	A1 - LSB
0x05	A2 - MSB
0x06	A2 - LSB
0x07	A3 - MSB
0x08	A3 - LSB
0x09	A4 - MSB
0x0A	A4 - LSB
0x0B	A5 - MSB
0x0C	A5 - LSB
0x0D	A6 -MSB
0x0E	A6 - LSB
0x0F	A7 - MSB
0x10	A7 - LSB
0x11	COMMANDS
0x12	IDENTIFICATION

Address Terminology

Note the addresses are in Hexadecimal:

- A Yellow address corresponds to a READ ONLY register
- A Green address corresponds to a READ/WRITE register

Strain Gauge Measurement System (SGMS) Register Information

Register Terminology

MSB - Most Significant Byte.
LSB - Least Significant Byte.
NOTE: Bytes are stored in the register in big-endian format with the MSB appearing before the LSB.

STATUS - A register address representing whether the device is actively collecting data or not. This register will be set to 0x01 if the device is collecting data and 0x00 if the device is not collecting data. (NOTE: On bootup, the STATUS register(0x00) will be set to 0x00 as the slave waits for a command from the master to start data collection).

COMMANDS - A register address used to pass commands from the master to the slave. Valid commands include:

Command	**Action**
0x01	Start Data Collection
Any Other Number	Stop Data Collection

IDENTIFICATION - A register address which stores the unique identifier of the slave. This register address is useful when trying to determine which slave the data is coming from.