I²C programming interface

The I²C interface consists of the SCL(clock) and SDA(data) signals. Data can be written to or read from the AL250. For both read and write, each byte is transferred MSB first. For both read and write, the SDA data bit is valid when the SCL is pulled high.

Read/Write Command

Write: <S><WRITE SA><A><REGISTER INDEX><A><DATA><A><P>
Read: <S><WRITE SA><A><REGISTER INDEX><A><S><READ SA><A><DATA><NA><P>

<**S**>:
Start signal
SCL   SDA
High   High
High   Low
The Start signal is HIGH to LOW transition on the SDA line when SCL is HIGH.

<**WRITE SA**>:
Write Slave Address: 58h or 5Ch

<**READ SA**>:
Read Slave Address: 59h or 5Dh

<**REGISTER INDEX**>:
Value of AL250 register index.

<**A**>:
Acknowledge stage
The acknowledge-related clock pulse is generated by the host(master). The host releases the SDA line (HIGH) during the acknowledge clock pulse. AL250(slave) will pull down the SDA line during the acknowledge clock pulse.

<**NA**>:
Not Acknoledge stage
The acknowledge-related clock pulse is generated by the host(master). The host releases the SDA line (HIGH) during the acknowledge clock pulse.

<**DATA**>:
Data byte write to or read from the register index.
In read operation, the host must release the SDA line(high) before the first clock pulse transmitted to AL250.

<**P**>:
Stop signal
SCL   SDA
High   Low
High   High
The Stop signal is LOW to HIGH transition on the SDA line when SCL is HIGH.