7.4 Sensor Reading Process

1. After power-on, wait for ≥100ms Before reading the temperature and humidity value, get a byte of status word by sending 0x71. If the status word and 0x18 are not equal to 0x18, initialize the 0x1B, 0x1C, 0x1E registers, details Please refer to our official website routine for the initialization process; if they are equal, proceed to the next step.

2. Wait 10ms to send the 0xAC command (trigger measurement). This command parameter has two bytes, the first byte is 0x33, and the second byte is 0x00.

3. Wait 80ms for the measurement to be completed, if the read status word Bit[7] is 0, it means the measurement is completed, and then six bytes can be read continuously; otherwise, continue to wait.

4. After receiving six bytes, the next byte is CRC check data, which the user can read as needed. If the receiver needs CRC check, it will send an ACK reply after receiving the sixth byte, otherwise it will send a NACK reply. The initial value of CRC is 0xFF, and the CRC8 check polynomial is:

$$CRC[7:0] = 1 + X^4 + X^5 + X^8$$

5. Calculate the temperature and humidity value