

HTU2X Serial Number reading

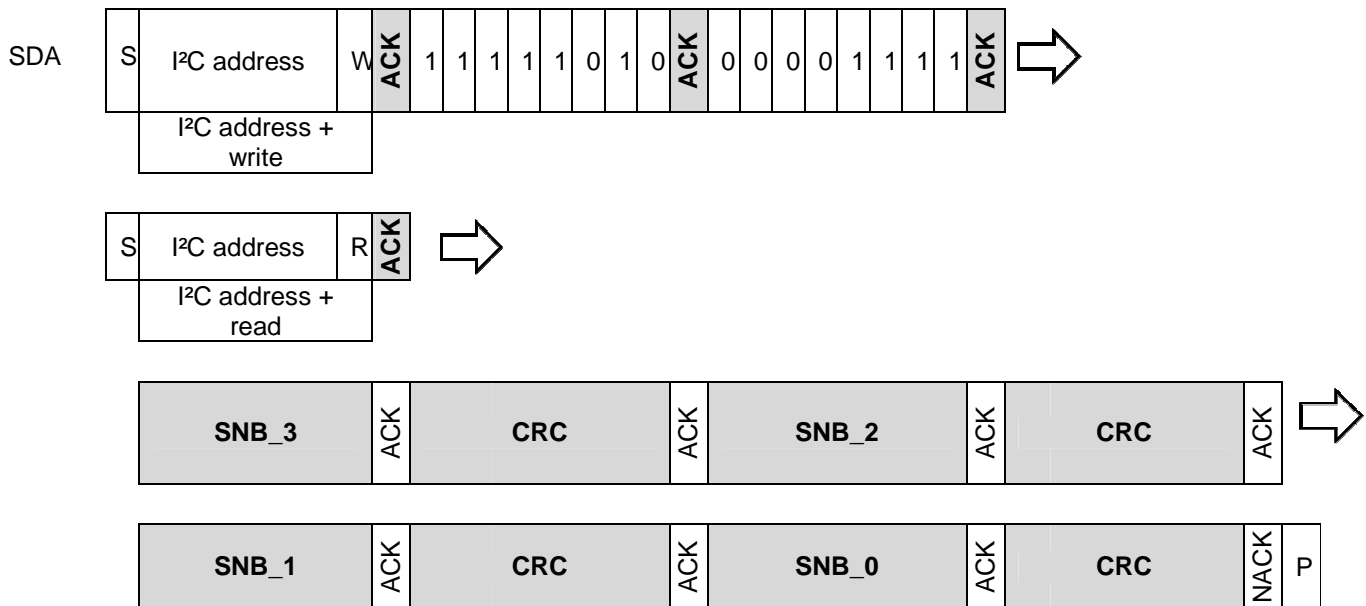
The HTU2X provides a device specific serial number which can be read-out via the serial interface (I2C) and allows for an unambiguous identification of each individual device. This application note describes the procedure for read-out of the serial number.

COMMUNICATION SEQUENCE

The communication sequences for reading out the serial number comply with the general I2C serial interface protocol. For detailed information on I2C, please refer to the Datasheet HTU2XD (HPC199 document).

The serial number of the HTU2X is partitioned to two different locations on the on-chip memory. Therefore, two memory access sequences are required to retrieve the complete serial number information. Figure below shows the corresponding communication sequence.

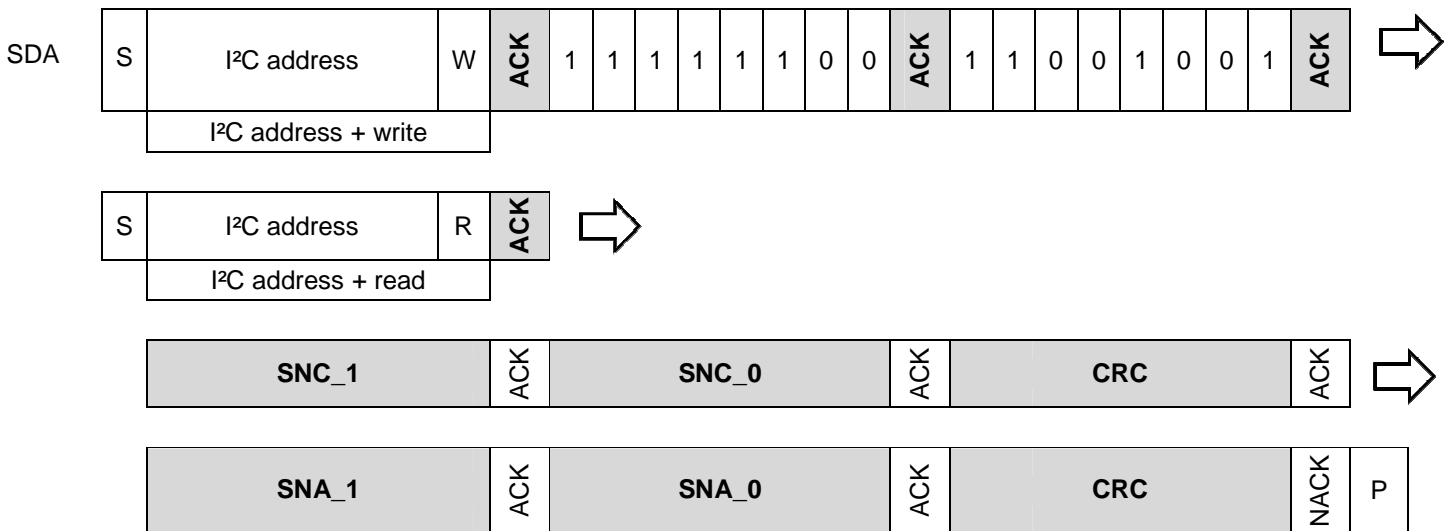
First memory access:



Application Note

HTU2X Serial Number reading

Second memory access:



S is for I2C start condition
P is for I2C stop condition
Data in bold are data from HTU2X sensor to master

COMPOSITION OF SERIAL NUMBER

After reading out the data as described above, the serial number is obtained by arranging the data bytes according to figure below.

64 bits							
16 bits		32 bits				16 bits	
SNA_1	SNA_0	SNB_3	SNB_2	SNB_1	SNB_0	SNC_1	SNC_0
0x48*	0x54*	0x00*	0xFF	0xFF	0xFF	0x32*	0xFF

* are fixed values

Application Note

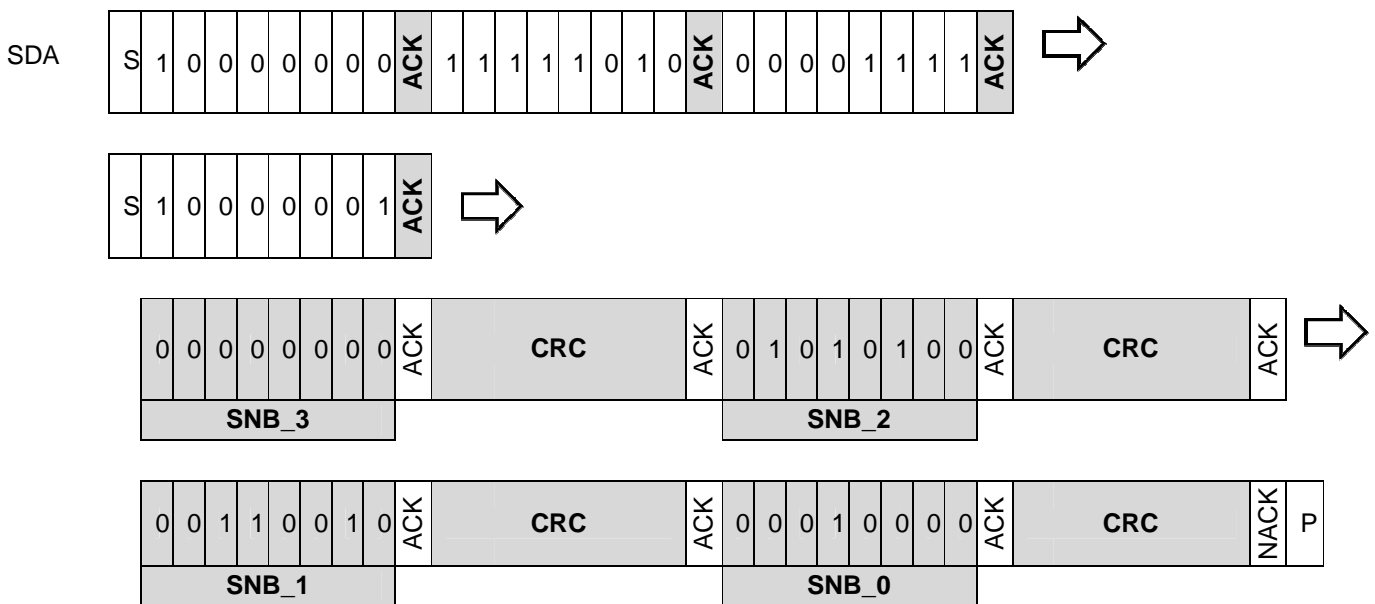
HTU2X Serial Number reading

EXAMPLE

For illustration of the read-out procedure, a numeric example is presented below. The I2C address of the HTU2X is assumed as "0100'0000" (hexadecimal: 0x40).

The serial number of the numeric example reads (hexadecimal) is 0x4854'0054'3210'3212.

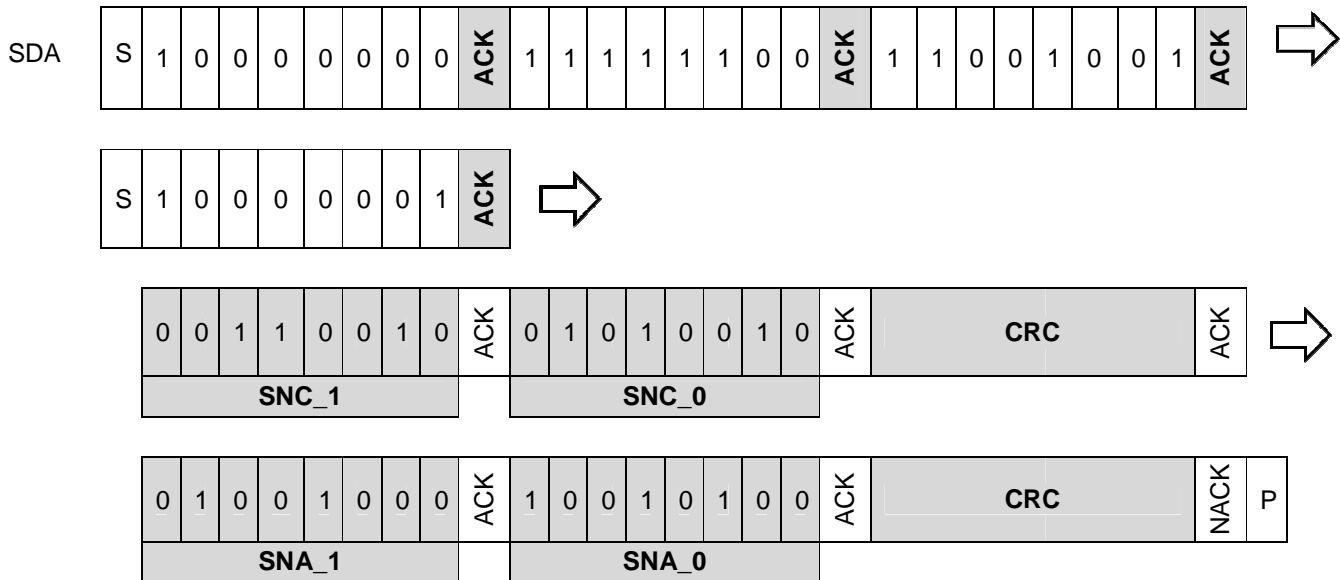
First memory access:



Application Note

HTU2X Serial Number reading

Second memory access:



Customer Service contact details

Measurement Specialties, Inc - MEAS France
 Impasse Jeanne Benozzi
 CS 83 163
 31027 Toulouse Cedex 3
 FRANCE
 Tel:+33 (0)5 820.822.02
 Fax:+33 (0)5.820.821.51
 Sales: humidity.sales@meas-spec.com

Revision	Comments	Who	Date
0	Document Creation	D. LE GALL	October 12

The information in this sheet has been carefully reviewed and is believed to be accurate; however, no responsibility is assumed for inaccuracies. Furthermore, this information does not convey to the purchaser of such devices any license under the patent rights to the manufacturer. Measurement Specialties, Inc. reserves the right to make changes without further notice to any product herein. Measurement Specialties, Inc. makes no warranty, representation or guarantee regarding the suitability of its product for any particular purpose, nor does Measurement Specialties, Inc. assume any liability arising out of the application or use of any product or circuit and specifically disclaims any and all liability, including without limitation consequential or incidental damages. Typical parameters can and do vary in different applications. All operating parameters must be validated for each customer application by customer's technical experts. Measurement Specialties, Inc. does not convey any license under its patent rights nor the rights of others.