

# Electronic Identification Code

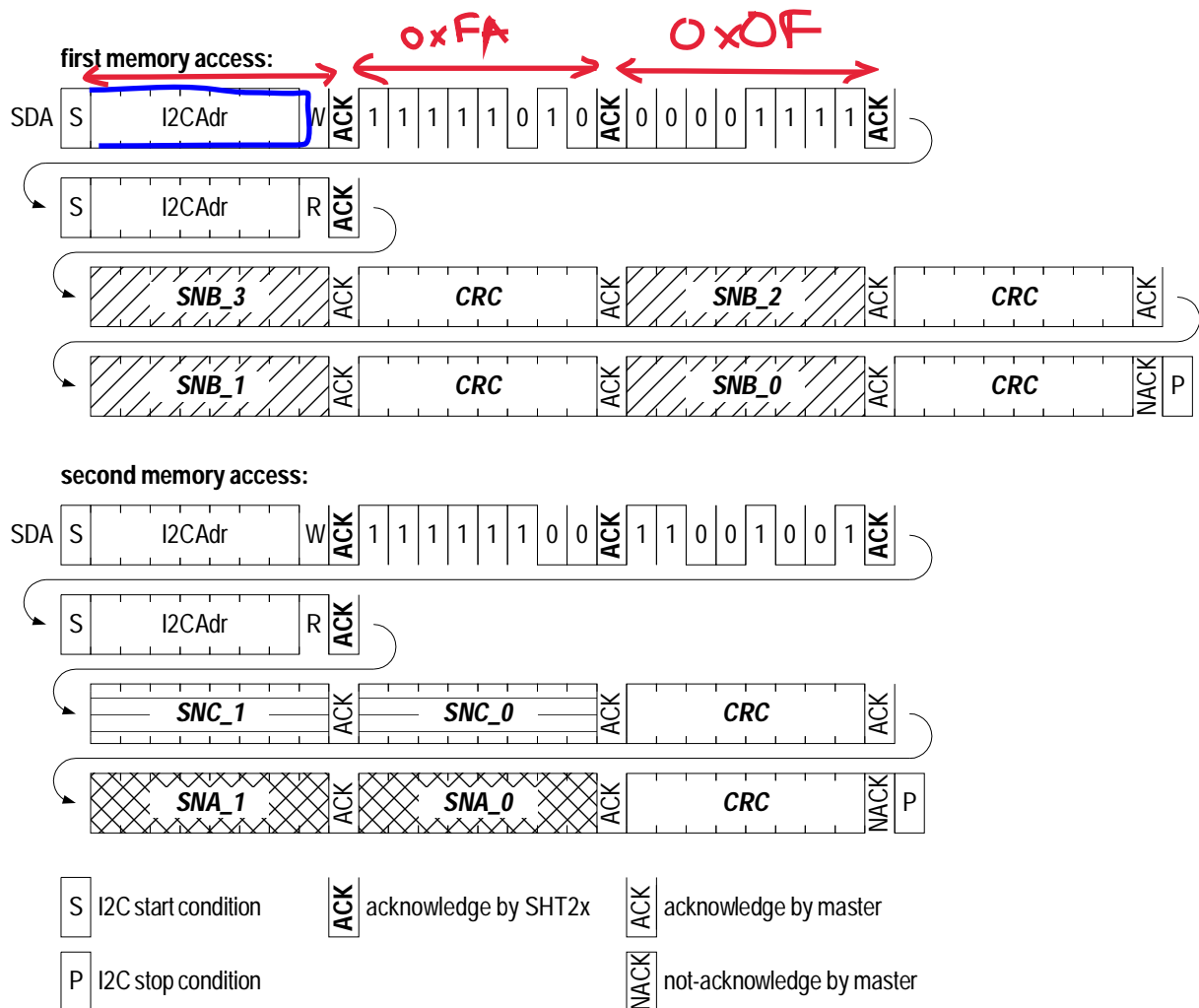
## How to read-out the serial number of SHT2x

The SHT2x provides a device specific serial number which can be read-out via the serial interface (I<sup>2</sup>C) and allows for an unambiguous identification of each individual device. This application note describes the procedure for read-out of the serial number.

### 1 Communication Sequence

The communication sequences for reading out the serial number comply with the general I<sup>2</sup>C serial interface protocol. For detailed information on I<sup>2</sup>C, please refer to the Datasheet SHT2x and the I<sup>2</sup>C bus specification by NXP Semiconductors (<http://www.standardics.nxp.com/support/i2c/>).

The serial number of the SHT2x 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 1 shows the corresponding communication sequence.



**Figure 1:** Communication sequences.

## 2 Composition of Serial Number

After reading out the data as described above, the serial number is obtained by arranging the data bytes according to Fig. 2.

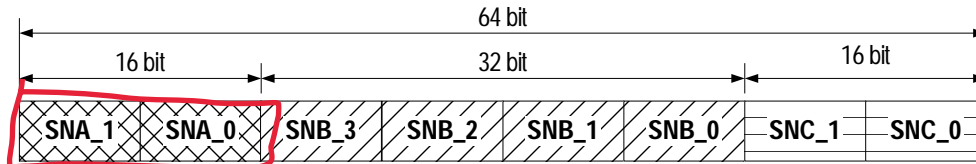


Figure 2: Composition of serial number.

## 3 Example

For illustration of the read-out procedure, a numeric example is presented below. The I<sup>2</sup>C address of the SHT2x is assumed as "100'0000" (hexadecimal: 0x40).

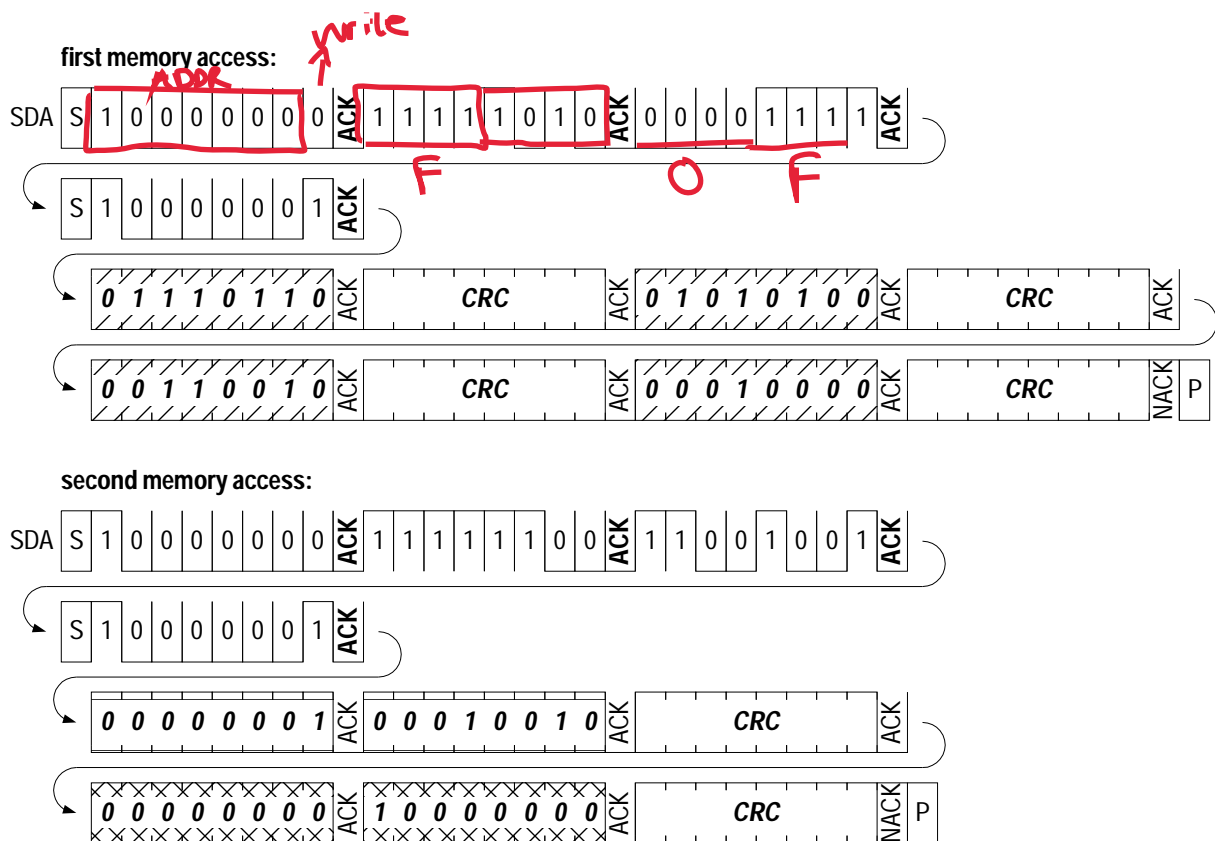


Figure 3: Communication sequences with numeric example (I<sup>2</sup>C address "100'0000"). Normal font: data direction master to SHT2x, bold-italic font: data direction SHT2x to master.

The serial number of the numeric example reads (hexadecimal): 0x0080'7654'3210'0112.

## Revision History

Date	Revision	Changes
21 September 2009	1.0	Initial version (PME/DHA)
27 October 2009	1.1	Added NACK at the end of each read-out sequence (PME/DHA)

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## Headquarter and Sales Offices

### Headquarter

SENSIRION AG  
Laubisruetistr. 50  
CH-8712 Staefa ZH  
Switzerland

Phone: +41 44 306 40 00  
Fax: +41 44 306 40 30  
[info@sensirion.com](mailto:info@sensirion.com)  
<http://www.sensirion.com/>

### Sales Office USA:

SENSIRION Inc.  
2801 Townsgate Rd., Suite 204  
Westlake Village, CA 91361  
USA

Phone: +1 805 409 4900  
Fax: +1 805 435 0467  
[michael.karst@sensirion.com](mailto:michael.karst@sensirion.com)  
<http://www.sensirion.com/>

### Sales Office Japan:

SENSIRION JAPAN Co. Ltd.  
Postal Code: 108-0074  
Shinagawa Station Bldg. 7F,  
4-23-5, Takanawa, Minato-ku  
Tokyo, Japan

Phone: +81 3 3444 4940  
Fax: +81 3 3444 4939  
[info@sensirion.co.jp](mailto:info@sensirion.co.jp)  
<http://www.sensirion.co.jp>

### Sales Office Korea:

SENSIRION KOREA Co. Ltd.  
#1414, Anyang Construction Tower B/D,  
1112-1, Bisan-dong, Anyang-city  
Gyeonggi-Province  
South Korea

Phone: +82 31 440 9925-27  
Fax: +82 31 440 9927  
[info@sensirion.co.kr](mailto:info@sensirion.co.kr)  
<http://www.sensirion.co.kr>

### Sales Office China:

Sensirion China Co. Ltd.  
Room 2411, Main Tower  
Jin Zhong Huan Business Building,  
Futian District, Shenzhen,  
Postal Code 518048  
PR China

phone: +86 755 8252 1501  
fax: +86 755 8252 1580  
[info@sensirion.com.cn](mailto:info@sensirion.com.cn)  
[www.sensirion.com.cn](http://www.sensirion.com.cn)

Find your local representative at: <http://www.sensirion.com/re>