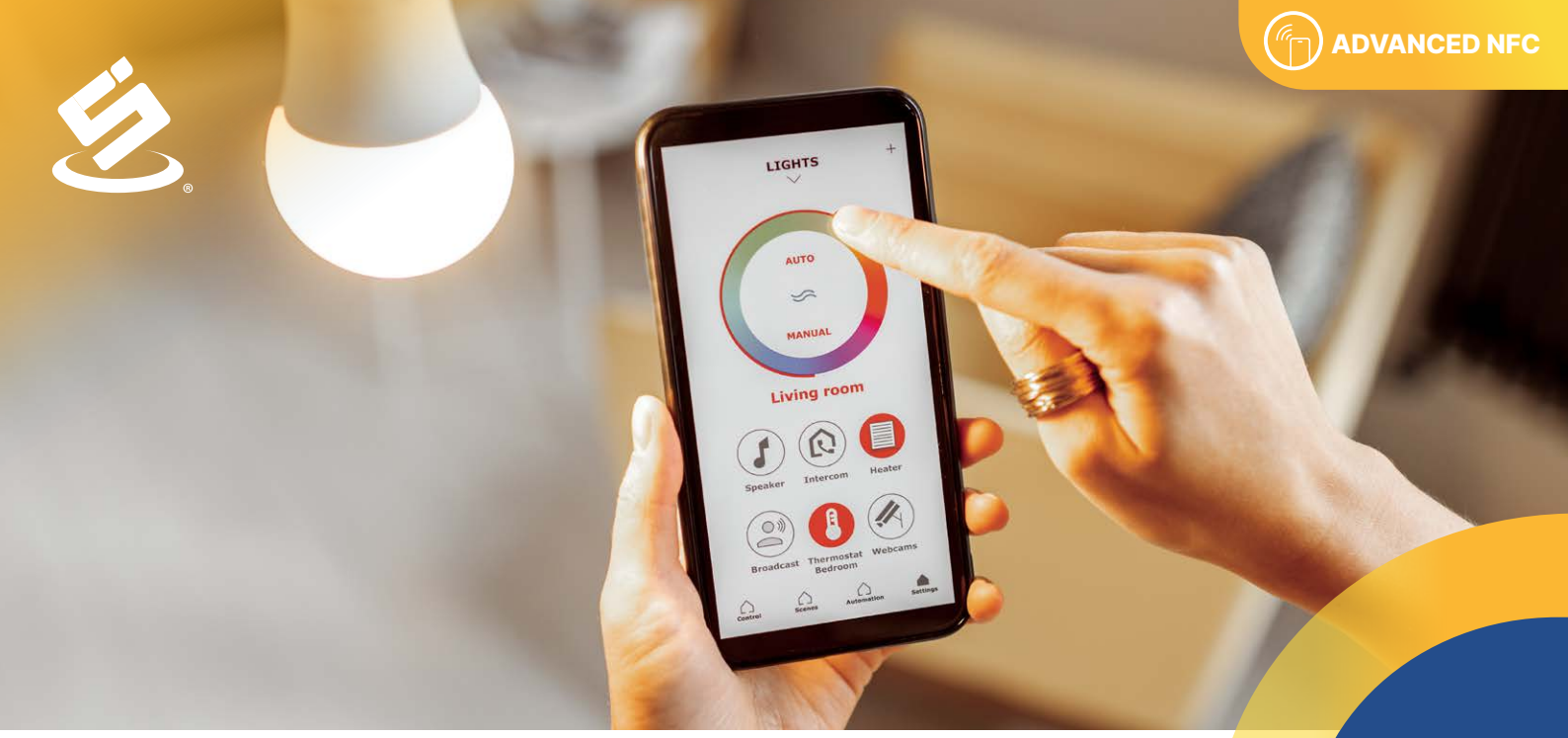
ADVANCED NFC



NFC TYPE 2 TAG ICs

WITH UART INTERFACE AND ENERGY HARVESTING FUNCTION

SIC4310

SIC4310 is NFC type 2 tag ICs with UART interface that bridge data transfer between NFC devices and UART-connected devices such as MCUs.

In addition, SIC4310 can harvest energy for peripheral circuit up to 10mA from desktop RFID readers or up to 7mA from typical NFC phones. This energy harvesting capability enables 'batteryless' applications that instantly operate when an NFC device is tapped, even without a battery inside.

Energy Harvesting

UART & GPIO Interface

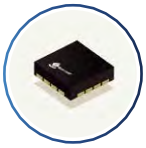
HIGHLIGHT FEATURES

- NFC Forum Type 2 Tag with Additional Commands
- Direct Data Transfer Between NFC and UART, or Vice Versa
- Utilizes NFC Energy Harvesting for Self-Operation or External Power Sourcing
- 3.3V On-Chip Regulator for Energy-Harvesting Output
- NFC Energy Harvesting: Up to 10mA Capability to Power External Circuits (Depending on the NFC Device's Output Power)
- 196 Bytes of User Memory

APPLICATIONS

- Shared Facility (e.g. Washing Machine, Coffee Maker, or Printer) Personalization and Controlling via NFC
- NFC Energy Harvesting Module
- Zero-Energy Emergency Data Transfer Channel for Electricity, Water or Gas Metering
- NFC Bridge for Medical Devices
- Interactive Packaging

CONNECTIVITY AND
ENERGY-HARVESTING NFC TAG IC



SIC4310

NFC Forum T2T with UART Interface and 8 GPIOs

COMPARISON TABLE

SPECIFICATION	SIC4310
Communication	
Standard	ISO14443A, NFC T2T
Data Rate [kbps]	106
Interface	UART
Buffer Size [byte]	64
Memory	
Memory Size [byte]	196
Data Retention [year]	10
Write Cycle [times]	100,000
Operating Condition	
Operating Temperature	-40 to 85°C
Maximum Standby Current	80µA (use XVDD pin)
External Input Supply Voltage	2.7V to 3.6V (use XVDD pin)
Maximum Harvesting Current	
Harvest from Mobile Phone	7.82mA @3V
Harvest from Desktop Reader	10.2 mA @2.87V
Pinouts and Peripherals	
GPIO pins	8
On-chip Capacitor [pF]	30.3
Packages	QFN3×3 -16 pins

DEVELOPMENT KIT

- SIC4310-HV Development Kit : P10CK081PB0S110D0CBA

- SIC4310-FU Development Kit : P10CSECR000SN10D1CB

DEVELOPMENT KIT
SUPPORT MATERIAL

- Firmware Source Code (SIC4310-FU)
- Demo Android/iOS App and Source Code
- Reference PCB Design and Schematic Diagram
- Reference Antenna and Antenna Design Tool

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