

## NTAG I<sup>2</sup>C plus Explorer Kit OM5569/NT322E: Operational Description

To demonstrate the unique properties of the NTAG I<sup>2</sup>C tag chip, NXP developed the NTAG I<sup>2</sup>C plus Explorer Kit OM5569/NT322E which consists from Connected Tags Explorer Board and NTAG I<sup>2</sup>C plus Antenna Boards (54 x 27 mm).

NXP's NTAG I<sup>2</sup>C plus Explorer Kit is an all-in-one demonstration/development resource for NFC connected tags. Designed to emulate using an NTAG I<sup>2</sup>C tag chip in an embedded electronic system, the kit centers around a multi-purpose microprocessor-based development/Explorer board, and includes a full complement of hardware and software tools to support investigation of the NTAG I<sup>2</sup>C chip operation, the NFC RF communication link, and the I<sup>2</sup>C serial bus connected link; perform a variety of demonstrations; and develop/test your own applications.

NTAG I<sup>2</sup>C tag chips mounted on a variety of different antenna types (FR4 PCB-based with separate antenna pads for custom antenna use) and with built-in I<sup>2</sup>C serial bus interface connectors.

The Connected Tags Explorer board contains an NXP microcontroller (LPC11U24 Cortex-M0), a RGB (red - green - blue) LED and OGB (orange – green - blue) push button as well as an NXP temperature sensor (PCT 2075) and an LCD screen to show the messages coming from the NTAG and the application. NTAG I<sup>2</sup>C plus Antenna Board 54 x 27 mm contains NTAG I<sup>2</sup>C integrated circuits (NT3H1101/NT3H1201) and pcb wired antenna. Connection between these two boards is via I2C serial link.

The Android application, called NTAG I2C Demo, can be found and freely downloaded from the Google Play Store. The Android application is intended to operate on devices running Android version 4.0 and beyond. The application has been optimized for a correct visioning of the graphical elements in smartphones featuring different resolutions.

The NTAG I2C Android App is meant to be working with the Connected Tags Explorer board, and an adjacent antenna to test all the features and functionalities the NTAG I<sup>2</sup>C is offering.

The below picture is a view of the Connected Tags Explorer board and the NTAG I<sup>2</sup>C plus Antenna Board 54 x 27 mm.

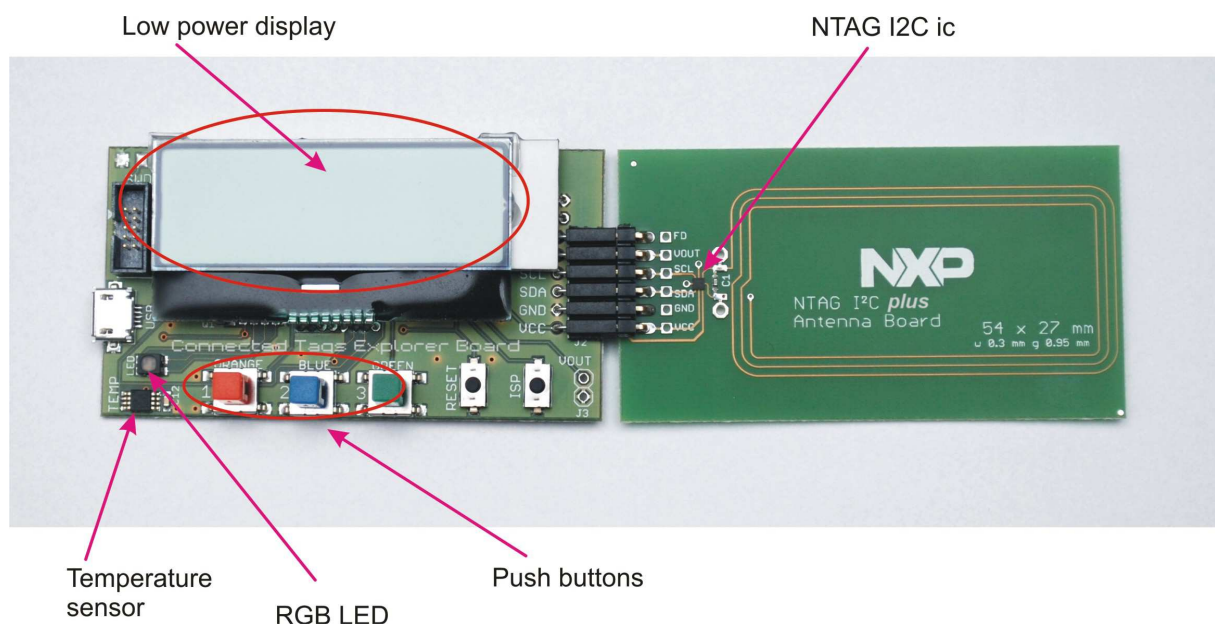


Figure 1: Connected Tags Explorer board with NTAG I<sup>2</sup>C plus Antenna Board 54 x 27 mm.

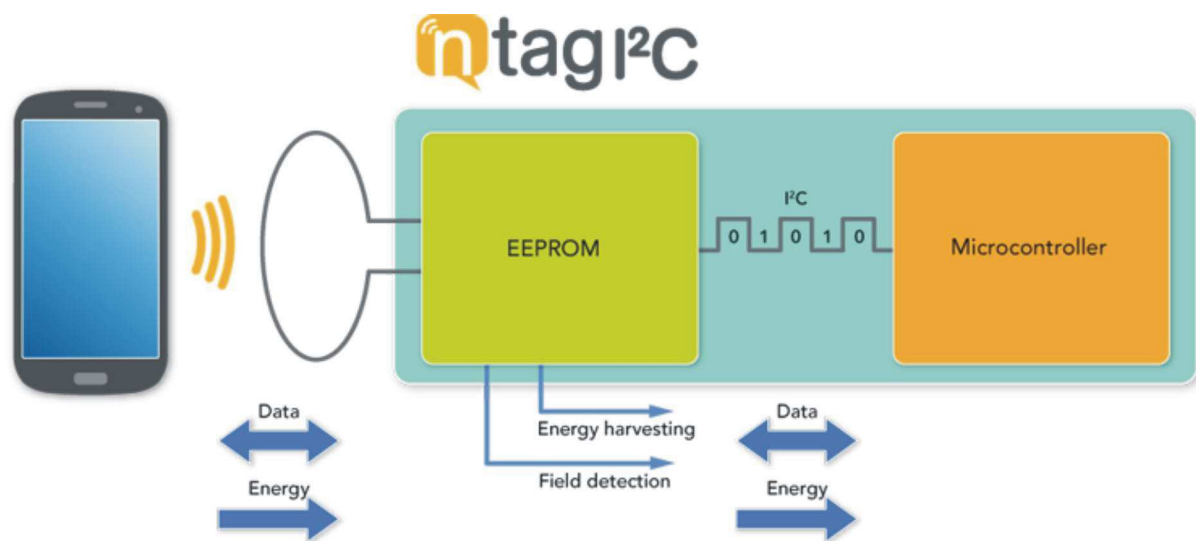


Figure 2: Connected Tags Explorer Board with NTAG I<sup>2</sup>C plus Antenna Board (with NFC device) – princip of operation.

**Disclaimer:**

This kit is intended only for development and evaluation purposes, and cannot be used in a finished product without further certification on the assembly.