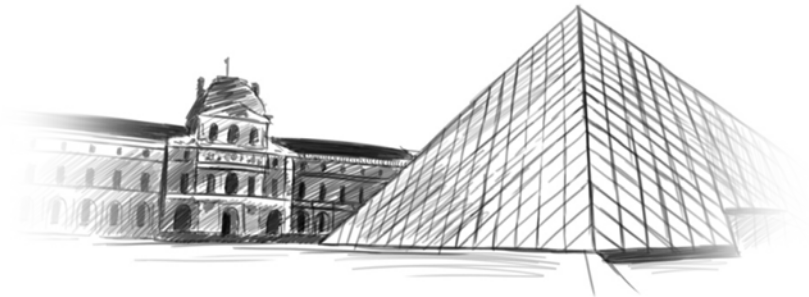


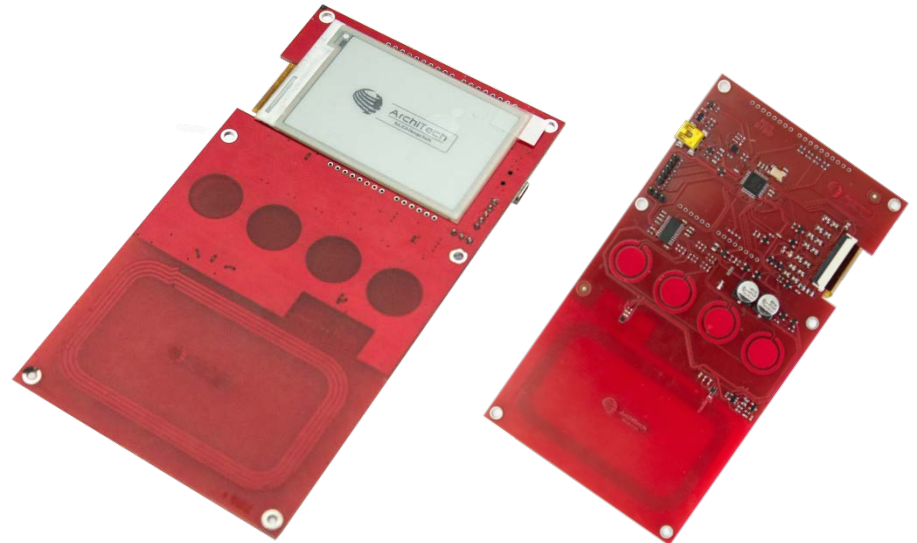
ArchiTech Louvre

NXP NTAG I²C – LPC11U37
Demo Board

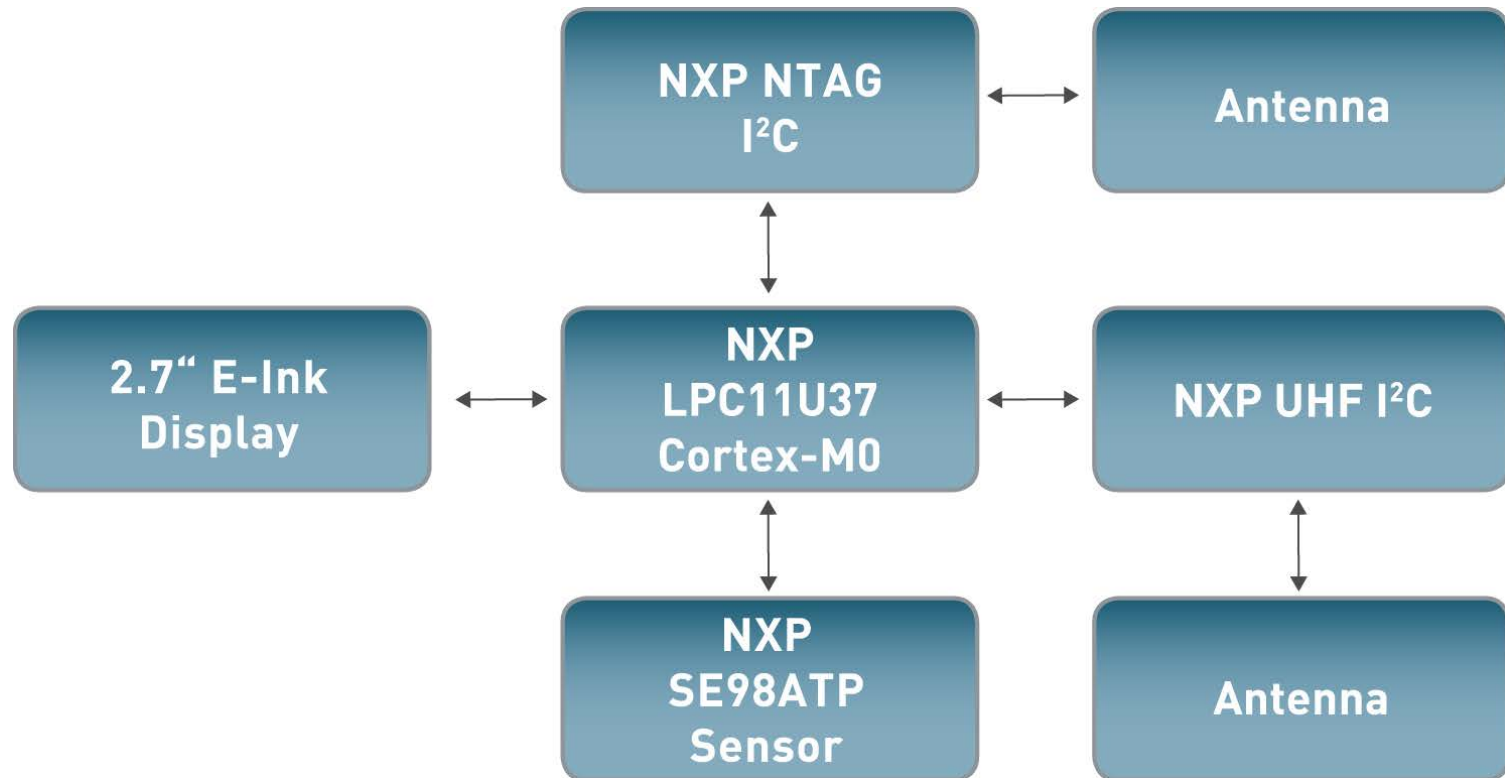


General description

- Goal: Taking the power of NFC to embedded developers
 - Upgrading firmware via NFC
 - Battery less sensors
 - Update data/images via smartphones
- Key factors
 - Small form factor
 - NXP NTAG I²C
 - NXP UHF I²C
 - NXP Cortex M0 LPC11U37 microcontroller
 - 2.7" e-ink display
 - SE98ATP temperature sensor
 - Micro-USB connector
 - Possibility to operate without battery
 - Full size antenna to maximize energy harvesting
- Four capacitive buttons to enable user interaction
- Arduino compatible
- Software will be available under GPL
- Schematics and gerber files will be available after registration on ArchiTech website (www.architechboards.org/louvre)



Block Diagram



Firmware & Software

- ArchiTech Louvre will be operating in two states
 - Powerless Mode
 - Power Mode
- Powerless Mode
 - Display will show a picture (updatable via smartphone)
 - LPC 11U37 firmware can be updated via smartphone.
 - LPC 11U37 contains a secondary bootloader developed by ArchiTech
 - Sensor (powered via energy harvesting) data and user parameters can be read/written via smartphone
- Power Mode
 - User interface will be displayed on e-ink when connected to USB (only as power source)
 - Showing sensor data
 - User value (number) can be modified via capacitive buttons
- **Source code will be available freely**
 - GNU GPL license

Android Application

- Android Application will enable
 - Upgrading firmware of LPC11U37 in Louvre from web location
 - Uploading image to the e-ink display
 - Reading sensor data
 - Reading/writing user parameter
- Application Source will be available under GPL License