

# **NFC Integration Toolkit**

**for mobile phones, PCs, embedded devices**

- **Complete software solution**
- **For mobile phones, PCs, embedded devices**
- **NFC Forum-compliant**
- **Legacy RFID and contactless smart card support**
- **Powerful API**
- **Android framework**
- **Windows Mobile support**
- **JSR-257**
- **C# framework**

Stollmann offers comprehensive tools to integrate NFC into mobile phones, PCs and embedded devices. A complete solution consisting of software components and support of different NFC chip layers facilitates the simple integration of a NFC interface in only a few steps, featuring a powerful control API. In addition, this solution includes integration packages for standardized Java interface (e.g. JSR-257 and Android). Further application interfaces can be added.

This solution supports all NFC Forum operations as well as legacy communication modes with RFID tags and contactless smart cards. Integration support as well as maintenance and qualification services are also available from Stollmann.

## **Evaluation Kit**

The evaluation kit is provided to allow developers to examine the functionality of the solution in a Windows based reference environment. Interested customer may contact the Stollmann sales team to ask for a copy of the evaluation kit. It will be soon available for free as a download from the Stollmann website.

## **Software Development Kit (SDK)**

The development kit "NFCStack+Dev" allows a developer to program and test real NFC applications in different operating system environments and also includes NFC hardware. The SDKs are shipped with proper USB NFC readers, but also support demo boards from ST and NXP. Even other NFC reader solutions, using ETSI/HCI, TAMA interface over UART are supported by the SDK. The SDK includes also the source code of the evaluation application from the evaluation kit as well as the relevant documentation.

# NFC Integration Toolkit

Following SDK versions are available:

- Windows 32Bit based NFCStack+ SDK with USB Reader and NFC tags (available now)
- Linux Kernel 2.6.x based NFCStack+ SDK with USB Reader and tags (available on request)
- Embedded SDK software package for “Beagle Boards” running Windows CE or Linux (available soon)
- Android 2.x based SDK with NFCStack+ integration running on Beagle Boards (available soon)

## Technical specifications

### NFC chip

NFC chip support	ST21NFCA, PN532, PN544
NFC chip interfaces	ETSI/HCI, TAMA

### NFCStack+

Lower Layer	ISO/IEC 14443 A, B ISO/IEC 14443 part 2, 3, 4 ISO/IEC 18092 (NFCIP-1)
Higher Layer/Middleware	Mode switch NFC Forum Tag Types 1-4 and NDEF on Mifare NDEF, NDEF Mapping Full RTD support LLCP/Peer-to-peer Host based Card Emulation (dynamic content / multiple SE)
Windows support	Windows 2000, XP (32Bit Single CPU) Windows Vista, 7 (32Bit Single CPU) untested Windows 64Bit/Multi CPU on customer request Windows API available (Stollmann NFCAPI)
Linux support	Linux kernel 2.6.x
Other OS	Other OS supported through source-code offering and porting guide (e.g.: Nucleus, MStar RTK, QNX, etc).
JSR-257	JSR-257 JSR-257 Nokia Extensions
Windows Mobile 6.x	C# integration layer available on request Windows API available (Stollmann API) Windows Mobile 7 integration package under development
Android 2.x	Basic Linux NFC protocol stack available JAVA Android layer and API available soon

**“NFC – driven by Stollmann!”**

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