KEOLABS

ContactLAB
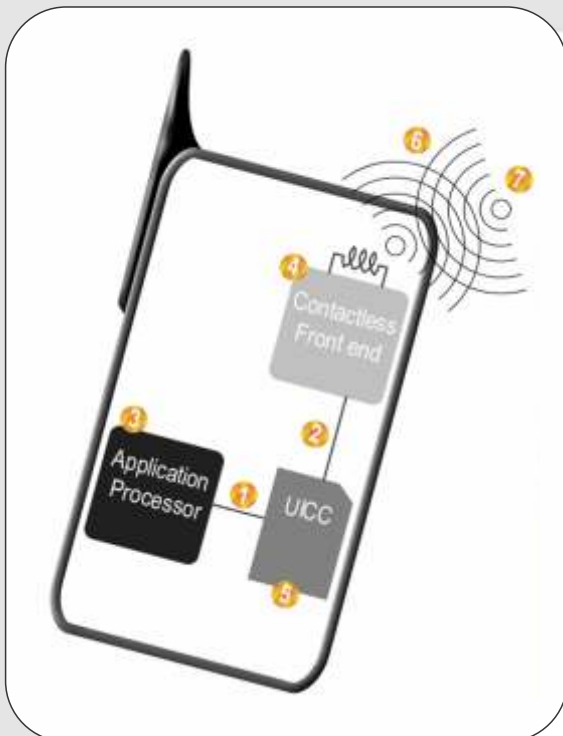### communication emulator & analyzer

All-in-one Platform
Tests NFC phones & Contact Cards

All-in-one solution to test...

- Contact smart cards
- USIM cards for mobile phones
- SWP interface of Contactless front end components in NFC mobile phones

ContactLAB is an advanced laboratory solution designed specifically to address the challenges of validation for contact smart cards and USIM in NFC enabled mobile handsets implementing Single Wire Protocol (SWP) and ISO 7816 interfaces. It encompasses the roles of both a fully programmable laboratory reader, SWP signal emulator and protocol analyzer.

NFC phone & USIM validation

ContactLAB allows capture and analysis of ISO 7816 transactions between **(1)** UICC and application processor, and SWP transactions between **(2)** UICC and the ContactLess Front end (CLF) for interoperability testing and system validation.

Fully configurable reader capabilities facilitate testing of **(3)** ISO 7816 and **(4)** SWP interfaces on the UICC. With **(5)** SWP emulation (HCI, HDLC), ContactLAB can also act as the UICC to test the handset's CLF.

In combination with ProxiSPY **(6)**, ContactLAB integrates capture and analysis of communication with external contactless readers. With ProxiLAB **(7)**, it allows complete testing of all parameters of the external contactless reader.

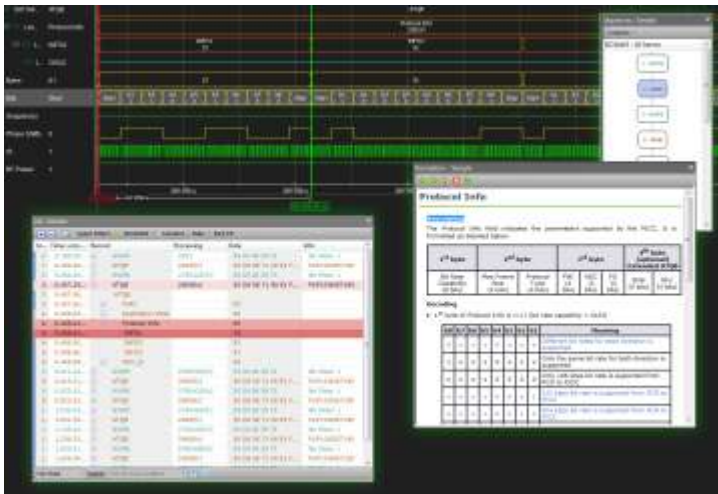Prototyping & Testing Platforms

Fully configurable reader & emulator

ContactLAB combines control of the full range of ISO 7816 and SWP parameters for comprehensive testing, with the added possibility of creating specific combinatorial situations for evaluation of behavior in out-of-norm conditions. Features include:

- Control of all reader/card voltage, timing parameters
- Plug-and-play integration with external tools
- Triggering on combinations of events and patterns

Comprehensive protocol analysis

Innovative and accurate, ContactLAB provides a detailed analysis of card/reader exchanges. This is combined with single-click access to user-friendly interpretation of ISO 7816 and SWP smart card protocols (including EMV, GSM, HDLC and HCI). A smart card 's USB interface can also be traced.

Complete software environment

ContactLAB software **with** the Real-time Generic Protocol Analyzer (RGPA) is designed to provide flexibility in accessing all emulation parameters. The software interface includes precise time measurement, wave form and listing views of test results, search functions, statistics and detailed protocol command descriptions.

ContacLAB can also be controlled via scripting languages (C, JScript, VBasic) and integrates with a range of SCRIPTIS-based solutions to facilitate implementation of standard-specific, in-house conformance testing.

Ordering Information

Platform modularity and firmware-based licenses allow users to order the functionality they need and easily upgrade their ContactLAB for future requirements.

Order codes:

- **SC-ContactLAB-HW** – Hardware platform
- **SC-ContactLAB-7816SPY** – ISO 7816 spy, protocol analysis
- **SC-ContactLAB-SWPSPY** – SWP spy, protocol analysis
- **SC-ContactLAB-7816** – ISO 7816 laboratory reader
- **SC-ContactLAB-SWP** – SWP laboratory reader capability
- **SC-ContactLAB-SWPEMU** – SWP smart card emulator capability

.

KEOLABS

your challenges, our solutions

abe-tech.com