UL MOBILE SPY

Who is it for?
UL Mobile Spy is essential for anyone in the mobile industry that needs to analyze the communication between mobile handsets and SIM/USIM cards or between M2M and Consumer RSP devices and eUICC.

Why do you need it?
UL Mobile Spy is an easy-to-use tool that translates and visualizes communication between handsets and SIM/USIM cards or contactless readers or M2M or Consumer RSP devices and eUICCs. It is a flexible and intuitive tool, providing the most complete translation available in the market today. The various views in UL Mobile Spy make troubleshooting fast and easy. Its in-built inspections even automatically help pinpoint problems.

What is inside?
UL Mobile Spy supports and translates ISO, GSM, 3G, CDMA, RFM/RAM over CAT_TP and SMS, HTTPS, SWP/HCI, Contactless/ NFC, MIFARE, GSMA eUICC and GlobalPlatform standards.

The core tool provides a basic ISO 7816 command translator with decoding of the T=0 and T=1 protocols over the ISO 7816 interface. It also includes several basic searches and a number of powerful core features such as translations, searches, filters, inspections and timeline.

The translation modules each add a number of new searches, filters and inspections for a specific protocol when included in UL Mobile Spy.
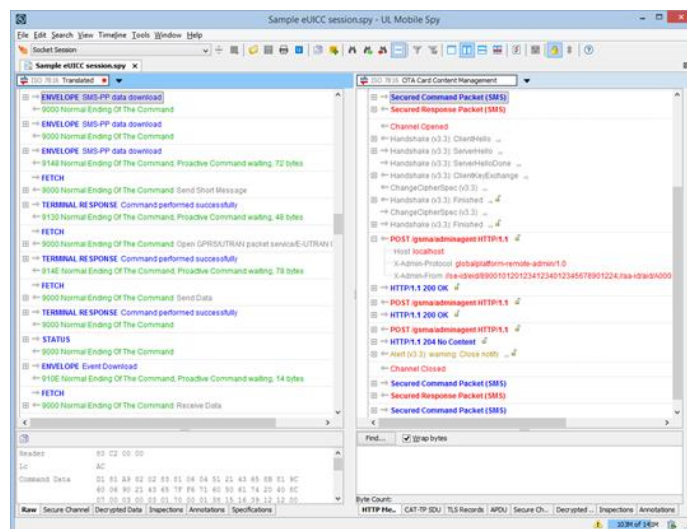
Key benefits
- Support for eUICC via dynamic decryption of active secure channels; SCP03, SCP80 & SCP81
- Translation of 3GPP Release 15 including 5G updates for TLVs, Envelopes, Proactive commands and file system
- Evaluate interoperability between handset and USIM card
- Assure Quality through error detection
- View clear, understandable communication between devices
- Translate SAT/USAT in GSM, 3G and CDMA2000 modules
- Advanced high level translation including toolkit, BIP & OTA
- Synchronized spying on SWP and Contactless interfaces
- Ability to share logs with other interested parties using the free-of-charge UL Mobile Log Viewer

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Specifications

Translation Modules and Standards supported

- **UL Mobile Spy Core**
  ISO 7816 translation of the T=0 and T=1 protocols.
- **GSM**
  Translation of GSM session commands, files, SAT (SIM Application Toolkit) commands and the BIP (Bearer Independent Protocol) channel.
- **3G**
  Translation of 3G (W-CDMA) USIM and ISIM commands, files, BIP and also GlobalPlatform Secure Element Access Control (ARA-M and PKCS#15).
- **CDMA**
  Translation of CDMA2000 commands, files and CCAT (CDMA Card Application Toolkit).
- **Contactless/NFC**
  Translation of contactless sessions according to ISO 14443 and APDUs sent over the contactless interface.
- **GSMA eSIM**
  Decryption and translation of SMS SCP80 and TLS SCP81 in M2M sessions on ES5, ES8 and ES6 as applicable. Translation of ASN.1 formatted function requests and responses in Consumer sessions on ES10x, ES6 and ES8+.

- **Card Management**
  Translation of GlobalPlatform commands, OTA RFM/RAM over CAT_TP and SMS, Secured Command Packets (ETSI 102 225 & 3GPP 31.115), RAM Over HTTP (GlobalPlatform Amendment B), SCP02, SCP03 (GlobalPlatform Amendment D) and GSMA's eUICC and related security protocols.
- **SWP**
  Translation of SWP communication, views for LLC and HCI layers, decoding of S1 and S2 signals, HCI pipes in the time-line view.
- **Mobile Payment**
  Translation of mobile Visa payWave, MasterCard PayPass, American Express ExpressPay, and Discover Contactless D-PAS applications for APDUs sent over the ISO 7816, contactless or SWP interfaces.
- **MIFARE**
  Translation of MIFARE Classic and MIFARE DESFire based messages on both contactless and SWP interfaces. With the appropriate keys MIFARE messages are decrypted to view tag memory.

Advanced Features

- **Search and Find**
  A powerful search facility on text, element type, commands, status word types, time intervals, channels or pipes.
- **Filters**
  Translate the information on the interface using tailored views and filters to ensure the user can view the data most relevant to them.
- **Timeline**
  Simultaneous views of different logical interfaces and data views. The timeline view shows all events and activities from the communication as they occur, essential for understanding synchronous communications allowing fast session navigation.

- **Inspections**
  Adds value to the session by inspecting and highlighting it for common issues. You can save comments with data elements to speed up problem solving and improve information sharing.
- **View Exports**
  Share session information from UL Mobile Spy with other parties to help identify, debug and fix issues. Do this by exporting session data to HTML, or using the free-of-charge UL Mobile Log Viewer.
- **UL Mobile Log Viewer**
  A free-to-use tool used to view test certificates and spy logs for people who do not have any UL test tools.

Hardware

Depending on your choice of translation:
- UL SmartConnect (Contact spying available now with Contactless coming soon)
- UL SmartWave Box (Contactless spying)
- Micropross MP300 ACL1 and Digital Antenna (Contactless spying)
- Micropross MP300 SC2 ISO and SWP SPY (Contact spying for 3G/GSM and SWP/HCI)
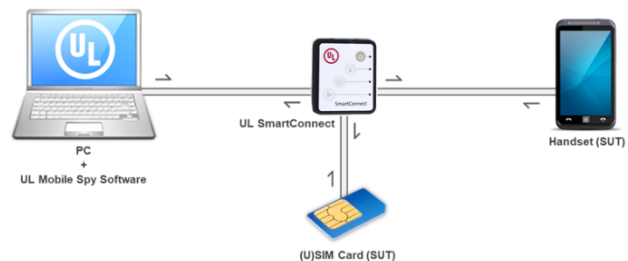
UL Mobile Spy with UL SmartConnect