ST4SIM-IPAD

Data brief

GSMA IoT profile assistant reference implementation





STEVAL-ST4SIMV1

Product status link
ST4SIM-IPAD

Features

Version

- IPAd ST internal version: 1.0.5

Hardware target

- STM32U5
- STEVAL-ST4SIMV1

Protocol supported

- HTTP with TLS v.1.2
- SGP. 32 mandatory Cipher suites compliant

Libraries and operating system

- Free RTOS V10.3.1
- mbedTLS V2.14.1

Standardization and specification

- GSMA SGP.32 v1.2

Supported command

- ipa version
- ipa set dns < host>:
- ipa set timer < value>:
- ipa set timeout_receive < value>:
- ipa set timeout_send < value>:
- ipa direct ac <activationCode>:
- ipa start
- ipa rollback <refreshFlag>
- ipa fallback <enable/disable> <refreshFlag>
- ipa emergency <enable/disable> <refreshFlag>

Validation

- Successful setup of TLS connection with remote server
  - OpenSSL test server using Amarisoft Network
  - ST&QA test server using Amarisoft Network
  - rsp.truphone.com using 1Global connectivity
  - validation of the eIM and SMPD+ interfaces

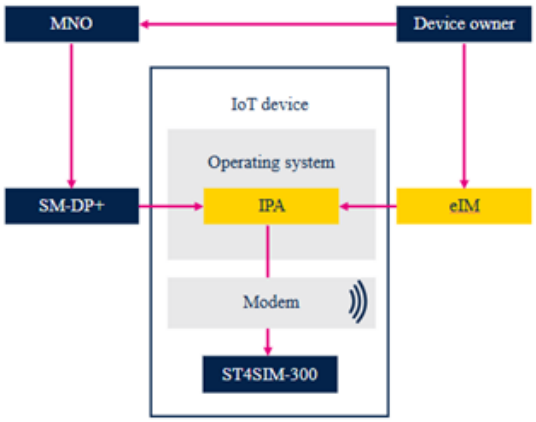
1 Description

IoT profile assistant (IPA) is the interface between the eSIM and the eIM- SMDP+. It provides functions and commands that enable the remote provisioning. IPAd is IPA running inside the IoT device.

ST4SIM-IPAD supports direct download only.

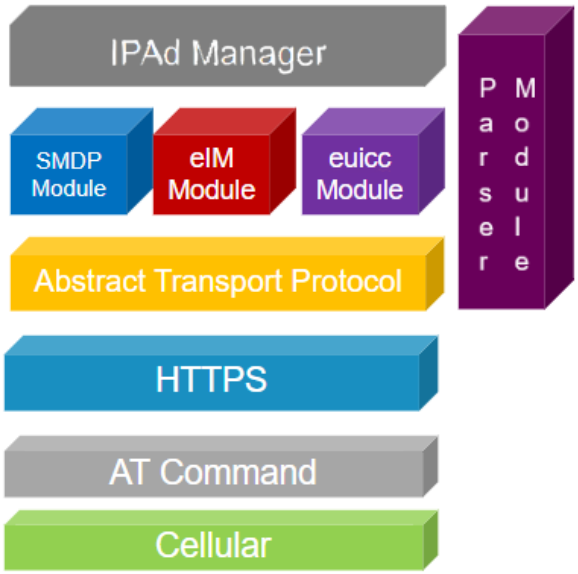
ST4SIM-IPAD support only the JSON message as interface with the server eIM.

Figure 1. IoT profile assistant eco-system



ST4SIM-IPAD is a reference implementation source code based on FreeRTOS™ on STM32U5 and ST4SIM300M evaluation boards. Ten commands are coded and validated with a successful TLS connection with a remote server

Figure 2. ST4SIM-IPAD block diagram



2 ST4SIM-IPAD restrictions

- Immediate profile enable command not supported
- After an enable\disable EmergencyProfil, ProfileRollback and ExecuteFallBackProfile the modem is restarted even if the refresh flag is set to false
- The TLS certificates are not checked
- Only one eIM configuration is managed
- The max size for a BoundProfilePackage is 32 KB
- The maximum length for a matching ID included in an activation code is 32 bytes
- The maximum length for a IpaEuiccDataResponse in the HTTP response is 2800 bytes.
- It is not possible to request the defaultAddress in the IpaEuiccDataResponse .

Revision history

Table 1. **Document revision history**

Date	Revision	Changes
03-Nov-2025	1	Initial release.

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