



Perfect Wireless Experience
完美无线体验

FIBOCOM AT Commands User Manual_ESIM

Version: V1.0.1

Date: 2019-08-16



Application type

No.	Type	Note
1	NL668-CN-00/01/02/03/04	NA
2	NL668-EAU-00	NA
3	NL668-EU-00/01/03	NA
4	NL668-AM-00/01	NA
5	NL668-JP-00/01	NA
6	NL668-LA-00	NA
7	NL661-EU-00	NA

FIBOCOM
Confidential



Copyright

Copyright ©2019 Fibocom Wireless Inc . All rights reserved.

Without the prior written permission of the copyright holder, any company or individual is prohibited to excerpt, copy any part of or the entire document, or transmit the document in any form.

Attention

The document is subject to update from time to time owing to the product version upgrade or other reasons. Unless otherwise specified, the document only serves as the user guide. All the statements, information and suggestions contained in the document do not constitute any explicit or implicit guarantee.

Trademark



The trademark is registered and owned by Fibocom Wireless Inc.

Versions

Version	Author	Date	Remarks
V1.0.0	Zhao Xin	2019-03-25	Initial version
V1.0.1	Longyiliang	2019-08-16	Add applicable model

Contents

1	ESIM Command	5
1.1	+CCHO , Open logical channel	5
1.1.1	<i>Description</i>	5
1.1.2	<i>Syntax</i>	5
1.1.3	<i>Attributes</i>	5
1.1.4	<i>Defined Values</i>	5
1.2	+CCHC, Close logical channel	6
1.2.1	<i>Description</i>	6
1.2.2	<i>Syntax</i>	6
1.2.3	<i>Attributes</i>	6
1.2.4	<i>Defined Values</i>	6
1.3	+CGLA, Generic UICC logical channel access	6
1.3.1	<i>Description</i>	6
1.3.2	<i>Syntax</i>	7
1.3.3	<i>Attributes</i>	7
1.3.4	<i>Defined Values</i>	7

1 ESIM Command

1.1 +CCHO , Open logical channel

1.1.1 Description

Execution of the command causes the MT to return <sessionid> to allow the TE to identify a channel that is being allocated by the currently selected UICC, which is attached to ME. The currently selected UICC will open a new logical channel; select the application identified by the <AID> received with this command and return a session Id as the response. The ME shall restrict the communication between the TE and the UICC to this logical channel.

This <sessionid> is to be used when sending commands with Restricted UICC Logical Channel access +CRLA or Generic UICC Logical Channel access +CGLA commands.

1.1.2 Syntax

Command	Possible response(s)
+CCHO=<AID>	+CCHO: <sessionid> OK Or ERROR
+CCHO?	ERROR
+CCHO=?	ERROR

1.1.3 Attributes

Pin Restricted	Persistent	Sync Mode	Execute Immediately	Time of duration
Yes	No	Yes	Yes	<1s

1.1.4 Defined Values

<AID>: all selectable applications in the UICC are referenced by a DF name coded on 1 to 16 bytes

<sessionid>: integer type; a session Id to be used in order to target a specific application on the smart card (e.g. (U)SIM, WIM, ISIM) using logical channels mechanism

1.2 +CCHC, Close logical channel

1.2.1 Description

This command asks the ME to close a communication session with the active UICC. The ME shall close the previously opened logical channel. The TE will no longer be able to send commands on this logical channel. The UICC will close the logical channel when receiving this command.

1.2.2 Syntax

Command	Possible response(s)
+CCHC=<sessionid>	OK Or ERROR
+CCHC?	ERROR
+CCHC=?	ERROR

1.2.3 Attributes

Pin Restricted	Persistent	Sync Mode	Execute Immediately	Time of duration
Yes	Yes	Yes	Yes	<1s

1.2.4 Defined Values

<sessionid>: integer type; a session Id to be used in order to target a specific application on the smart card (e.g. (U)SIM, WIM, ISIM) using logical channels mechanism

1.3 +CGLA, Generic UICC logical channel access

1.3.1 Description

Set command transmits to the MT the <command> it then shall send as it is to the selected UICC. In the same manner the UICC <response> shall be sent back by the MT to the TA as it is. This command allows a direct control of the currently selected UICC by a distant application on the TE. The TE shall then take care of processing UICC information within the frame specified by GSM/UMTS.

Although Generic UICC Logical Channel Access command +CGLA allows TE to take control over the UICC-MT interface, there are some functions of the UICC-MT interface that logically do not need to be

accessed from outside the TA/MT. Moreover, for security reason the GSM network authentication should not be handled outside the TA/MT. Therefore it shall not be allowed to execute a Run GSM Algorithm command or an Authenticate command in GSM context from the TE using +CGLA at all time whether the +CGLA is locked or unlocked. This shall not forbid the TE to send Authenticate commands in other security contexts (e.g. EAP security context).

For example, the TA/MT shall forbid the transfer of the Authenticate command to a USIM application when parameters P2 = 0 (GSM security context). See 3GPP TS 31.102 [59] for USIM authenticate command definition.

NOTE: Compared to Restricted UICC Access command +CRLA, the definition of +CGLA allows TE to take more control over the UICC-MT interface. The locking and unlocking of the interface may be done by a special <command> value or automatically by TA/MT (by interpreting <command> parameter). In case that TE application does not use the unlock command (or does not send a <command> causing automatic unlock) in a certain timeout value, MT may release the locking.

1.3.2 Syntax

Command	Possible response(s)
+CGLA=<sessionid>,<length>,<command>	+CGLA: <length>,<response> OK or ERROR
+CGLA?	ERROR
+CGLA=?	ERROR

1.3.3 Attributes

Pin Restricted	Persistent	Sync Mode	Execute Immediately	Time of duration
Yes	NO	Yes	Yes	<1s

1.3.4 Defined Values

<sessionid>: integer type; this is the identifier of the session to be used in order to send the APDU commands to the UICC. It is mandatory in order to send commands to the UICC when targeting applications on the smart card using a logical channel other than the default channel (channel "0").

<length>: integer type; length of the characters that are sent to TE in <command> or <response> (two

Reproduction forbidden without Fibocom Wireless Inc. written authorization - All Rights Reserved.

times the actual length of the command or response)

<command>: command passed on by the MT to the UICC in the format as described in 3GPP TS 31.101 [65] (hexadecimal character format; refer +CSCS)

<response>: response to the command passed on by the UICC to the MT in the format as described in 3GPP TS 31.101 [65] (hexadecimal character format; refer +CSCS)

FIBOCOM
Confidential