

UCP access

Description



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1. Introduction

This service allows an access to the UCP (Universal Computer Protocol) interface of our eCall System, to send SMS.

1.1 Target audience

This document is intended for all the users of our eCall Service, who want to send SMS using the UCP-protocol.

1.2 Purpose

The document describes the UCP interface between the eCall and the external systems. This interface is based on the standard UCP protocol, described in detail in the document "Short Message Service Centre 4.6, EMI-UCP Interface" [1].

The structure of the document is as follows:

- General Information
- Access information
- UCP operations

2. General information

This chapter contains general information about the eCall UCP interface.

2.1 Core Features

The UCP interface provides the following main functionality:

- Sending of single or multipage SMS
- Reception of the delivery receipts
- Support the GSM 7-bit alphabet and parts of the Unicode character-set

2.2 Requirements

To use the UCP interface the following requirements apply:

- The customer must have an active eCall account
- The UCP interface must be activated for this account

3. Access information

This chapter contains information about the connection to the eCall UCP interface.

3.1 Host, IP and Port

These are the values to access the eCall UCP interface:

Host: ucp.ecall.ch (193.93.208.139)

Port: 2780

4. UCP operations

The eCall UCP interface implements and supports a select list of UCP operations from the complete list of operations of the standard UCP protocol.

Listed below are the supported and unsupported operations. The supported operations are described in detail in the following chapters.

4.1 Supported UCP-Operations

The UCP interface supports following operations:

- Operation-60 „Session Management Operation“
- Operation-01 „Call Input Operation“
- Operation-02 „Multiple Address Call Input Operation“
- Operation-30 „MS Message Transfer Operation“
- Operation-51 „Submit Short Message Operation“
- Operation-53 „Delivery Notification Operation“
- Operation-31 „MT Alert Operation“
- Operation-52 „Deliver Short Message Operation“

4.2 Unsupported UCP operations

The UCP interface does not support the following operations yet:

- Operation-03
- Operation-54
- Operation-55
- Operation-56
- Operation-57
- Operation-58
- Operation-59
- Operation-61

Note: When an unsupported operation is used, the UCP interface replies back with the following negative result: „03 - Operation Not Supported by System “

5. Supported operations in detail

5.1 Open a session with a "Session Management" operation

Before the data for an SMS can be sent, the client must open a session with the UCP interface. The Operation-60 can be used for this purpose.

5.1.1 List of parameters for this operation

This operation uses the following parameters:

Parameter	Description and allowed values
OAdC	User-name of the interface
STYP	Operation subtype. Only the operation subtype ,1' "Open Session" is supported
PWD	Password of the interface user
VERS	Version number is ,0100'

Table 1 List of parameters for the operation-60

5.1.2 Beispiel Operation

- For a user name „ucpUser“ and password „pa55w0rt“ the UCP operation looks as follows:
`<STX>01/00058/O/60/ucpUser/6/5/1/7061353577307274//0100////////8A<E
TX>`
- Responses to this operation may look as follows:
 - Positive result:
`01/00036/R/60/A/Login successful./F4`
 - Negative result (Authentication failed)
`01/00047/R/60/N/07/Login failed for ucpUser./2C`

5.2 Submit an SMS to eCall with Operation-51

To submit an SMS to eCall System over the UCP interface use this operation.

5.2.1 List of parameters for this operation

This operation uses the following parameters:

Parameter	Description and allowed values
AdC	Receiver address
OAdC	Sender address
NRq	,0' Delivery notification is returned in the current session.
NAdc	Empty
NT	Type of delivery notification.
DD	In case the SMS is to be sent on a future date, a value of ,1' can be set in this parameter.
DDT	Date and time to send the SMS. The date 01. August 2017 08:30 is encoded as 0108170830
VP	Validity period of the SMS. The date 03. August 2017 08:30 is encoded as 0308170830
MT	Message type. Only the type ,3' alphanumeric messages are supported
AMsg	Alphanumeric message encoded in IRA characters
XSer	Extra Services. Only the types ,01' - GSM UDH Information and ,02' - GSM DCS Information are supported

Table 2 List of parameters for the operation-51

5.2 Example of this operation

- To send a message to a receiver with the number 0041791234567 with sender address 0041797654321 and content as „Dies ist ein Test“, the UCP operation looks as follows:
<STX>02/00110/O/51/0041791234567/0041797654321//0/////////////////////////////////3
//44696573206973742065696E2054657374////////////////////////////////5E<ETX>
- Responses to this operation may look as follows:
 - Positive result:
02/00046/R/51/A//0041791234567:010817083105/DB
 - Negative result (Receiver address is invalid):
02/00022/R/51/N/06//0B

5.3 Submit an SMS to eCall with Operation-01

Call Input Operation-01 is the simplest operation, with which an SMS can be submitted to the UCP interface.

5.3.1 List of parameters for this operation

This operation uses the following parameters:

Parameter	Description and allowed values
AdC	Receiver address
OAdC	Sender address
MT	Message type. Only the type ,3' alphanumeric messages are supported
AMsg	Alphanumeric message encoded in IRA characters

Table 3 List of parameters for the operation-01

5.3.2 Example of this operation

- To send a message to a receiver with the number 0041791234567 with sender address 0041797654321 and content as „Dies ist ein Test“, the UCP operation looks as follows:
`<STX>03/00081/O/01/0041791234567/0041797654321/3/4469657320697374
2065696E2054657374/0D<ETX>`
- Responses to this operation may look as follows:
 - Positive result:
`03/00046/R/01/A//0041791234567:010817083105/D7`
 - Negative result (Receiver address is invalid):
`03/00022/R/01/N/06//04`

5.4 Submit an SMS to eCall with Operation-02

Use this operation to send an SMS to more than one recipient in a single command.

5.4.1 List of parameters for this operation

This operation uses the following parameters:

Parameter	Description and allowed values
NPL	Number of receiver addresses
RAd:s	List of receiver addresses
OAdC	Sender address
MT	Message type. Only the type ,3' alphanumeric messages are supported
AMsg	Alphanumeric message encoded in IRA characters

Table 4 List of parameters for the operation-02

5.4.2 Example of this operation

- To send a message to two receivers with the numbers 0041791234567, 0041791234568 with sender address 0041797654321 and content as „Dies ist ein Test“the UCP operation looks as follows:

```
<STX>04/00098/O/02/2/0041791234567/0041791234568/0041797654321//3  
/44696573206973742065696E2054657374/78<ETX>
```

- Responses to this operation may look as follows:

- Positive result:

```
04/00072/R/02/A/0041791234567:010817083105,0041791234568:01081  
7083105/13
```

- Negative result (Receiver addresses are invalid):

```
04/00022/R/02/N/06//09
```

5.5 Submit an SMS to eCall with Operation-30

Use this operation to send an SMS with different options like request for delivery notification, schedule an SMS on a later date, or define a validity period for the sent SMS.

5.5.1 List of parameters for this operation

This operation uses the following parameters:

Parameter	Description and allowed values
AdC	Receiver address
OAdC	Sender address
NRq	In case a Delivery notification is needed, a value of '1' can be set in this parameter.
NAd	Empty. Delivery notifications are returned in the current session.
NPID	Empty.
DD	In case the SMS is to be sent on a future date, a value of ,1' can be set in this parameter.
DDT	Date and time to send the SMS. The date 01. August 2017 08:30 is encoded as 0108170830
VP	Validity period of the SMS. The date 03. August 2017 08:30 is encoded as 0308170830
AMsg	Alphanumeric message encoded in IRA characters

Table 5 List of parameters for the operation-30

5.5.2 Example of this operation

- To send a message to the receiver with number 0041791234567 with sender address 0041797654321 and content as „Dies ist ein Test“, to be sent on a future date of 1. August 2017 8:30 am having a validity until 3. August 2017 8:30 am, the UCP operation looks as follows:
<STX>05/00104/O/30/0041791234567/0041797654321////////1/0108170830/0308170830/44696573206973742065696E2054657374/22<ETX>

- Responses to this operation may look as follows:

- Positive result:

05/00046/R/30/A//0041791234567:010817083105/DB

- Negative result (Receiver address is invalid):

05/00022/R/30/N/06//0B

- Für eine Meldung die einem Empfänger mit Nummer 0041791234567 ausgeliefert wurde, sieht die Empfangsbestätigung in einer Operation-53 wie folgt aus:

```
<STX>06/00260/O/53/0041791234567/0041797654321//////////010817083105/0/000/010817083105/3//4D65737361676520666F7220303034313739313233343536372C2077697468206964656E74696669636174696F6E2030313038313730383331303520686173206265656E2064656C697665726564//////////33<ETX>
```

Konvertiert in Text ergibt sich die Meldung: „Message for 0041791234567, with identification 010817083105 has been delivered“

- Antworten auf diese Operation sehen so aus:

- Positives Resultat:

06/00020/R/53/A///9C

- Negatives Resultat (Adresse ist auf der schwarzen Liste):

06/00022/R/53/N/05//10

5.6 Receive a delivery notification with Operation-53

In case a request for delivery notification is set at the time of submitting an SMS, it is sent in this operation.

5.6.1 List of parameters for this operation

This operation uses the following parameters:

Parameter	Description and allowed values
AdC	Receiver address
OAdC	Sender address
SCTS	Timestamp of eCall
Dst	Delivery status
Rsn	This parameter gives the reason, in case the SMS delivery fails or the provider buffers the SMS.
DSCTS	Delivery timestamp
MT	Message type

Table 6 List of parameters for the operation-53

5.6.2 Example of this operation

- When a message is delivered to the receiver with a number 0041791234567, the delivery notification looks as follows:

```
<STX>06/00260/O/53/0041791234567/0041797654321////////////////010817  
083105/0/000/010817083105/3//4D65737361676520666F7220303034313739  
313233343536372C2077697468206964656E74696669636174696F6E203031303  
8313730383331303520686173206265656E2064656C697665726564/////////  
///33<ETX>
```

Message text after conversion: „Message for 0041791234567, with identification 010817083105 has been delivered”

- Responses to this operation may look as follows:
 - Positive result:

06/00020/R/53/A///9C

- **Negative result (Receiver address is on a blacklist):**

06/00022/R/53/N/05//10

5.7 Keep a session active with the Operation-31

As the server closes any connection that is inactive for 60 seconds, this operation can be used to keep a session alive. The positive result message always contains ,0000' as a System Message.

5.7.1 List of parameters for this operation

This operation uses the following parameters:

Parameter	Description and allowed values
AdC	User name of the interface
PID	,0539' – Connected over TCP/IP

Table 7 List of parameters for the operation-31

5.7.2 Example of this operation

- For a user name „ucpUser“ the UCP operation looks as follows:
<STX>07/00037/O/31/ucpUser/0539/E7<ETX>
- Responses to this operation may look as follows:
 - Positive result:
07/00023/R/31/A/0000/2D
 - Negative result (Ungültiger Benutzername):
07/00022/R/31/N/06//0E

5.8 Receive an incoming message with Operation-52

With this operation, the user of the eCallUcp Interface can receive the messages that are sent to the virtual mobile number, rented in the eCall Portal.

5.8.1 List of parameters for this operation

This operation uses the following parameters:

Parameter	Description and allowed values
AdC	Receiver address
OAdC	Sender address
SCTS	Timestamp of eCall
MT	Message type
NB	Number of bits in Transparent Data (TD) Message, only when MT is 4
AMsg/NMsg/TMsg	Encoded incoming message

Table 8 List of parameters for the operation-52

5.8.2 Example of this operation

- When a message is received for the virtual mobile number 0797654321, sent by the sender with the number, 0791234567, the Deliver short message operation looks as follows:

```
<STX>08/00134/O/52/0797654321/0791234567////////////////////////////////010517115747
////3//44696573206973742065696E20496E636F6D696E672054657374////////
////////A7<ETX>
```

Message text after conversion: „ Dies ist ein Incoming Test“

- Responses to this operation may look as follows:
 - Positive result:


```
08/00020/R/52/A///9D
```
 - Negative result (Operation not allowed, at this point in time):


```
08/00022/R/52/N/04//10
```

5.9 Not enough points available

If an eCall account does not have enough points available, to send an SMS, the interface will reply with the following negative result:

- Negative result (Not enough points available)

08/00076/R/51/N/04/4E6F7420656E6F75676820706F696E7473206176616
96C61626C65/BF

6. External documents

[1] Short Message Service Centre 4.6, EMI-UCP Interface, CMG Wireless Data Solutions, Version 4.6, April 2003

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