

*SMS Application Notes on SM5100B-D
modules*

Revision history

Version	Date	Author	Update description
1.0	20080702	Steven Shao	Create

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1: SMS PDU Mode

A: Sending a message in the PDU mode

(1) NO SMS SERVICE CENTER

AT+CMGF=0

AT+CMGS=16 (PDU length)

>0011020B803167344256F00008000A00680065006C006C006F<ctrl-z>

+CMGS: 36

OK

PDU length is the sum of the receiver number length and TP-User-Data-Length (in bytes).

In this case PDU length = 6 (3167344256F0) + 10 (00680065006C006C006F) = 16

The PDU string consists of the following:

Octet(s)	Description
00	Length of SMSC information. Here the length is 0, which means that the SMSC stored in the phone should be used
11	First octet of the SMS-SUBMIT message.
02	TP-Message-Reference.
0B	Address-Length. Length of phone number (11)
80	Type-of-Address
3167344256F0	The phone number in semi octets (13764324650)
00	TP-PID. Protocol identifier
08	TP-DCS. Data coding scheme.
00	TP-Validity-Period.
0A	TP-User-Data-Length. Length of message.
00680065006C006C006F	TP-User-Data.

(2) WITH SMS SERVICE CENTER

AT+CMGF=0

AT+CMGS=24 (PDU length)

>0891683108200105F011020B803167344256F00008000A00680065006C006C006F<ctrl-z >

+CMGS: 12

OK

PDU length is the sum of the service center length, receiver number length and TP-User-Data-Length (in bytes).

In this case PDU length = 8 (91683108200105F0) + 6 (3167344256F0) + 10 (00680065006C006C006F) = 24

The PDU string consists of the following:

Octet(s)	Description
08	Length of the SMSC information (in this case 8 octets)
91	Type-of-address of the SMSC. (91 means international format of the phone number)
68 31 08 20 01 05 F0	Service center number (in decimal semi-octets). The phone number of this service center is "+8613800210500".
11	First octet of the SMS-SUBMIT message.
02	TP-Message-Reference.
0B	Address-Length. Length of phone number (11)
80	Type-of-Address
3167344256F0	The phone number in semi octets (13764324650)
00	TP-PID. Protocol identifier
08	TP-DCS. Data coding scheme.
00	TP-Validity-Period.
0A	TP-User-Data-Length. Length of message.
00680065006C006C006F	TP-User-Data.

B: Receiving a message in the PDU mode

AT+CMGF=0

AT+CMGL=0

+CMGL: 1, 0, ,30

0891683108125000F0200D91683167344256F0000880504171613323100031003200334F605

97D006100620063

The PDU string consists of the following:

Octet(s)	Description
08	Length of the SMSC information (in this case 8 octets)
91	Type-of-address of the SMSC. (91 means international format of the phone number)
68 31 08 12 50 00 F0	Service center number (in decimal semi-octets). The phone number of this service center is "+861380210500".
20	First octet of this SMS-DELIVER message.
0D	Address-Length. Length of the sender number (0D hex = 13 dec)
91	Type-of-address of the sender number
68 31 67 34 42 56 F0	Sender number (decimal semi-octets), with a trailing F
00	TP-PID. Protocol identifier.
08	TP-DCS Data coding scheme
80 50 41 71 61 33 23	TP-SCTS. Time stamp (semi-octets)
10	TP-UDL. User data length, length of message.
0031003200334F60597D006100620063	TP-UD. Message Contents

C: Status report

AT+CNMI=3, 0, 1, 1 (enable SMS status report)

AT+CMGS=16 (PDU length)

>0031000B803167344256F00008000A00680065006C006C006F<ctrl-z>

+CMGS: 36

OK

(Following is status report)

+CDS: 35

0891683108200105F002020D90683167344256F0805021517145238050215171552300

2: SMS Text Mode

A: Sending a message in the TEXT mode

(1) Default alphabet

AT+CMGF=1

AT+CMGS="15921272576"

>HELLO9527<ctrl-z >

+CMGS: 36

OK

(2) UCS2 format

AT+CMGF=1

AT+CSMP=19, 143, 0, 2 (<DCS> value is UCS2)

AT+CMGS="15921272576"

>4F60597D<ctrl-z >

+CMGS: 36

OK

(3) 8bit format

```
AT+CMGF=1
AT+CSMP=19, 143, 0, 1 (<DCS> value is 8bit)
AT+CMGS="15921272576"
>3031<ctrl-z>
+CMGS: 36
OK
```

B: Receiving a message in the TEXT mode

```
AT+CMGF=1
AT+CMGL="ALL"
+CMGL: 1,2,"REC READ","+8615921272576","08/05/14,17:16:33+32"
0031003200334F60597D
```

C: Status report

```
AT+CSMP=39, 143, 0, 0 (enable SMS status report)
AT+CMGF=1
AT+CNMI=3, 0, 1, 1
AT+CMGS="15921272576"
>00680065<ctrl-z >
>+CMGS: 45
OK
```

(Following is the status report)

```
+CDS: 2, 45,"+8615921272576, 145,"08/05/15,13:41:15+32""08/05/15,13:41:15+32",0
```