



Technical Specification | HTTP2SMS for

AMS-R Singpost Pte Ltd

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This document is targeted at software designers, who wish to integrate SMS transmission as a function into their computer program, e.g. in connection with WEB-server upgrading, unified messaging, information services etc.

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1. Introduction

1.1 Scope of Document

1.1.1 Introduction to HTTP2SMS

SMS Messages can be transmitted using HTTP protocol.

1.1.2 Requirements

The following requirements must be met to enable the sending of short messages (SMS) via HTTP2SMS:

- You need a client account
- You need sufficient credit on your client account

Access to the HTTP2SMS service is subject to our general terms and conditions of business.

ⓘ Please address **questions regarding contracts** and prices via email to: info@axonmedia.sg

ⓘ Please address **technical questions** by email to: sms_support@axonmedia.sg

1.1.3 Abbreviations

[ABBR]	[Explanation]



2. Technical description

2.1 Functionality

Data is transferred using HTTP-GET/POST requests. Our system accepts requests at the following URLs:

<http://ss72.smsmarketing.sg>

or

<http://ss73.smsmarketing.sg>

For optimal availability your application should automatically switch over to the second gateway-address, if the primary gateway is not reachable. Only this can ensure optimal availability in an internet environment.

The different gateway-addresses are located in different subnets.

2.2 Parameter

The following CGI-parameters are processed:

Formal description of possible parameter values

Parameter name	Value/Pattern	Sample	Description
id	[1-9][0-9]+	13828	Account ID
pw	alphanumeric	a7372fe	Account password or MD5-hash
dnr	\+[countrycode][prefix][0-9]+	+491721234567	phone number of destination
snr	numeric: international \+[0-9]+ national [0-9]+ alphanumeric up to 11 characters	+491721234567 or 01721234567 or „yourname“	numeric or alphanumeric originator for this SMS



Parameter name	Value/Pattern	Sample	Description
msg	Text ISO-8859-1 (max. 160 characters) or Unicode (if parameter encoding=ucs, max. 70 characters)	This is a test	Text of SMS
split	numeric	3	Number of maximum SMS that a text will be splitted
ddt	DDMMYYHHMI	1205011259	Timestamp of deferred delivery
flash	0 or 1	1	flag indicating flash-sms
drep	0 or 1	1	flag requesting a delivery report for this message
dtag	[a-zA-Z0-9]+ up to 32 characters	KEY1234	numeric or alphanumeric client defined key of this message (up to 32 chars)
test	0 or 1	1	flag indicating test mode (SMS will not be send out)
encoding	ucs	ucs	indicates Unicode encoded message text



Parameter name	Value/Pattern	Sample	Description
data	Hex encoded Data including Data header indicated by „/“ [0-9A-F]+/ [0-9A-F]+	010706050415820000/ 62F22000480E010000 000000000000000000 0000000000000001800 00006000000000018000 0006000000000180000 0060000000001800000 060000000001FC79F8 FE7E3F000001FEF8FB DFEFF7F00000186C30 D86C36000000186C30 D86C37E00000186C30 D86C33F00000186C30 D86C303000001FEC3 FDFEFF7F000000FCC 1F8FC7E7E000	binary SMS encoded as hex string
vt	DDMMYYHHMI	2501100856	Timestamp of validity period

The recipient number must be in international format.

A + must be added to the beginning of the number, for example (+491721234567).

2.3 Alphanumeric Originator Address Code

The originating address can either be a complete mobile telephone number or alphanumeric character string.

The length of the alphanumeric character string may not exceed more than 11 characters. Please keep in mind that not all mobile phones are able to illustrate a proper alphanumeric address.

2.4 Encrypted password

Instead of the sending the password in clear text, you have also the option to submit it encrypted as a MD5-hash.

This hash-value does not only contain the password, but also the parameter snr, dnr and msg.

The hash-value must be calculated using the following equation: **md5(md5(\$pw) + \$snr + \$dnr + \$msg)**



2.5 Transport of text messages

The msg parameter must be included in the text you want to send.

<http://ss72.smsmarketing.sg?id=1&pw=secret&dnr=%2B491721234567&snr=%2B49172123456&msg=This+is+a+test>

The previous example sends the message: "this is a test" to the following number +491721234567 with the originating number +491721234567 together with the largeaccount ID 9999 and password secret.

Where do you find your large account ID and your password?

Under *My Data* you get displayed all configured information of your own Client Master Account:

- Basic data (customer ID, status, account balance)
- Contact data
- Billing data
- Assigned Routingclasses with status, volume scale type, as well as technical connection details which interface has been defined (HTTP, SMPP, UCP)
- **Largeaccount ID and Password**

The screenshot displays the 'My Data' section of the client interface. A red box highlights the 'Largeaccounts' table, which contains the following data:

Largeaccount	Password	Routingclass	Use Splitbasefee	Scale type	Status
2019	[blurred]	High	No	progressive	Active
2010	[blurred]	Special	Yes	lowest price	Active

Other visible sections include:

- Basic data:** Company: Gamer SMS, Customer ID: 2010-1, Status: Active, Balance: 75.00 €.
- Contact data:** Company Address: Jolie Smiths, Leisure Place 344, Liverpool, 297.
- General Technical Responsible:** John Miller, support@gamers-sms.co.uk.

Support for long messages (>160 characters)

It is also possible for the client application to submit a message longer than 160 characters, the message will be split automatically into several SMS and send out as concatenated text messages. If the receiving phone is able to handle long messages, it will show the text as a single SMS.

The parameter split controls the maximum number of messages. The default value for split is 1.



2.6 Deferred delivery of messages

In addition to the text-message parameter you can specify time and date in the parameter ddt in the format DDMMYYHHMI (CET) to indicate a deferred delivery of the message.

<http://ss72.smsmarketing.sg?id=1&pw=secret&dnr=%2B491721234567&snr=%2B49172123456&msg=This+is+a+test&ddt=2105091530>

The previous example sends the message: "this is a test" at 21st May of 2009 15:30 CET.

2.7 Validity period

With the parameter vt the timestamp of the end of the validity period can be defined. If not set, the default value of the delivering SMSC is used.

The vt parameter has effect only with supported routing classes.

Valid format is DDMMYYHHMI, where the minimum time difference must be 5 Minutes and a maximum period of 7 days (168 hours).

<http://ss72.smsmarketing.sg?id=1&pw=secret&dnr=%2B491721234567&snr=%2B49172123456&msg=This+is+a+test&vt=2501100856>

The previous example sends the message: "this is a test" to +491721234567 with a validity period **until 25th January 2010 08:56 CET**

2.8 Transport of text-messages in the form of flash SMS

In addition to the text-message parameter you can also add a specific parameter to be able to carry out the task "flash": flash equals 1.

The terminals do not save the incoming flash SMS.

<http://ss72.smsmarketing.sg?id=1&pw=secret&dnr=%2B491721234567&snr=%2B49172123456&msg=This+is+a+test&flash=1>

The flash SMS appears on the terminal display as soon as it's received.

2.9 Transport of UCS encoded text messages

You can submit messages containing foreign (non-latin) characters using the Unicode Character Set (UCS) Encoding, to use this feature you have to add the parameter encoding with the value ucs to your request and you have to encode your text according to UCS.

The length of UCS-encoded text-messages is limited to 70 characters.

You can find a complete list of UCS-characters at

<http://www.unicode.org/charts/>



<http://ss72.smsmarketing.sg?id=1&pw=geheim&dnr=%2B491721234567&snr=%2B491721234567&msg=044d0442043e04420020043e04340438043d00200442043504410442&encoding=ucs>

This example sends the Russian text (with Cyrillic letters) „this is a test“.

2.10 WAP support

2.11 Sending WAP Configuration (OTA)

Our gateway supports sending of WAP-configurations. The parameter wapconfig has to be filled with the following parameters:

wapconfig=name,url,proxy,proxyport,proxyauthname,proxyauthsecret,dialstring,authtype,authname,authsecret,calltype,speed,bearer,proxytype,smcaddress,ussdservicecode,gprsapn,ispname,proxylogintype,logintype

Description of Parameters

- name: Name of this WAP-configuration
- url: URL of startpage
- proxy: IP-address of WAP-Proxy
- proxyport : Type of connection
 - 9200: temporary (not encrypted)
 - 9201: continuous (not encrypted)
 - 9202: temporary (encrypted)
 - 9203: continuous (encrypted)
- proxyauthname: username for WAP-proxy
- proxyauthsecret: password for WAP-proxy
- dialstring: dialin-Number
- authtype: authentication protocol (pap (default) or chap)
- authname: username
- authsecret: password
- calltype: (analogue (default) or isdn)



- speed: connection-speed: 9600 (default), 14400,19200, 28800, 38400, 43200, 57600
- bearer: bearer-type, possible is gsm/csd (necessary parameters are proxy and dialstring), gsm/sms (necessary parameters are proxy and smscaddress), gsm/usssd (necessary parameters are proxytype, proxy and ussdservicecode), is-136/csd (necessary parameters are proxy and dialstring) und gprs (necessary parameters is proxy). If bearer is not specified, gsm/csd will be set.
 - proxytype: msisdn_no or ipv4
 - smscaddress: number of the SMS-service-center
 - ussdservicecode: USSD-service-code
 - gprsapn: GPRS-access-point
 - ispname: name of provider (if the parameter ispname or the parameter name will be shown depends on the cellular phone, normally it is sufficient to set ,name')
 - proxylogintype: automatic or manual
 - logintype: automatic or manual
 -

It depends on the cellular phone which parameters and bearer-types are supported.

Example:

<http://ss72.smsmarketing.sg?dnr=%2b491721234567&wapconfig=WAP,http://wap.yourdomain.com,192.168.1.2,,,,12345,pap,user,pwd,isdn,,&snr=%2b491721234567&id=9999&pw=geheim>

2.12 Sending WAP-bookmarks

Our gateway supports the transmission of WAP bookmarks via SMS, the bookmark information must inserted at the wapbookmark parameter in the following format: **wapbookmark=name,url**

- name: name of the bookmark
- url: URL of the bookmark

Example (WAP bookmark):

<http://ss72.smsmarketing.sg?dnr=%2b491721234567&wapbookmark=MessagingWeb,http://www.smsmessagesite.com>

This requests sends a bookmark with the name „MessagingWeb“ and the URL <http://www.smsmessagesite.com> to phone number +491721234567.



06	Total length in Bytes from IEI, IDL, port of destination and port of transmission together
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2.15 Processing of delivery receipts

A detailed delivery receipt can be requested for each SMS as every status change of the SMS and the final successful or failed delivery of the SMS is processed and stored by our application messaging system. If needed, delivery receipts can be dispatched to the customer system via HTTP-Requests.

A delivery receipt can be requested using the parameters `drep=1` and `dtag=userkey`. The user key is assigned by the customer application and cannot exceed 32 characters.

Sample request of a delivery receipt

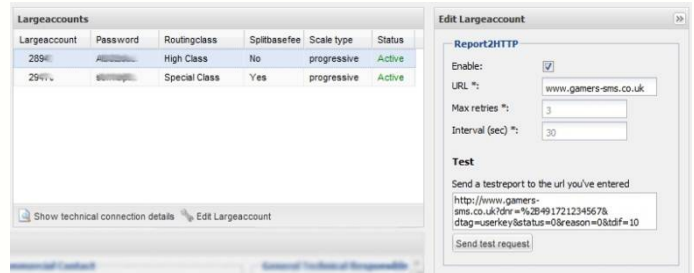
<http://ss72.smsmarketing.sg?id=9999&pw=secret&dnr=%2B491721234567&snr=%2B491721234567&msg=this+is+a+test&drep=1&dtag=KEY1234>

Delivery receipts via the web-interface:

If you are logged into your Client Master Account area, you can retrieve delivery receipts by entering a phone number or the user key of the message. You find this interface under the menu *Tracking*.

Dispatching of delivery receipts via HTTP:

Delivery receipts can be automatically dispatched to customer systems using HTTP-Requests. The destination URL can be setup up by your own in your Client Master Account Area for the desired largeaccount, which is explained in your manual.



The following parameters will be sent to customer server:

- `dnr` (phone number of the destination)
- `snr` (phone number of the originator)
- `dtag` (the previously by the client application submitted user key)
- `status` (actual status of the SMS: 0 = successfully delivered, 1 = queued for some reason, 2 = delivery failed)
- `reason` (detailed error code if status = 1 or 2)
- `tdif` (difference between the point of time of the status change of the SMS and the actual time, this makes it possible for the customer application to calculate the absolute timestamp independently of different timezones)



- dnetid (network code in hex, e.g. “62F220” for Vodafone Germany (V/G). Returns “FFFFFF” for unknown networks.
- mnc (mobile network code in dec. form, e.g. “02” for V/G. Multiple mnc are comma separated. Returns “0” for unknown network.
- mcc (mobile country code in dec. form, e.g. “262” for Germany. Returns “0” for unknown country code.

Note: Parameter **dnetid** will be replaced by **mnc** and **mcc** and should not be used.

Sample request on the customer system:

```
http://gw1.yourserver.com/smsreports.php?dnr=%2b491721234567&dtag=KEY1234&status=0&reason=0&tdif=120&dnetid=62F220&mnc=02&mcc=262
```

(A SMS to +491721234567 was successfully delivered 120 seconds ago.)

```
http://gw1.yourserver.com/smsreports.php?dnr=%2b491721234567&dtag=KEY1234&status=1&reason=107&tdif=40&dnetid=62F220&mnc=02&mcc=262
```

(A SMS to +491721234567 with the user-defined key KEY1234 could not be delivered at the moment, because the receiving mobile phone is currently switched off.)

2.16 Throughput limitations

2.17 Counting the throughput

There is a throughput limit configured per account. The maximum number of allowed SMS per second is given in the client contract. The HTTP2SMS Gateway counts the maximum number of allowed SMS per minute.

Example:

Your contract/tariff includes a maximum throughput of 4 SMS per second. You are allowed to send 240 SMS per minute; even you send it in 3 Seconds.

2.18 Hitting the throughput limit

If you are hitting the throughput limit per minute, your requests will be answered with error ERR 443 (see 2.9 System messages). SMS will be rejected and not processed.

2.19 Queuing / Retries due to throughput limitations

If SMS are rejected, there will be no queuing on ours. Your system shall be able to handle retries automatically, considering the account throughput.



2.20 Account blocking due to HTTP request flooding

Your system shall be configured to send not more HTTP requests than your throughput allow per minute, including the retries. Our gateway will block the account temporary for 5 minutes, in case of more than 100 rejected HTTP request in a row.

Example:

Your account is configured with a throughput of 4 SMS per Second. The HTTP2SMS Gateway allows 240 SMS per Minute (see 2.8.1). If you are submitting SMS request no. 241 to no. 340 (in the same minute) the Gateway will answer with error ERR 443. Request 341 in the same minute will be answered with ERR 442 and the account will be blocked completely for 5 minutes.

2.21 System messages

The following feedback is released:

Error code	Description
+OK 01 message queued (dest=+491721234567)	SMS was delivered successfully to our gateway
-ERR 52 invalid destination number	Receiver number has an invalid figure
-ERR 53 invalid source number	Forwarding number has an invalid figure
-ERR 54 invalid user-id	Invalid client ID and password
-ERR 57 invalid wap-configuration	missing parameters for wap-configuration
-ERR 59 message too long	The submitted text message is too large
-ERR 60 sorry, account has no credit	Account has not enough credit, please recharge
-ERR 441 HTTP2SMS not allowed for largeaccount	HTTP2SMS interface is not configured for this account
-ERR 442 HTTP2SMS temporary blocked due to request flooding	The HTTP2SMS interface for this account is temporary blocked due to flooding the GW with HTTP requests.
-ERR 443 HTTP2SMS throughput limit reached, message rejected	You have submitted more HTTP2SMS requests per minute than allowed.

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