21 HTTP

The section describes the u-blox proprietary AT commands that can be used for sending requests to a remote HTTP server, receiving the server response and transparently storing it in the file system. The supported methods are: HEAD, GET, DELETE, PUT, POST file and POST data. A PSD or CSD connection must be activated before using HTTP AT commands.

When these commands report an HTTP error, the error code can be queried using the +UHTTPER AT command.

☞ SARA-R4
No need to establish a PSD connection explicitly. This device automatically establishes a PSD connection as part of the network registration and attach procedure.

21.1 HTTP control +UHTTP

+UHTTP

Modules	SARA-R404M SARA-R410M-01B SARA-R410M-02B SARA-R410M-52B SARA-R412M					
	SARA-N4					
Attributes	**Syntax**	**PIN required**	**Settings saved**	**Can be aborted**	**Response time**	**Error reference**
	partial	No	No	No	-	Appendix A.6

21.1.1 Description

Configures, reads or resets (to the factory-programmed values) the HTTP application profile parameters. Up to 4 different HTTP profiles can be defined. To set all the parameters in an HTTP profile a set command for each <op_code> needs to be issued.

☞ The configured HTTP profile parameters are not saved in the non volatile memory.

☞ The read command has two possible usages. The functionality of the command differs with the number of command parameters issued:
- Only the first command parameter (<profile_id>) issued: the module resets all the profile parameters (to the factory-programmed values) for the profile specified with <profile_id>
- Only the first and second command parameters used (<profile_id>, <op_code>): the module returns the current value of the profile parameter specified with <op_code> and related to the profile specified with <profile_id>

21.1.2 Syntax

Type	Syntax	Response	Example
Generic syntax			
Set	AT+UHTTP=<profile_id>,<op_code>,<param_val>[,<param_val1>]	OK	AT+UHTTP=2,0,"125.24.51.133" OK
Read	AT+UHTTP=<profile_id>,<op_code>	+UHTTP: <profile_id>,<op_code>,<param_val>[,<param_val1>] OK	AT+UHTTP=2,0 +UHTTP: 2,0,"125.24.51.133" OK
HTTP server IP address			
Set	AT+UHTTP=<profile_id>,0,<HTTP_server_IP_address>	OK	AT+UHTTP=2,0,"125.24.51.133" OK
Read	AT+UHTTP=<profile_id>,0	+UHTTP: <profile_id>,0,<HTTP_server_IP_address> OK	AT+UHTTP=2,0 +UHTTP: 2,0,"125.24.51.133" OK
HTTP server name			
Set	AT+UHTTP=<profile_id>,1,<HTTP_server_name>	OK	AT+UHTTP=2,1,"www.u-blox.com" OK
Read	AT+UHTTP=<profile_id>,1	+UHTTP: <profile_id>,1,<HTTP_server_name> OK	AT+UHTTP=2,1 +UHTTP: 2,1,"www.u-blox.com"

Type	Syntax	Response	Example
			OK
Username			
Set	AT+UHTTP=<profile_id>,2, <username>	OK	AT+UHTTP=2,2,"my_user"
			OK
Read	AT+UHTTP=<profile_id>,2	+UHTTP: <profile_id>,2,<username>	AT+UHTTP=2,2
		OK	+UHTTP: 2,2,"my_user"
			OK
Password			
Set	AT+UHTTP=<profile_id>,3, <password>	OK	AT+UHTTP=2,3,"pwd"
			OK
Read	AT+UHTTP=<profile_id>,3	+UHTTP: <profile_id>,3,<password>	AT+UHTTP=2,3
		OK	+UHTTP: 2,3,"pwd"
			OK
Authentication type			
Set	AT+UHTTP=<profile_id>,4,<HTTP_ authentication>	OK	AT+UHTTP=2,4,1
			OK
Read	AT+UHTTP=<profile_id>,4	+UHTTP: <profile_id>,4,<HTTP_ authentication>	AT+UHTTP=2,4
			+UHTTP: 2,4,1
		OK	OK
HTTP server port			
Set	AT+UHTTP=<profile_id>,5,<HTTP_ port>	OK	AT+UHTTP=2,5,30
			OK
Read	AT+UHTTP=<profile_id>,5	+UHTTP: <profile_id>,5,<HTTP_ port>	AT+UHTTP=2,5
			+UHTTP: 2,5,30
		OK	OK
HTTP secure option			
Set	AT+UHTTP=<profile_id>,6,<HTTP_ secure>[,<USECMNG_profile>]	OK	AT+UHTTP=2,6,1
			OK
Read	AT+UHTTP=<profile_id>,6	+UHTTP: <profile_id>,6,<HTTP_ secure>[,<USECMNG_profile>]	AT+UHTTP=2,6
			+UHTTP: 2,6,1
		OK	OK
HTTP add custom request headers			
Set	AT+UHTTP=<profile_id>,9, <custom_request_header>	OK	AT+UHTTP=2,9,"0:hdr0:val0"
			OK
Read	AT+UHTTP=<profile_id>,9	+UHTTP: <profile_id>,9,<custom_ request_header>	AT+UHTTP=2,9
			+UHTTP: 2,9,"0:hdr0:val0"
		OK	OK
Read	AT+UHTTP=<profile_id>	OK	AT+UHTTP=2
			OK
Test	AT+UHTTP=?	+UHTTP: (list of supported <profile_ id>s),(list of supported <op_code>s)	+UHTTP: (0-3),(0-9)
		OK	OK

21.1.3 Defined values

Parameter	Type	Description
<profile_id>	Number	HTTP profile identifier, in range 0-3
<op_code>	Number	• 0: HTTP server IP address;
		• 1: HTTP server name;
		• 2: username
		• 3: password

Parameter	Type	Description
		• 4: authentication type
		• 5: HTTP server port
		• 6: HTTP Secure option (SSL encryption)
		• 7: reserved for internal use only
		• 8: reserved for internal use only
		• 9: HTTP add custom request headers
<HTTP_server_IP_ address>	String	HTTP server IP address; The factory-programmed value is an empty text string. For IP address format reference see the IP addressing.
<HTTP_server_ name>	String	HTTP server name; the maximum length is 128 characters (e.g. "http.server.com"). The factory-programmed value is an empty text string.
<username>	String	User name; the maximum length is 30 characters; it is used for the HTTP login procedure if the authentication is used. The factory-programmed value is an empty text string.
<password>	String	Password; the maximum length is 30 characters; it is used for the HTTP login procedure if the authentication is used. The factory-programmed value is an empty text string.
<HTTP_ authentication>	Number	HTTP authentication method; the allowed values are: • 0 (factory-programmed value): no authentication • 1: basic authentication (the password and username must be set)
<HTTP_port>	Number	HTTP server port; range 1-65535. It means the HTTP server port to be used in a HTTP request; the factory-programmed value is 80.
<HTTP_secure>	Number	HTTP Secure option (SSL encryption). It enables or disables the HTTPS (SSL secured connection for HTTP application) usage: • 0 (factory-programmed value): HTTPS (SSL encryption) disabled and the HTTP server port set to 80 • 1: HTTPS (SSL encryption) enabled and the HTTP server port set to 443; an USECMNG profile can be specified with an additional parameter.
<USECMNG_profile>	Number	Defines the USECMNG profile which specifies the SSL/TLS properties to be used for the SSL/TLS connection. The range goes from 0 to 4. If no profile is set a default USECMNG profile is used
<custom_request_ header>	String	Sets/clears the custom request header (string); the custom header option follows a defined format "hdr_id:hdr_name:hdr_value"; the hdr_id is a number in the range [0-4]; the hdr_name and hdr_value are strings having a maximum length of 64 characters (see examples below). • "0:hdr0:val0": set header 0 with name hdr0 and value val0 • "0:": clear header 0 • "1:hdr1:val1": set header 1 with name hdr1 and value val1 • "1:": clear header 1 • "2:hdr2:val2": set header 2 with name hdr2 and value val2 • "2:": clear header 2 • "3:hdr3:val3": set header 3 with name hdr3 and value val3 • "3:": clear header 3 • "4:hdr4:val4": set header 4 with name hdr4 and value val4 • "4:": clear header 4 The following character is not allowed in the <custom_request_header> parameter: • 0x3A (:)
<param_val>	Number / String	Type and supported content depend on the related <op_code> parameter; details are given above
<param_val1>	Number / String	Type and supported content depend on the related <op_code> parameter; details are given above.

21.1.4 Notes

• HTTP server IP address and HTTP server name are mutually exclusive. If the HTTP server IP address is specified by the user, then the value for the HTTP server name is reset, or vice versa.

SARA-R404M / SARA-R410M-01B

• <op_code>=9 is not supported.

SARA-R404M / SARA-R410M-01B

• <op_code>=6 is not supported.