CLI-Reference

Industrial Wireless LAN Client
BAT-C

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About this manual

The following manuals are available as PDF files on the CD-ROM supplied:

- ►User Manual Configuration and Administration
- ►Reference Manual
- ►User Manual Installation

■ Related Documents

BAT-C User Manual Configuration and Administration.
This is a quick setup guide to be able to setup the BAT-C for the simplest out-of-the-box applications.

BAT-C User Manual Installation.
This is a detailed specification or reference for all of the supported AT commands.

1 AT command syntax

1.1 Command Line Format

Each command line sent from the DTE (data terminal equipment) to the DCE (data communications equipment) consists of a prefix, body, and terminator. As prefix for the BAT-C AT commands, only "AT" (ASCII 65, 84) and "at" (ASCII 97, 116) can be used. There is no distinction between upper and lower case characters. The body is a string of characters in the range ASCII 032-255. Control characters other than <CR> (carriage return; ASCII 13) and <BS> (backspace; ASCII 8) in a command line are ignored.
The terminator is <CR>. Commands denoted with a "*" character are extended AT commands, i.e. BAT-C specific AT commands. The command line is limited to one command at a time. Terminate each command with a <CR> before sending a new command. The limit of a command line is 300 characters.
A command can either be:

- Read commands without parameters: AT<command>?<CR>
- Write commands without parameters: AT<command><CR>
- Read and write commands with parameters: AT<command>=<parameter1>, <parameter2>, ...<parameterN><CR>

The device sends responses back to the host and can be any of the following:

- This response indicates a successful execution of the write command: <CR><LF>OK<CR><LF>
- A read command will precede the OK response with the read parameters. The form is <CR><LF><command>:<param1>,<param2>,...,<paramN><CR><LF> String results will have "" around them.
- Successful intermediate/final message with parameters follows an OK message in some commands. In these cases, the OK message works as a confirmation message only. <CR><LF><result_response>:<parameter1>, parameter2>, ...<parameterN>
- This response indicates an unsuccessful execution of the write command: <CR><LF>ERROR<CR><LF>

1.2 Limitations

When a AT command is issued with the store parameter set to 1, the previous values will be stored as well, regardless of whether the previous commands where issued with the store parameter set to 1 or not.

1.3 Data Types

The definition of each command specifies the data types used for values associated with the command.
There are four different data types:

- String
- Octet String
- Integer
- IP_Addr
- MAC_Addr

The follow paragraph describes the Data Type listed above:

- **String**
  A string consists of a sequence of displayable characters from the ISO 8859-1 (8-bit ASCII) character set, except for characters "\", """ and characters below 32 (space). A string constant shall be delimited by two double-quote (""") characters, e.g. "Donald Duck". Use the "\" character as an escape character to insert raw bytes in a string. If the double-quote character (""") is to be used within a string, e.g. "My friend "Bono" is a singer", they have to be represented as "\22". If the back-slash character ("\") is to be used within a string constant, it has to be represented as "\5C". An empty string is represented by two adjacent delimiters, "".

- **Octet String**
  An octet string shall consist of an even number of hexadecimal values. Valid values are 0-9, 'a'-'f' and 'A'-'F'.

- **Integer**
  An integer value consists of a sequence of characters all in the range {0..9}. An integer can also be represented by as hexadecimal string, e.g. 15 can be written as "0x0000000F", excluding the double-quote characters.

- **IP_Addr**
  A valid IP address consists of four integer values separated by dots. Valid range of each integer value is {0..255}. An example IP address is "192.168.0.1", excluding the double-quote characters.

- **MAC_Addr**
  A MAC consists of a sequence of six values, expressed in two-digit hexadecimal, in sequence. Group the hexadecimal values together without delimiters. An example MAC address is "00A0F7101C08", excluding the double-quote characters. The MAC address is an Octet String with a fixed length of 12.

2 Standard AT Commands

2.1 AT Attention Command

Syntax	Description
AT<CR>	This is an ATtention command determining the presence of a DCE, i.e. the Ethernet Port Adapter.

Responses	Description
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

2.2 AT* List Available Commands

Syntax	Description
AT*<CR>	Lists the supported AT commands

Responses	Description
<CR><LF><cmd1><CR><LF><cmd2><CR><LF>... <CR><LF>OK<CR><LF>	The device sends a response to the host for every successful supported command, followed by an “OK”..
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

2.3 AT&F Restore to Factory Settings

Syntax	Description
AT&F<CR>	This command instructs the device to set all parameters to their defaults as specified by the manufacturer (Factory).

Responses	Description
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

2.4 AT&F0 Restore to Factory Settings

Syntax	Description
AT&F0<CR>	See the description of the AT&F Restore to Factory Settings command.

Responses	Description
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

2.5 ATE Echo Off

Syntax	Description
ATE<CR>	Use this command to configure the Ethernet Port Adapter to Echo the incoming characters.

Responses	Description
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

2.6 ATE Echo On/Off

Syntax	Description
ATE<echo_on><CR>	Use this command to configure the Ethernet Port Adapter to Echo the incoming characters.
ATE?	Use this command to read the current Echo setting.

Input and Response Parameters	Type	Description
echo_on	integer	0 = The echo characters function is off during command state and online command state. 1 = Unit echoes characters during command state and online command state.

Responses	Description
<CR><LF>echo_on <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

2.7 ATQ Result Codes On/Off

Syntax	Description
ATQ<result_off><CR>	Configuring this parameter determines whether or not the unit transmits result codes to the DTE, (Quit). When suppressing result codes, no transmission of any portion of any intermediate, final, or unsolicited result code, i.e. header, result text, line terminator, or trailer, occurs. The value of this parameter has no affects on information text transmitted in response to commands.
ATQ?	Use this command to read the current result code setting, (Quit).

Input and Response Parameters	Type	Description
result_off	integer	0 = Unit transmits result codes. 1 = Result codes are suppressed.

Responses	Description
<CR><LF>result_off <CR><LF>OK<CR><LF>	The device displays the current parameter setting followed by ”OK“, after entering a successful read command..
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

2.8 ATS2 Escape Character

Syntax	Description
ATS2=<esc_char><CR>	This command is issued to change the escape character to “esc_char”.
ATS2?	Use this command to read the current escape character.

Input and Response Parameters	Type	Description
esc_char	integer	“esc_char” is the ASCII value of the new escape character, i.e. 47 equals '/'. The default character is '/'. **Note:** The escape sequence will be "///". Therefore, enter the character three times.

Responses	Description
<CR>>LF>esc_char <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

2.9 ATS3 Command Line Termination Character

Syntax	Description
ATS3=<line_term><CR>	Use this command to write command line termination character. This setting changes the decimal value of the character recognized by the DCE from the DTE to terminate an incoming command line. The DCE also generates this as part of the header, trailer, and terminator for result codes and information text along with the S4 parameter Use the previous value of S3 to determine the command line termination character for entering the command line containing the S3 setting command. However, the result code issued uses the value of S3 as set during the processing of the command line. For example, if S3 was previously set to 13 and you enter the command line "ATS3=30". You use the CR, character (13), to terminate the command line but the result code issued will use the character with the ordinal value 30 in place of the CR.
ATS3?	Use this command to read the current command line termination character.

Input and Response Parameters	Type	Description
line_term	integer	0...127 (13, CR is default)

Responses	Description
<CR><LF>line_term <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<line_term><LF>OK<line_term><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

2.10 ATS4 Response Formatting Character

Syntax	Description
ATS4=<term><CR>	Use this command to write response-formatting character. This setting changes the decimal value of the character generated by the DCE as part of the header, trailer, and terminator for result codes and information text, along with the S3 parameter. If you change the value of S4 in a command line, the result code issued in response to that command line will use the new value of S4.
ATS4?	Use this command to read the current response-formatting character.

Input and Response Parameters	Type	Description
term	integer	0...127 (10, LF is default)

Responses	Description
<CR><LF>term <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

2.11 ATS5 Response Formatting Character

Syntax	Description
ATS5=<backspace><CR>	Use this command to write backspace character. This setting changes the decimal value of the character recognized by the DCE as a request to delete from the command line the immediately preceding character.
ATS5?	Use this command to read the current backspace character.

Input and Response Parameters	Type	Description
backspace	integer	0...127 (8, BS is default)

Responses	Description
<CR><LF>backspace <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

2.12 ATS General Settings S Register Manipulation

Syntax	Description
ATS<register>=<value><CR>	Use this command to write to a general settings S register.
ATS<register>?	Use this command to read from a general settings S register.

Input and Response Parameters	Type	Description
register	integer	Any of the registers described below.
value	integer	-2147483648...2147483647 or 0x00000000...0xFFFFFFFF. Listed below are valid values for each register.

Responses	Description
<CR><LF>value <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.
Register	**Description**
Roaming registers	
1100	RSSI thresholds Use this by the smart LEDs deciding how to indicate the current RSSI. Default value is 0xC9BFB5AB, giving the following limits: >85 dBm -> 1 LED >75 dBm -> 2 LEDs >65 dBm -> 3 LEDs >55 dBm -> 4 LEDs

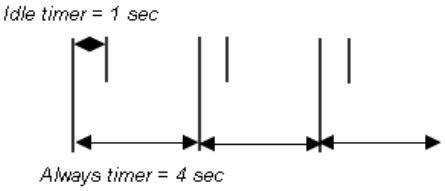
Responses	Description
1101	Reserved
1102	Reserved
1103	Reserved
1104	Reserved
1105	Roaming scheme 0: Connect to name, see connect to name scheme (default) 1: Connect to next. This will simply connect to the next device configured with AT*ADWRL Write Roaming List 2-31: Reserved
1106	Reserved
1107	Reserved
1108	Reserved
1109	Reserved
1110	Reserved
1111	Roaming RSSI diff threshold (default 10) When the difference between the connected AP RSSI and the RSSI from the best AP from background scan exceeds this threshold a roaming handover is done.
1119	Reserved
Miscellaneous	
1200	Use this register to configure the time in seconds before the LEDs turn off. Entering “0” will disable the feature.
1201	Reserved
1202	Reserved
1203	Disable Link configuration if broadcast

Responses	Description
1204	Reserved
1205	Reserved
1206	Reserved
1207	Event Subscriber Protocol The device sends events according to this value. 0: disable (default) 1: Messages sent by AT over TCP 2: Messages sent by AT over Layer-2, mac_address must be specified using AT*AMESS 3: Syslog, destination IP address must be specified using AT*AMESS 4 - 255: reserved
1208	Event Subscriber Port / Ethernet type
1209	Wireless Interface Disable 0 = Enable Wireless Interface (default) 1 = Disable
1210	Bridge Cache Timeout Time in seconds before MAC address cache table in the bridge throws away an entry.
1211	Bit mask representing SMART LED Mode when finishing smart mode Bit 0: RSSI Bit 1: RESERVED Bit 3-31: RESERVED
1212	Smart LED Update timeout in seconds
1213	Activate User Management 0: disable 1: enable
1214	Smart mode button push functionality 0: Disconnect/connect 1: Toggle ALL LEDs 2: Reset

Responses	Description
1215	Smart mode button hold functionality 0: Disconnect/connect 1: Toggle ALL LEDs 2: Reset
1216	External trigger push functionality 0: Disconnect/connect 1: Toggle ALL LEDs 2: Reset
1217	External trigger hold functionality 0: Disconnect/connect 1: Toggle ALL LEDs 2: Reset
1218	Write diagnose mode bitmask. Default value is 0x00000001. This function sends the following events when the bit is set: Bit 0: *ADCPO - Connection up *ADCCO - Connection down *AMDST - Digital signal transition *AMRSS - RSSI value below -70dBm Bit 1: *AGRSS - RSSI periodically sent with interval set by ATS register 1219 *AGCH - Used WLAN channel, sent upon connection setup Bit 2: *AGSCAN - Background scan result
1219	RSSI poll interval in milliseconds Default value is 1000 ms.
1220	Maximum time to wait for first push on SMART button Default value is 5000 ms.
Profinet	
1900	Reserved
1901	Reserved

Responses	Description
1902	Profinet prioritization: 0: Disable (default) 1: Enable
1903	Reserved
1904	Ethernet type to prioritize, default 0x8892
WLAN	
3000	WLAN preamble 0 = Long preamble 1 = Short preamble (default)
3001	Reserved
3002	WLAN minimum scan time in milliseconds on each channel 0...65535 (default 50)
3003	WLAN maximum scan time in milliseconds on each channel 0...65535 (default 200)
3004	WLAN scan type 0 = Active scan (default) 1 = Passive scan
3005	Reserved
3006	Averaging depth for the RSSI trigger 1...16 (default 4, 1 means no depth)
3007	WLAN lower lost beacon value to trigger a rescan. The maximum number of lost beacons before a rescan happens. 1...32 (default 30)
3008	Averaging depth for the lost beacon trigger 1...32 (default 32)
3009	Reserved
3010	Reserved

Responses	Description
3011	Beacon Period of the BSS Descriptor of the ESS to Join or Start a network in IBSS. Value in milliseconds 100 (default 100)
3012	Use this register to configure the time limit, in units of beacon intervals, after which termination of the Join procedure occurs. 1...100 (default 10)
3013	Reserved
3014	Max power (use AT*AMMP)
3015	Reserved
3016	Data Rate (use AT*AGRTE)
3017	Link Adaption (use AT*AGRTE) 0: Disable 1: Enable
3018	Power save 0: Disable 1: Enable
3019	Regulatory domain 1: World Domain (default) (1...11) 2.4GHz 2: FCC (1...11) 2.4GHz 3: ETSI (1...13) 2.4GHz 4: TELEC (1...14) 2.4GHz 10: U-NII-1 (36, 40, 44, 48) 5GHz 20: U-NII-2 (52, 56, 60, 64) 5 GHz 40: U-NII-2 extended (100, 104, 108, 116, 120, 124, 128, 132, 136, 140) 5 GHz 80: U-NII-3 Upper (149, 153, 157, 161) 5 GHz The regulatory domain values can be added if multiple options are required. For example, 21 (20 + 1) represents option 1 and option 20 and signifies World Domain and U-NII-1. Note: After changing the regulatory domain, verify that the channel list is updated according to your preferences as well. (AT*AGCL)

Responses	Description
3020	DTIM Enable 0: Disable 1: Enable (default)
3021	QoS Enable 0: Disable 1: Enable (default)
3022	Reserved
3023	Reserved
3024	Reserved
3025	Reserved
3026	Reserved
3027	Background scanning idle timeout (default 1000 ms) When there has been no data activity for the last 'idle timeout' ms, the background scan starts. 
3028	Background scanning interval Time between background scans(default 5000 ms)
3029	Background scanning scheme Configure when to initiate background scanning with this register. A prerequisite for this is that the RSSI level is below Trigger Scan RSSI (ATS4012). 0: Always in intervals of ATS3028 ms 1: When idle, the idle time is checked every ATS3028 ms.
4000	Reserved, do not modify

Responses	Description
4001	Reserved, do not modify.
4002	Reserved, do not modify.
4003	WPA key input mode Controls how the WPA key is parsed and interpreted. 0 = Auto (default) 1 = ASCII 2 = Hexadecimal Auto mode will try to determine if it the input is an ASCII key or a HEX key by looking at the contents.
4004	Reserved
4005	Reserved
4006	Reserved
4007	Reserved, do not modify
4008	Ad-hoc timeout Time before a single unit in an ad-hoc network tries a rescan to find an existing network. Value in milliseconds 0 = disabled 0...2147483647 (default 6000)
4009	Delayed association This value sets the time to wait before initiating an association attempt. Value in milliseconds 0 = no delay 0...2147483647 (default 0)
4010	LLDP send interval The module sends, per default, information in LLDP frames with its current setup and those of its peers. Another use for this parameter is to stay alive on access points that do not properly wake the module before a disassociation. Value in seconds 0 = Do not send. 0...2147483 (default 60)
4011	Reserved

Responses	Description
4012	Trigger Scan RSSI Defines at what RSSI level to initiate a background scan to search for a better connection. Normally when the Slave is lost, the Master assumes this task. The Master searches for a better connection when RSSI exceeds this value.
4013	LLDP hold multiplier This value multiplied with LLDP interval equals the total time an LLDP update is valid. 1...10 (default 4)
4014	Enable/disable adaptive RSSI threshold. 0 = Disable (default) 1 = Enable
Networking	
5000	Turn on/off TCP keep-alive packets It is important to understand that sending frequent keep-alive packets usually isn't a good solution to detect dropped connections. Perform dead links detection on a higher level, i.e. in the user application protocol. There is a lot of information available on the subject on the web. 0 = TCP keep-alive packets turned off (default)1 = TCP keep alive packets turned on
5001	This is the time in milliseconds for a TCP connection to be idle before sending a keep-alive packet. 0...2147483647 (default 7200000 = 2 hours)
5002	This is the time in milliseconds between keep-alive packets after losing a keep-alive packet. 0...2147483647 (default 75000 = 75 seconds)
5003	This is the number of lost keep-alive packets to wait before resetting a TCP connection. 1...255 (default 9)

3 Link Layer Commands

3.1 AT*AGAM Authentication Mode

Syntax	Description
AT*AGAM=<amode>, <store_in_startup_database><CR>	Use this command to write Authentication Mode.
AT*AGAM?	Use this command to read the current Authentication Mode.

Input and Response Parameters	Type	Value
amode	Integer	0 = Open (default) 1 = Shared secret 2 = WPA/WPA2 PSK 3 = LEAP 4 = PEAP 5 = Reserved
store_in_startup_database	Integer	0: The setting will be valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AGAM:<amode> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

3.2 AT*AGEM Encryption Mode

Syntax	Description
AT*AGEM=<emode>,<store_in_startup_database><CR>	Use this command to write Encryption Mode
AT*AGEM?	Use this command to read the current Encryption Mode.

Input and Response Parameters	Type	Value
emode	Integer	0 = None (default) 1 = WEP64 2 = WEP128 3 = TKIP 4 = AES/CCMP
store_in_startup_database	Integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AGEM:<emode> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

3.3 AT*AGSM Security Mode

Syntax	Description
AT*AGSM=<smode>, <store_in_startup_database><CR>	Use this command to write Security Mode. Security Mode is a shortcut for setting a combination of the authentication and encryption modes. Sending a "AT*AGSM=3" command is therefore the equivalent of sending the commands: "AT*AGAM=2" and "AT*AGEM=3". If you send a "AT*AGSM?" command, the DCE will return 255 if the current settings do not match the predefined values.
AT*AGSM?	Use this command to read the current security mode.

Input and Response Parameters	Type	Value
smode	Integer	0 = No security (default) (AM=0,EM=0) 1 = Shared-WEP64 (AM=1,EM=1) 2 = Shared-WEP128 (AM=1,EM=2) 3 = WPA-PSK-TKIP (AM=2,EM=3) 4 = WPA2-PSK-AES/CCMP (AM=2,EM=4) 5 = LEAP-WPA2 (AM=3,EM=4) 6 = LEAP-WEP128 (AM=3,EM=2)
store_in_startup_database	Integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AGSM:<smode> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

3.4 AT*AGOM Operational Mode

Syntax	Description
AT*AGOM=<omode>, <store_in_startup_database><CR>	Use this command to write the Operational Mode, i.e. if the device is operating in an Ad-Hoc environment or as a predetermined infrastructure with access points.
AT*AGOM?	Use this command to read the current Operational Mode.

Input and Response Parameters	Type	Value
omode	Integer	1 = Managed (infrastructure) (default) 2 = Ad-Hoc
store_in_startup_database	Integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AGOM:<omode> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

3.5 AT*AGFP Encryption/Authentication Key

Syntax	Description
AT*AGFP=<key>,<store_in_startup_database><CR>	Use this command to write the encryption/authentication key for index 1. This command is a shortcut for AT*AGFPWI=1,<key>,<store_in_startup_database>.

Input Parameters	Type	Value
key	String	Use any string value for this setting.
store_in_startup_database	Integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

3.6 AT*AGFPWI Write Encryption/Authentication Key (with Index)

Syntax	Description
AT*AGFPWI=<keyindex>, <key>, <store_in_startup_database> <CR>	Use this command to write the encryption/authentication key.

Input Parameters	Type	Value
keyindex	Integer	The valid integers are 1...4.
key	String	Use any string value for this setting.
store_in_startup_database	Integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

3.7 AT*AGAFP Active Encryption/Authentication Key

Syntax	Description
AT*AGAFP=<keyindex>, <store_in_startup_database><CR>	Use this command to write the active encryption/authentication key.
AT*AGAFP?	Use this command to read the current active encryption/authentication key.

Input and Response Parameters	Type	Value
keyindex	Integer	Valid integers for this function are 1...4 (1 default).
store_in_startup_database	Integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AGAFP:<keyindex> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

3.8 AT*AGUN Username

Syntax	Description
AT*AGUN=<username>, <store_in_startup_database><CR>	Use this command to write the UserName.
AT*AGUN?	Use this command to read the current the UserName.

Input and Response Parameters	Type	Value
username	String	Use this name for identification on authentication servers. See AT*AGAM Authentication Mode.
store_in_startup_database	Integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AGUN:<username> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

3.9 AT*AGDN Domain name

Syntax	Description
AT*AGDN=<domain>, <store_in_startup_database><CR>	Use this command to write the Domain Name.
AT*AGDN?	Use this command to read the current the Domain Name.

Input and Response Parameters	Type	Value
domain	String	This is the domain to use with authentication servers. See AT*AGAM Authentication Mode.
store_in_startup_database	Integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AGDN:<domain> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

3.10 AT*AGCFP Certificate Fingerprint

Syntax	Description
AT*AGCFP=<fingerprint>, <store_in_startup_database><CR>	Use this command to write the Certificate Finger Print.
AT*AGCFP?	Use this command to read the current Certificate Finger Print.

Input and Response Parameters	Type	Value
fingerprint	Octet String	This is a 20 bytes octet string representing the fingerprint. (quotes (") shall not be used)
store_in_startup_database	Integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AGCFP:<fingerprint> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

3.11 AT*AGSSID Network Name (SSID)

Syntax	Description
AT*AGSSID=<ssid>, <store_in_startup_database><CR>	Use this command to write the Network Name (SSID) of the access point.
AT*AGSSID?	Use this command to read the current Network Name (SSID) of the access point.

Input and Response Parameters	Type	Value
ssid	String	Use any string value, max length 32 bytes.
store_in_startup_database	Integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AGSSID:<ssid> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

3.12 AT*AGRSS RSSI Value

Syntax	Description
AT*AGRSS?	Use this command to read the current RSSI value of the connection. If the module is not connected it returns an ERROR.

Response Parameter	Type	Value
rssi	Integer	This is the RSSI value. -128...10 where value is dBm value Use this command after the device establishes a connection, otherwise, the response to this read command is an error message.

Responses	Description
<CR><LF>*AGRSS:<rssi> <CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates unsuccessful execution of the write command.

3.13 AT*AGCH Channel Number

Syntax	Description
AT*AGCH=<ch_no>,<store_in_startup_database><CR>	Use this command to write the Channel number to use.
AT*AGCH?	Use this command to read the current CHannel number in use.

Input and Response Parameters	Type	Value
ch_no	Integer	0 = Auto (default), select from defined channel list. > 0 = Channel to use. Available channels depending on regulatory domain setting.
store_in_startup_database	Integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AGCH:<ch_no> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

3.14 AT*AGCL Channel List

Syntax	Description
AT*AGCL=<ch1>,<ch2>,…,<chN>, <store_in_startup_database><CR>	Use this command to write the channel number to use.
AT*AGCH?	Use this command to read the current channel number in use.

Input and Response Parameters	Type	Value
ch#	Integer	Write the channel list to use. This list also specifies the scan order. The number of channels to specify is dependent on the regulatory domain set. See command AMRD for details about regulatory domains and below for channel list lengths. If you don´t want to use all positions, pad list with zeros. Channel list length for the regulatory domains: World = 11 FCC = 11 ETSI = 13 U-NII band 1 = 4 U-NII band 2 = 4 U-NII band 2 extended = 11 U-NII band 3 Upper = 4 Example 1: If regulatory domain is set to World + U-NII band 1 + 2, then the number of channels to specify is 11 + 4 + 4 = 19. AT*AGCL:6,1,11,2,7,4,9,3,8,5,10,36,40,44,48,52,56,60,64,1 Example 2: To use only channel 1,6 and 11 in regulatory domain ‘World’. AT*AGCL=1,6,11,0,0,0,0,0,0,0,0,0,0,1
store_in_startup_database	Integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AGCL:<ch1>,<ch2>,...,<chN> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

3.15 AT*AGSCAN

Syntax	Description
AT*AGSCAN?	Use this command to SCAN for available networks. The command will return 0...48 networks in the immediate surroundings, then return OK.
AT*AGSCAN=<ssid>,<channel>	Use this command to SCAN the available networks with specific a SSID on a specified channel.

Input and Response Parameters	Type	Value
bssid	MAC_Addr	MAC address of the access point
op_mode	Integer	1 = Infrastructure 2 = Ad-hoc
ssid	String	SSID name of network
channel	Integer	Channel the network uses
rssi	Integer	Signal strength value for the network
encryption	Integer	0 = No encryption 1 = WEP 2 = WPA 3 = WPA2/RSN

Input and Response Parameters	Type	Value
information_element	String	This is a Hexadecimal string with the information element for WPA and RSN networks. The string is unavailable for WEP networks or networks without encryption.

Responses	Description
<CR><LF>*AGSCAN: <bssid>, <op_mode>, <ssid>, <channel>, <rssi>, <encryption>, <information_element> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

3.16 AT*AGRTE Data Rate and Link Adaptation

Syntax	Description
AT*AGRTE=<data_rate>, <link_adaptation>, <store_in_startup_database><CR>	Use this command to write the data Rate and link adaptation settings.
AT*AGRTE?	Use this command to read the current data Rate and link adaptation settings.

Input and Response Parameters	Type	Value
data_rate	Integer	1 = 1Mbit (only 2.4GHz) 2 = 2Mbit (only 2.4GHz) 3 = 5.5Mbit (only 2.4GHz) 4 = 6Mbit 5 = 9Mbit 6 = 11Mbit (only 2.4GHz) 7 = 12Mbit 8 = 18Mbit 9 = 24Mbit (default) 10 = 36Mbit 11 = 48Mbit 12 = 54Mbit 13 = 6.5Mbit 14 = 13Mbit 15 = 19.5Mbit 16 = 26Mbit 17 = 39Mbit 18 = 52Mbit 19 = 58.5Mbit
link_adaptation	Integer	0 = Link adaptation off. The device uses the configured data_rate. 1 = Link adaptation on. The data_rate of the device adjusts automatically depending on the operation environment.
store_in_startup_database	Integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AGRTE:<data_rate>, <link_adaption> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

4 Network Layer Commands

4.1 AT*ANIP IP Settings

Syntax	Description
AT*ANIP=<ip_addr>, <netmask>, <gw>, <store_in_startup_database><CR>	Use this command to write the system information, i.e. IP address, netmask, and gateway IP. The device requires a restart to activate the new configuration. The “AT*ANIP?” Command returns the old system information until you restart the module.
AT*ANIP?	Use this command to read the currently stored IP address and system information. Use the AT*AMSTAT to read the current IP address.

Input and Response Parameters	Type	Value
ip_addr	IP_Addr	IP address for the device (default 172.23.56.99)
netmask	IP_Addr	Netmask for the device (default 255.255.255.0)
gw	IP_Addr	The IP address of the gateway (default 172.23.56.99)
store_in_startup_database	integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*ANIP<ip_addr>, <netmask>,<gw> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

4.2 AT*ANDHCP DCHP Activation

Syntax	Description
AT*ANDHCP=<dhcp_mode>, < store_in_startup_database ><CR>	Activate/deactivate DHCP If activated, this configuration will take precedence over the settings made with AT*ANIP.
AT*ANDHCP?	Use this command to read the current DHCP setting.

Input and Response Parameters	Type	Value
dhcp_mode	integer	0: Static, enter a static IP address (default) 1: DHCP Client, acquire an IP address using DHCP 2: DHCP Server, use a static IP address and act as DHCP server 3: Auto IP, The BAT-C will be assigned a private IP address with a prefix of 169.254/16. 4: DHCP Relay, use a static IP address, and act as DHCP relay. 5: DHCP Client + DHCP Relay, acquire an IP address using DHCP, then act as DHCP relay (default)
store_in_startup_database	integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*ANDHCP:<on> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

4.3 AT*ANHN Hostname

Syntax	Description
AT*ANHN=<hostname>, < store_in_startup_database ><CR>	Use this command to write the HostName used with the dynamic DNS.
AT*ANHN?	Use this command to read the current HostName used with the dynamic DNS.

Input and Response Parameters	Type	Value
hostname	string	Use any string (default: "BAT-C")
store_in_startup_database	integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*ANHN:<hostname> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

4.4 AT*ANDNS DNS Settings

Syntax	Description
AT*ANDNS=<dns1>,<dns2>,<store_in_startup_database><CR>	Use this command to write the name server (DNS) information.
AT*ANDNS?	Use this command to read the current name server (DNS) information.

Input and Response Parameters	Type	Value
dns1	IP_Addr	This is the Primary DNS server. If DNS is not used, set this parameter to 0.0.0.0 (default 0.0.0.0).
dns2	IP_Addr	This is the Secondary DNS server. If DNS is not used or if one server is used, set this parameter to 0.0.0.0 (default 0.0.0.0).
store_in_startup_database	integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*ANDNS:<dns1>,<dns2> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

5 Data Mode Commands

5.1 AT*ADC Connect

Syntax	Description
AT*ADC<CR>	Use this command to connect to a previously configured WLAN network.

Responses	Description
<CR><LF>*ADC:<connection_handle> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

5.2 AT*ADCP Connect to BSSID

Syntax	Description
AT*ADCP=<BSSID>, <network_type >, <wlan_channel>, <ssid><CR>	Use this command to connect to a WLAN network. (Managed mode)

Input Parameters	Type	Value
BSSID	Mac_Addr	This is the BSSID of the desired AP.
network_type	Integer	1 = Managed mode
wlan_channel	Integer	0 = Auto (default) 1...11, 1...13 or 14 depending on regulatory domain setting for 2.4GHz. 36, 40, 44, 48 for 5GHz.
ssid	String	This is the SSID of the desired AP.

5.3 AT*ADCPN Connect to name (SSID)

Syntax	Description
AT*ADCPN=<SSID >, <network_type>, <wlan_channel>, <reserved><CR>	Use this command to connect to a WLAN network specified by the SSID.

Input and Response Parameters	Type	Value
SSID	string	This is the SSID of the desired AP or Ad Hoc unit.
network_type	Integer	1 = Managed mode 2 = Ad-Hoc
wlan_channel	Integer	0 = Auto (default) 1…11, 1…13 or 14 depending on regulatory domain setting for 2.4GHz 36, 40, 44, 48 for 5GHz.
Reserved	Integer	This parameter is for future use.
connection_handle	Integer	1=closes the current connection

Responses	Description
<CR><LF>*ADCPN:<connection_handle> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

5.4 AT*ADCC Close Connection

Syntax	Description
AT*ADCC=<connection_handle><CR>	This command Closes an existing network Connection.

Input Parameters	Type	Value
connection_handle	integer	1=closes the current connection

Responses	Description
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

5.5 AT*ADRDRP Read Default Remote Peer

Syntax	Description
AT*ADRDRP=<peer_id><CR>	Use this command to read the current default peer.

Input and Response Parameters	Type	Value
peer_id	Integer	The command returns a value between 0 and the response from AT*ADMRP – 1.
address	String	Address to the service on the remote peer. In the form of, <protocol>://ipaddr:port. i.e.: tcp://172.23.56.1:5130.
conn_scheme	Integer	Ignored by the BAT-C 0 = Unused 1 = Connect on data (Connects when transmitting data, then remains connected.) 2 = Always connected (Connects right after power on.)
update_on_incoming	Integer	This parameter is for future use.
name	String	A string with a user defined name of the peer.

Responses	Description
<CR><LF>*ADRDRP:<address>, <conn_scheme>, <update_on_incoming>, <name> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

5.6 AT*ADWDRP Write Remote Peer Information

Syntax	Description
AT*ADWDRP=<peer_id>, <address>, <conn_scheme>, <reserved>, <name>, <store_in_startup_database>	Use this command to write information for a remote peer.

Input Parameters	Type	Value
peer_id	Integer	This is any value between 0 and the response from AT*ADMRP – 1.
address	String	Address to the service on the remote peer. In the form of, <protocol>://ipaddr:port. i.e.: udp://172.23.56.1:5130.
conn_scheme	Integer	Ignored by the BAT-C Reserved, use 0
reserved	Integer	This parameter is for future use. Use 0
name	String	A string with a user defined name of the peer.
store_in_startup_database	Integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

5.7 AT*ADRL Roaming List

Syntax	Description
AT*ADRL?	Use this command to read the current list of Access Points used for roaming.

Response Parameters	Type	Value
index	integer	This is the position in the roaming list.
bssid	Mac_Addr	This is the BSSID of the Access Point.
store_in_startup_database	integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*ADRL:<index>,<bssid >	The device sends this response for every AP in the list.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

5.8 AT*ADRRL Read Roaming List

Syntax	Description
AT*ADRRL=<index><CR>	This command reads the BSSID of the selected AP in the roaming list.

Input and Response Parameters	Type	Value
index	integer	This is the position in the roaming list.
bssid	Mac_Addr	This is the BSSID of the Access Point.
channel	integer	This is the channel of the AP.

Responses	Description
<CR><LF>*ADRRL:<index>,<mac_addr> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

5.9 AT*ADWRL Write Roaming List

Syntax	Description
AT*ADWRL=<index>,<mac_addr>, <store_in_startup_database><CR>	This command writes the BSSID of the AP in the roaming list.

Input Parameters	Type	Value
index	integer	This is the position in the roaming list.
bssid	Mac_Addr	This is the BSSID of the Access Point.
channel	integer	This is the channel of the AP.
store_in_startup_database	integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	Response to an unsuccessful execution of the write command.

5.10 AT*ADLNK Read WLAN link status

Syntax	Description
AT*ADLNK?<CR>	Use this command to read the current WLAN link status.

Response Parameters	Type	Value
link_status	integer	0: Not associated 1: Associated
bssid	Mac_Addr	BSSID of the WLAN network or N/A if not associated.

Responses	Description
<CR><LF>*ADLNK:<link_status>,<bssid> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

6 Informational Commands

6.1 AT*AILBA Read Local MAC Address

Syntax	Description
AT*AILBA?<CR>	This command reads the MAC Address of the local device.

Response Parameters	Type	Value
mac_addr	Mac_Addr	This is the Local MAC address.

Responses	Description
<CR><LF>*AILBA:<mac_addr> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command..
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

6.2 AT*AILVI Local version

Syntax	Description
AT*AILVI?<CR>	This command reads the local version information to the Ethernet Port Adapter.

Response Parameters	Type	Value
manufacturer	String	This is the Ethernet port adapter manufacturer, i.e. "Hirschmann".
spa_sw_version	String	This is the Ethernet port adapter software version, i.e. "2.3.2 [11:32:15,May 14 2012]".
wlan_driver_version	String	This is the WLAN host driver version, i.e. "2.12.1".
wlan_fw_version	String	This is the WLAN firmware version, i.e. "3.2.8.5".
wlan_hw_manufacturer	String	This is the WLAN hardware manufacturer, example "RPS".

Responses	Description
<CR><LF>*AILVI: <manufacturer>, <spa_sw_version>, <wlan_driver_version>, <wlan_fw_version>, <wlan_hw_manufacturer> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7 Miscellaneous Commands

7.1 AT*AMLI Log in

Syntax	Description
AT*AMLI=<password><CR>	Use this command to Log in to the AT command interface. Note: The “User management S register” must be set to “enable user management”.

Input Parameters	Type	Value
password	String	This is a null terminated string of up to 15 bytes.

Responses	Description
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.2 AT*AMLO Log Out

Syntax	Description
AT*AMLO=<log_out><CR>	Use this command to Log out from the AT command interface.

Input Parameters	Type	Value
log_out	Integer	1= log out

Responses	Description
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.3 AT*AMGD General Data

Syntax	Description
AT*AMGD=<data><CR>	Use this command to write data, to be stored between power cycles.
AT*AMGD?<CR>	Use this command to read the current previously written data.

Input and Response Parameters	Type	Value
data	String	Represents the data to store, up to 31 bytes long.

Responses	Description
<CR><LF><data><CR><LF> OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.

Responses	Description
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.4 AT*AMMP Max Output Power

Syntax	Description
AT*AMMP=<max_power>, <store_in_startup_database><CR>	Use this command to write the max power settings.
AT*AMMP?	Use this command to read the current max power setting.

Input and Response Parameters	Type	Value
max_power	Integer	This setting is the actual dBm. The valid range is between -14...15.
store_in_startup_database	Integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AMMP:<max_output_power> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.5 AT*AMWS Watchdog Settings

Syntax	Description
AT*AMWS=<reserved1>, <inactivity_timeout>, <connect_timeout>, <disconnect_reset>, <reset>, <store_in_startup_database><CR>	Use this command to write the watchdog settings. The watchdog functionality will disconnect from a remote peer for one of the given conditions.
AT*AMWS?	Use this command to read the current watchdog settings.

Input and Response Parameters	Type	Value
reserved1	Integer	This parameter is for future use. This is a “0” for this parameter.
inactivity_timeout	Integer	This is the time in seconds before the BAT-C resets if it receives no data on the WLAN interface. 0: Disabled (default value) > 0: Timeout in seconds
connect_timeout	Integer	This is the Max connection time in seconds before the BAT-C resets. 0: Disabled (default value) > 0: Timeout in seconds
disconnect_reset	Integer	0: Disabled (default value) 1: Enabled, the BAT-C will reset on a terminated connection.
reset	Integer	1: Reset the unit immediately. Will not store nor return any response.
store_in_startup_database	Integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AMWS:<reserved1>, <inactivity_timeout>, <connect_timeout>, <disconnect_reset>, <reset> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.6 AT*AMESS Event and Status Subscriber

Syntax	Description
AT*AMESS=<mac_addr>, <ip_addr>, <port>, <protocol>, <store_in_startup_database><CR>	Use this command to write the Event and Status subscriber.
AT*AMESS? <CR>	Use this command to read the current Event and Status subscriber.

Input and Response Parameters	Type	Value
mac_addr	MAC_Addr	This is the MAC address of event subscriber.
ip_addr	IP_Addr	This is the IP address of event subscriber.
port	Integer	This is the port number of event subscriber 0: use default Layer-2 events, must be specified

Input and Response Parameters	Type	Value
protocol	Integer	Manage event transmission using the following values. 0: disable (default) 1: Messages sent by AT over TCP 2: Messages sent by AT over Layer-2 (mac_address must be specified, FFFFFFFFFFFF means that it will be broadcasted) 3: Syslog 4 - 255: reserved
store_in_startup_database	integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AMESS: <mac_addr>,<ip_addr>,<port>, <protocol><CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.7 AT*AMSMF SMART Mode (Button) functionality

Syntax	Description
AT*AMSMF=<short_mode>,<long_mode>, <store_in_startup_database><CR>	Use this command to write the SMART button functionality.
AT*AMSMF? <CR>	Use this command to read the current SMART button functionality.

Input and Response Parameters	Type	Value
short_mode	Integer	Manage the “Push” functionality with the following values. 0: Trigger roaming (disconnect/connect) 1: Toggle Leds 2: Soft reset
long_mode	Integer	Manage the “Hold” functionality with the following values. 0: Trigger roaming (disconnect/connect) 1: Toggle Leds 2: Soft reset
store_in_startup_database	integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AMSMF: <short_mode>,<long_mode><CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.8 AT*AMSMFL SMART Mode Function List

Syntax	Description
AT*AMSMFL=<smart_mode_1>, <smart_mode_2>,<smart_mode_3>, <smart_mode_4>,<smart_mode_5>, <smart_mode_6>,<smart_mode_7>, <smart_mode_8>,<smart_mode_9>, <smart_mode_10>,<smart_mode_11>, <smart_mode_12>,<smart_mode_13>, <smart_mode_14>,<smart_mode_15>, <store_in_startup_database><CR>	Use this command to write the sequence of SMART button functionality modes. Example: "AT*AMSMFL=15,2,3,4,5,11,12,0,0,0,0,0,0,0,0,1" will limit the number of SMART modes to 7. The first mode indicated by the "A" LED will be 15 (see list below), the second, indicated by the "B" LED will be 2 and the third, indicated by "A" and "B", will be 3 and so on. See the product guide for more details.
AT*AMSMFL? <CR>	Use this command to read the current SMART button function list.

Input and Response Parameters	Type	Value
smart_mode_#	Integer	0: End Smart mode function list 1 - 15 SMART functionality: 1: Exit Smart mode 2: Reset to factory defaults 3: Reset IP settings to factory defaults 4: Wait for Automatic configuration - Ad-Hoc 5: Initiate Automatic configuration - Ad-Hoc 6: Wait for Automatic configuration - Profinet - Ad-Hoc 7: Initiate Automatic configuration - Profinet - Ad-Hoc 8: Wait for Automatic configuration - Managed mode 9: Initiate Automatic configuration - Managed mode 10: Initiate Automatic configuration - Managed mode - wired 11: Configure Client mode 12: Initiate Automatic configuration - Ad-Hoc - Multipoint 13: Reserved 14: Reserved 15: Enable DHCP server 16 - 255: Reserved Default: 15,2,3,4,5,6,7,8,9,10,11,12
store_in_startup_database	integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AMSMFL:<smart_mode_1>, <smart_mode_2>,<smart_mode_3>, <smart_mode_4>,<smart_mode_5>, <smart_mode_6>,<smart_mode_7>, <smart_mode_8>,<smart_mode_9>, <smart_mode_10>,<smart_mode_11>, <smart_mode_12>,<smart_mode_13>, <smart_mode_14>,<smart_mode_15> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.9 AT*AMSSC SNMP Sys Contact

Syntax	Description
AT*AMSSC=<sys_contact>, <store_in_startup_database><CR>	Use this command to write the SNMP Sys Contact.
AT*AMSSC? <CR>	Use this command to read the current SNMP Sys Contact.

Input and Response Parameters	Type	Value
sys_contact	String	This is a desired string, up to 32 characters.
store_in_startup_database	integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AMSSC: <sys_contact><CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.

Responses	Description
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.10 AT*AMSSL SNMP Sys Location

Syntax	Description
AT*AMSSL=<sys_location>, <store_in_startup_database><CR>	Use this command to write the SNMP Sys Location.
AT*AMSSL? <CR>	Use this command to read the current SNMP Sys Location.

Input and Response Parameters	Type	Value
sys_Location	String	This is a desired string, up to 32 characters.
store_in_startup_database	integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AMSSL: <sys_location><CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.11 AT*AMSSS SNMP Sys Services

Syntax	Description
AT*AMSSS? <CR>	Use this command to read the current SNMP Sys Services.

Response Parameters	Type	Value
sys_services	Integer	This parameter represents the system services defined by SNMP.

Responses	Description
<CR><LF>*AMSSS: <sys_services><CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.12 AT*AMSBN SNMP Basic Name

Syntax	Description
AT*AMSBN=<basic_name>, <store_in_startup_database><CR>	Use this command to write the SNMP Basic Name.
AT*AMSBN? <CR>	Use this command to read the current SNMP Basic Name.

Input and Response Parameters	Type	Value
basic_name	String	This is a desired string, up to 32 characters.
store_in_startup_database	integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration

		between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AMSBN: <basic_name><CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.13 AT*AMSBD SNMP Basic Descriptor

Syntax	Description
AT*AMSBD=<basic_descriptor>, <store_in_startup_database><CR>	Use this command to write the SNMP Basic Descriptor.
AT*AMSBD? <CR>	Use this command to read the current SNMP Basic Descriptor.

Input and Response Parameters	Type	Value
basic_descriptor	String	This is a desired string, up to 32 characters.
store_in_startup_database	integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AMSBD: <basic_descriptor><CR><LF>OK< CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.

Responses	Description
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.14 AT*AMSSD SNMP Sys Description

Syntax	Description
AT*AMSSD=<basic_description>, <store_in_startup_database><CR>	Use this command to write the SNMP System Description.
AT*AMSSD? <CR>	Use this command to read the current SNMP System Description.

Input and Response Parameters	Type	Value
basic_description	String	This is a desired string, up to 32 characters.
store_in_startup_database	integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AMSBD: <basic_description><CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.15 AT*AMSWC SNMP Write Community (Private Community)

Syntax	Description
AT*AMSWC=<community>, <store_in_startup_database><CR>	Use this command to write the SNMP Private Community name. The BAT-C currently supports 1 community that has both read and write access.

Input Parameters	Type	Value
community	String	This is a desired string, up to 12 characters.
store_in_startup_database	integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.16 AT*AMSEID SNMP Enterprise ID

Syntax	Description
AT*AMSEID?<CR>	Use this command to read the current SNMP Enterprise Id.

Response Parameters	Type	Value
id	Integer	This is an integer representing your company.

Responses	Description
<CR><LF>*AMSEID: <id><CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.17 AT*AMTL TCP Listener

Syntax	Description
AT*AMTL=<port>,<enable>, <store_in_startup_database><CR>	Use this command to enable or disable the TCP Listener.
AT*AMTL?	Use this command to read the current TCP Listener activation status.

Input and Response Parameters	Type	Value
enable	Integer	0 = Disables TCP Listener 1 = Enables TCP Listener. When enabled, it will always enter at mode at startup
port	Integer	TCP port to listen for incoming connections
store_in_startup_database	Integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AMTL:<port>,<enable> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.18 AT*AMUR UDP Receiver

Syntax	Description
AT*AMUR=<port>,<enable>, <store_in_startup_database><CR>	Use this command to enable or disable the UDP Receiver.
AT*AMUR?	Use this command to read the current UDP receiver activation status.

Input and Response Parameters	Type	Value
enable	Integer	0 = Disables UDP Receiver 1 = Enables UDP Receiver
port	Integer	UDP port to listen for incoming packets
store_in_startup_database	Integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AMUR:<port>,<enable> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.19 AT*AMHL HTTP Listener

Syntax	Description
AT*AMHL=<port>,<enable>, <store_in_startup_database><CR>	Use this command to enable or disable the HTTP Listener.
AT*AMHL?	Use this command to read the current HTTP Listener status.

Input and Response Parameters	Type	Value
enable	Integer	0 = Disables HTTP Listener 1 = Enables HTTP Listener
port	Integer	TCP port to listen for incoming connections
store_in_startup_database	Integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AMHL:<port>,<enable> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.20 AT*AMSR SNMP Receiver

Syntax	Description
AT*AMSR=<port>,<enable>, <store_in_startup_database><CR>	Use this command to enable or disable the SNMP Receiver.
AT*AMSR?	Use this command to read the current SNMP Receiver status.

Input and Response Parameters	Type	Value
enable	Integer	0 = Disables SMNP Receiver 1 = Enables SNMP Receiver
port	Integer	This is the UDP port to listen for incoming packets.
store_in_startup_database	Integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AMSR:<port>,<enable> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.21 AT*AMLCR Link Config Receiver

Syntax	Description
AT*AMLCR=<eth_type>,<enable>, <store_in_startup_database><CR>	Use this command to enable or disable the Link Configuration Receiver.
AT*AMLCR?	Use this command to read the current Link Configuration Receiver status.

Input and Response Parameters	Type	Value
enable	Integer	0 = Disables Link Config Receiver 1 = Enables Link Config Receiver
eth_type	Integer	Ethernet type that will be passed up the AT parser
store_in_startup_database	Integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AMLC:<eth_type>,<enable> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.22 AT*ACEW Configure Mode

Syntax	Description
AT*ACEW=<mac_addr>,<enter>, <store_in_startup_database><CR>	Use this command to configure and enter Client mode.
AT*ACEW?	Use this command to read the current Wireless LAN MAC address and mode.

Input and Response Parameters	Type	Value
mac_addr	MAC_Addr	MAC address to use in Client and Multi-Client mode. (Ignored if second parameter = 1)
enter	Integer	0: Configure Client mode (The device issues a reset of the module.) 1: Configure Ethernet Bridge mode 2: Reserved 3: Configure Multi-Client mode
mode	Integer	0: Client mode 1: Ethernet Bridge Mode 3: Multi-Client mode
store_in_startup_database	integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*ACEW:<mac_addr>,<mode> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.23 AT*AMEO Set External Digital Output

Syntax	Description
AT*AMEO=<value><CR>	Use this command to set External digital Output to value.

Input Parameters	Type	Value
value	integer	0: LOW - Ground (0V DC) 1: HIGH – The voltage will be set to the corresponding value on the power connector, A-coded male M12, pinning number 5 (typical 12-24 V DC).

Responses	Description
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.24 AT*AMSTAT Read Current Status

Syntax	Description
AT*AMSTAT=<level>,<id><CR>	Use this command to read the current status of a specific interface.

Input and Response Parameters	Type	Value
level	integer	1 = Common 2 = Reserved 3 = WLAN 4 = Reserved 5 = Ethernet 6 = Reserved 7 = Reserved

Input and Response Parameters	Type	Value
id	integer	0 = This entry is optional.
uptime	integer	This is the uptime in seconds.
wlan_mac_addr	MAC_Addr	This is the WLAN MAC address.
wlan_status	integer	0 = Not associated 1 = Associated
op_mode	integer	1 = Managed 2 = Ad-hoc
ssid	string	This is the SSID of the AP.
bssid	MAC_Addr	This is the BSSID of the AP or associated device.
data_rate	integer	See AT*AGRTE for further details.
rssi	integer	See AT*AGRSS for further details.
channel	integer	This is the Channel.
eth_mac_addr	MAC_Addr	This is the Ethernet MAC address.
eth_status	integer	Lists the Ethernet Link Status 0: Link is down 1: Link is up
ip_addr	IP_Addr	This is the Static IP address or assigned IP address when using DHCP.
subnet	IP_Addr	This is the Subnet mask.
gateway	IP_Addr	This is the Gateway IP address.
dhcp_mode	integer	This is the DHCP mode, see AT*ANDHCP for further details.
dns1	IP_Addr	This is the Primary DNS server.
dns2	IP_Addr	This is the Secondary DNS server.

Responses	Description
*UPTIME:<uptime> <CR><LF>OK<CR><LF>	The device returns with this response for integer 1. The device responds with this information for the common command, followed by an “OK”.
<CR><LF>OK<CR><LF>	The device returns with this response for integer 2.
*HW_ADDR:<wlan_mac_addr><CR><LF> *STATUS:<wlan_status><CR><LF> *OP_MODE:<op_mode><CR><LF> *SSID:<ssid><CR><LF> *BSSID:<bssid><CR><LF> *TX_RATE:<data_rate><CR><LF> *RSSI:<rssi><CR><LF> *CHANNEL:<channel><CR><LF> <CR><LF>OK<CR><LF>	The device returns with this response for integer 3. The device responds with this list of information for the WAN command. The device displays the WLAN, TX_RATE, RSSI and CHANNEL values when connected.
<CR><LF>OK<CR><LF>	The device returns with this response for integer 4.
*HW_ADDR:<eth_mac_addr><CR><LF> *STATUS:<eth_status><CR><LF> *IP_ADDR:<ip_addr><CR><LF> *SUBNET_MASK:<subnet><CR><LF> *GATEWAY:<gateway><CR><LF> *DHCP:<dhcp_mode><CR><LF> *DNS1:<dns1><CR><LF> *DNS2:<dns2> <CR><LF>OK<CR><LF>	The device returns with this response for integer 5. The device responds with this list of information for the Ethernet command, followed by an “OK”.
<CR><LF>OK<CR><LF>	The device returns with this response for integer 6.
<CR><LF>OK<CR><LF>	The device returns with this response for integer 7.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.25 AT*AMWID Wireless interface disable

Syntax	Description
AT*AMWID=<disable>,<store_in_startup_database><CR>	Use this command to Disable the Wireless Interface.
AT*AMWID?	Use this command to read the Wireless Interface Disabled status.

Input and Response Parameters	Type	Value
disable	integer	0: Wireless interface enabled 1: Wireless interface is disabled
store_in_startup_database	integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.

Responses	Description
<CR><LF>*AMWID:<disable> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

7.26 AT*AMPSM Profisafe Mode

Syntax	Description
AT*AMPSM=<ps_mode>, <store_in_startup_database>, <apply_without_restart><CR>	Use this command to enable ProfiSafe Mode. This command disables the write configuration mode. However, with the ProfiSafe Mode enabled, you are able to read the configuration on the device. To amend the configuration, set the device in configuration mode with “AT*ACEW” or reset to factory defaults with “AT&F0”.
AT*AMPSM?	Use this command to read the ProfiSafe Mode Status.

Input and Response Parameters	Type	Value
ps_mode	integer	0: ProfiSafe Mode disabled 1: ProfiSafe Mode enabled
store_in_startup_database	integer	0: The setting is valid for the current power cycle. 1: The Ethernet Port Adapter retains the configuration between power cycles by updating the settings database.
apply_without_restart	integer	This entry is optional. 1: The device enters the ProfiSafe Mode directly without a restart when setting this entry to 1. This command disables the write configuration mode immediately after execution.

Responses	Description
<CR><LF>*AMPSM:<ps_mode> <CR><LF>OK<CR><LF>	The device displays the current parameter setting, followed by “OK“, after entering a successful read command.
<CR><LF>OK<CR><LF>	This response indicates a successful execution of the write command.
<CR><LF>ERROR<CR><LF>	This response indicates an unsuccessful execution of the write command.

8 Events

8.1 *ADCPO Connection Up

Event	Description
*ADCPO:<connection_handle>, <network_type>, <mac_addr>, <bssid><CR><LF>	After establishing a connection to a remote device, the BAT-C transmits the event.

Input and Response Parameters	Type	Value
connection_handle	integer	Identifies the connection.
network_type	integer	1: Managed 2: Ad Hoc
mac_addr	Mac_Addr	Local mac address
bssid	Mac_Addr	Bssid of the network we are connected to.

8.2 *ADCCO Connection Closed

Event	Description
*ADCCO:<connection_handle>, <reason>, <mac_addr>, <bssid><CR><LF>	After disconnecting from a remote device, the BAT-C transmits the event.

Input and Response Parameters	Type	Value
connection_handle	integer	Identifies the connection.

Input and Response Parameters	Type	Value
reason	integer	0: Disconnected by command 1: Disconnected by link loss 255: Reason unknown
mac_addr	Mac_Addr	Local MAC address.
bssid	Mac_Addr	Bssid of the network we were previously connected to.

8.3 *AMDST Digital Signal Transition

Event	Description
*AMDST:<mac_addr><CR><LF>	The device transmits theis event after detecting an external Digital Signal Transition.

Parameters	Type	Value
mac_addr	Mac_Addr	MAC address of the device.

8.4 *AMRSS Low RSSI Warning

Event	Description
*AMRSS:<mac_addr>,<rssi><CR><LF>	The RSSI value is below -70 dBm.

Response Parameters	Type	Value
mac_addr	Mac_Addr	MAC address of the device.
rssi	Integer	RSSI value

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