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2.4G LoRa DTU

USR-DR124

AT Command

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AT

Description	Test instruction AT
Query - Request	AT?
Query - Response	\r\nOK\r\n

AT+E

Description	Set/Query Echo Status
Query - Request	AT+E?
Query - Response	+E:<status>OK
Set - Request	AT+E=<status>
Set - Response	OK
Parameter	<status> : Echo Enable Status ON - Enable AT command echo OFF - Turn off AT command echo

AT+Z

Description	Restart the device
Execution - Request	AT+Z

Execution - Response	OK

AT+VER

Description	Query version number
Execution - Request	AT+VER
Execution - Response	+VER:<para>

AT+ENTM

Description	Exit AT instruction mode
Execution - Request	AT+ENTM
Execution - Response	OK

AT+RELD

Description	Restore user Parameter
Execution - Request	AT+RELD
Execution - Response	OK

AT+CFGTF

Description	Save Parameter to user area

Execution - Request	AT+CFGTF
Execution - Response	OK

AT+SN

Description	Setting/Querying SN
Activation Method	Take effect after restart
	Take effect in real - time
Query - Request	AT+SN?
Execution - Response	+SN:<para1> OK
Set - Request	AT+SN=USRWR,<para1>
Execution - Response	OK
Parameter	<para1>:Length 20 bytes

AT+MODEL

Description	Set/Query device model
Activation Method	Take effect after restart

	Take effect in real - time
Query - Request	AT+MODEL?
Execution - Response	+MODEL:<para1> OK
Parameter	<para1>:USR-DR124-27 Or USR-DR124-12

AT+NID

Description	Setting/Querying node ID
Activation Method	Take effect after restart
	Take effect in real - time
Query - Request	AT+NID?
Execution - Response	+NID:<para1> OK
Set - Request	AT+NID=USRWR,<para1>
Execution - Response	OK
Parameter	<para1>:Length 8 bytes

Serial port functionality

AT+UART

Description	Set/Query serial port Parameter
Activation Method	Take effect after restart
	Take effect in real - time
Query - Request	AT+UART?
Execution - Response	+UART:<para1>,<para2>,<para3>,<para4> OK
Set - Request	AT+UART=<para1>,<para2>,<para3>,<para4>
Execution - Response	OK
Parameter	<para1>: Baud rate ： 1200-921600 (default： 115200) <para2>: data bit： 8(default)、7 <para3>: stop bit ： 1(default)、2 <para4>: check bit： NONE(default)、ODD、EVEN
Supplement	Note: When setting the data bit to 7, the check bit cannot be NONE

AT+UARTFT

Description	Setting/Query serial port packing time Parameter

Activation Method	Take effect after restart
	Take effect in real - time
Query - Request	AT+UARTFT?
Execution - Response	+UARTFT:<para1> OK
Set - Request	AT+UARTFT=<para1>
Execution - Response	OK
Parameter	<para1>:0-250ms

Remote configuration function

AT+SCANCMD

Description	Search device command
Activation Method	Take effect after restart
	Take effect in real - time
Query - Request	AT+SCANCMD=<CH>,<SPD>{{,<timeout>}}
Execution - Response	+SCANCMD: 1,<NID1>,<CH>,<SPD>

	2,<NID2>,<CH>,<SPD> 3,<NID3>,<CH>,<SPD> OK
Parameter	<CH>：CH: 0-50 <SPD>: Rating LoRa:1-8 FLRC:1-6 <timeout>: Scan timeout , by default 10s , Scan time support 10-255 , Restart failed
Supplement	Note: The device information is output one by one, OK or ERR-5 after the arrival time

AT+READCMD

Description	Read the Parameter command
Activation Method	Take effect after restart
	Take effect in real - time
Query - Request	AT+READCMD=<NID>,<CH>,<SPD>,<#CH#VER#...#>
Execution - Response	+READCMD:#CH:8#VER:1.0.0.000000.0000# OK
Parameter	<NID> : Node ID <CH>: CH: 0-50

	<SPD>: Rating LoRa:1-8 FLRC:1-6 <#CH#VER#...#> : Read the Parameter. Multiple instructions can be read at one time. Instructions are separated by # signs, and the maximum byte of the response content is 110 bytes.
Supplement	Note: The timeout time is 2 seconds.

AT+WRITECMD

Description	Setting the parameter command
Activation Method	Take effect after restart
	Take effect in real - time
Set - Request	AT+WRITECMD=<NID>,<CH>,<SPD>,<#CH=8#LBT=1#...#>
Execution - Response	OK
Parameter	<NID> : Node ID <CH>: CH: 0-50 <SPD>: Rating LoRa:1-8 FLRC:1-6 <#CH=8#LBT=1#...#>: Parameter content, supports setting multiple Parameters at a time, instructions are separated by # signs, the maximum content length is 110 bytes
Supplement	Note: 1. To set the Parameter instruction, you need to send the Parameter content <#Z#> instruction and restart the configured device. 2. The timeout time is 2 seconds.

AT+SCANWORD

Description	Remote scan command word
Activation Method	Take effect after restart
	Take effect in real - time
Query - Request	AT+SCANWORD=<WORD>
Execution - Response	+SCANWORD: <WORD> OK
Parameter	<WORD>: 0~255
Supplement	At the same time, you can reply to the scanning function of remote devices

Application function

AT+RF

Description	Setting/Query RF Parameters
Activation Method	Take effect after restart
	Take effect in real - time
Query - Request	AT+RF?
Execution - Response	+RF:<para1>,<para2>,<para3>,<para4>

	OK
Set - Request	AT+UART?
Execution - Response	OK
Parameter	<para1>: modulation system ： LoRa(Default)、FLRC <para2>:CH：0-50，　Default：0 <para3>:Rating：LoRa:1-8 、FLRC:1-6 <para4>:FEC　grade ： 1-3　Default :2

AT+POWER

Description	Setting/Querying Power Parameters
Activation Method	Take effect after restart
	Take effect in real - time
Query - Request	AT+POWER?
Execution - Response	+POWER:<para1> OK
Set - Request	AT+POWER=<para1>
Execution - Response	OK
Parameter	<para1>:Power USR-DR124-27 range 10-27dBm default 27dBm

	USR-DR124-12 is a fixed value of 12dbm

AT+WMOD

Description	Set/Query working mode
Activation Method	Take effect after restart
	Take effect in real - time
Query - Request	AT+WMOD?
Execution - Response	+WMOD:<para1> OK
Set - Request	AT+WMOD=<para1>
Execution - Response	OK
Parameter	<para1>:Working modes: TRANS (transmission) (default), BROAD (broadcast), FP (fixed point), MSS (master-slave slave), MSM (master (From the host)

AT+ADDR

Description	Set/Query device address
Activation Method	Take effect after restart
	Take effect in real - time

Query - Request	AT+ADDR?
Execution - Response	+ADDR:<para1> OK
Set - Request	AT+ADDR=<para1>
Execution - Response	OK
Parameter	<para1>:Device address: 0-65535 Default 0

AT+RELAY

Description	Set/Query relay switch
Activation Method	Take effect after restart
	Take effect in real - time
Query - Request	AT+RELAY?
Execution - Response	+RELAY:<para1> OK
Set - Request	AT+RELAY=<para1>
Execution - Response	OK
Parameter	<para1>:Switch: 0: Off (default), 1: Network terminal, 2: Network relay

AT+RELAYGID

Description	Setting/Querying the relay group ID
Activation Method	Take effect after restart
	Take effect in real - time
Query - Request	AT+RELAYGID?
Execution - Response	+RELAYGID:<para1> OK
Set - Request	AT+RELAYGID=<para1>
Execution - Response	OK
Parameter	<para1>:Scope 0-255 Default: 0

AT+RELAYRULE

Description	Setting/Querying relay rules
Activation Method	Take effect after restart
	Take effect in real - time
Query - Request	AT+RELAYRULE?
Execution - Response	+RELAYRULE:<para1>,<para2>

	OK
Set - Request	AT+RELAYRULE=<para1>,<para2>
Execution - Response	OK
Parameter	<para1>: Scope: 0-255 Default: 0 <para2>: Scope 0-255 Default: 1
Supplement	Para1 does not equal Para2

AT+RFTO

Description	Setting/Query restart without data
Activation Method	Take effect after restart
	Take effect in real - time
Query - Request	AT+RFTO?
Execution - Response	+RFTO:<para1> OK
Set - Request	AT+RFTO=<para1>
Execution - Response	OK
Parameter	<para1>:No data restart time:0-2880min Default:60min

AT+RESEND

Description	Setting/Query Retransmission
Activation Method	Take effect after restart
	Take effect in real - time
Query - Request	AT+RESEND?
Execution - Response	+RESEND:<para1> OK
Set - Request	AT+RESEND=<para1>
Execution - Response	OK
Parameter	<para1>:Retransmission times: 0-3 Default 0 Not enabled

AT+LBT

Description	Setting/Querying LBT
Activation Method	Take effect after restart
	Take effect in real - time
Query - Request	AT+LBT?
Execution - Response	+LBT:<para1>

	OK
Set - Request	AT+LBT=<para1>
Execution - Response	OK
Parameter	<para1>:LBT ON/OFF ,By default, it is enabled

AT+ENC

Description	Set/Query encryption switch
Activation Method	Take effect after restart
	Take effect in real - time
Query - Request	AT+ENC?
Execution - Response	+ENC:<para1> OK
Set - Request	AT+ENC=<para1>
Execution - Response	OK
Parameter	<para1>:ON/OFF default： ON

AT+ENCKEY

Description	Set/Query encryption key

Activation Method	Take effect after restart
	Take effect in real - time
Query - Request	AT+ENCKEY?
Execution - Response	+ENCKEY:********** OK
Set - Request	AT+ENCKEY=<para1>
Execution - Response	OK
Parameter	<para1>:Default 16-bit hex (0-F) (313233...45) Length is 32 bits, and you need to input a 16-bit string

AT+LOG

Description	Set/Query log switch
Activation Method	Take effect after restart
	Take effect in real - time
Query - Request	AT+LOG?
Execution - Response	+LOG:<para1> OK

Set - Request	AT+LOG=<para1>
Execution - Response	OK
Parameter	<para1>: 1: On, 0: Off (default)

AT+SENDOK

Description	Set/Query data transfer success flag
Activation Method	Take effect after restart
	Take effect in real - time
Query - Request	AT+SENDOK?
Execution - Response	+SENDOK:<para1> OK
Set - Request	AT+SENDOK=<para1>
Execution - Response	OK
Parameter	<para1>:ON/OFF default： OFF

AT+CSQ

Description	Setting/Query signal detection
Activation Method	Take effect after restart

	Take effect in real - time
Query - Request	AT+CSQ?
Execution - Response	+CSQ:<para1> OK
Set - Request	AT+CSQ=<para1>
Execution - Response	OK
Parameter	<para1>:0: Off (default), 1: Add SNR and RSSI values after data output, 2: Current channel check

AT+DMOD

Description	Setting/Query additional data transfer
Activation Method	Take effect after restart
	Take effect in real - time
Query - Request	AT+DMOD?
Execution - Response	+DMOD:<para1> OK
Set - Request	AT+DMOD=<para1>
Execution - Response	OK

Parameter	<para1>:0: Off (default), 1: Data front-end attachment node ID, 2: Data front-end attachment node ID, data back-end carries SNR, RSSI value