



Milesight Gateway

SG50/UG63

MQTT API Specification

Date	Applicable Firmware Version	Description
April 12, 2025	64.0.0.3/50.0.0.4	Initial version
May 19, 2025	64.0.0.3-r1/50.0.0.4-r1	Add gateway info enquiry

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1. Introduction

Milesight gateway SG50/UG63 supports MQTT integration with third-party servers to receive data, send downlinks, and configure the embedded network servers. It is necessary to enable an MQTT integration under an application and subscribe data topics as required.

The screenshot shows the 'Application' tab in the Milesight gateway web interface. It features a table with columns: Data Type, Topic, Period, Retain, and QoS. The table lists various data types and their corresponding MQTT topics, periods, and QoS values.

Data Type	Topic	Period	Retain	QoS
Uplink data		Publish as updated	☐	QoS 0
Downlink data		-		QoS 0
Join notification		Publish as updated	☐	QoS 0
ACK notification		Publish as updated	☐	QoS 0
Gateway Info		64800	☐	QoS 0
Request data		-		QoS 0
Response data		-	☐	QoS 0

All messages between the gateway embedded network server and MQTT brokers are transmitted via JSON formats.

2. Uplink Data

When subscribing to this topic, users can receive the uplink-type data from all end devices within this application.

Report Example

```
{
  "applicationID": "3",
  "applicationName": "test",
  "data": "/wv//wEB/xZnB+CUI3cIAf8JAhD/CgEG/w8A",
  "devEUI": "24e124707e094237",
  "deviceName": "AM300",
  "fCnt": 1,
  "fPort": 85,
  "rxInfo": [
    {
      "altitude": "-",
      "latitude": "-",
      "longitude": "-",
      "loRaSNR": 6.1999998092651367,
      "mac": "24e124fffffa0fa8",
      "name": "Local_Gateway",
      "rssi": -49,
      "time": "2025-04-12T02:56:19"
    }
  ],
}
```

```

"time": "2025-04-12T02:56:19",
"txInfo": {
  "frequency": 904700000,
  "adr": true,
  "codeRate": "4/5",
  "dataRate": {
    "modulation": "LORA",
    "bandwidth": 125,
    "spreadFactor": 8
  }
}
}

```

Parameters

Name		Description
applicationID		Application ID
appName		Application name
data		Payload content of this packet (Base64 format).
devEUI		Device EUI
devicename		Device name
fCnt		Frame counter
fPort		Device application port
rx Info		Device rx info
	altitude	The altitude of the gateway (SG50 Only)
	latitude	The latitude of the gateway (SG50 Only)
	longitude	The longitude of the gateway (SG50 Only)
	loRaSNR	Signal to noise ratio
	mac	The gateway MAC address
	name	The gateway name
	rssi	Signal strength (Unit: dBm)
	time	The time for gateway to receive this packet
time		The time for gateway to receive this packet
txInfo		Devie tx info
	frequency	The frequency to receive this packet
	adr	Device ADR status
	codeRate	Code rate
	datarate	Data rate
	modulation	LORA modulation

	bandwidth	Bandwidth for transmission
	spreadingFactor	Spreading factor for transmission

3. Downlink Data

When subscribing to this topic, users can send downlink commands to end devices. When you require to send the downlink commands to a specific device, please add wildcard “\$deveui” when configuring the downlink topic.

Configure Example:

Downlink data

milesight/downlink/\$deveui

Subscribe Example: milesight/downlink/24E124136A456465

(replace the “\$deveui” as the real device EUI to send downlinks to)

Downlink Example

```
{
  "confirmed": true,
  "fPort": 85,
  "data": "/xD/"
}
```

Downlink Parameters

Name	Type & Range	Default	Required	Description
confirmed	bool	-	Yes	Whether requiring the confirmed
fPort	int	-	Yes	Application port of the device
data	string	-	Yes	Downlink command (Base64 format)

4. Join Notification

When subscribing to this topic, users can receive the **Join** notifications if the gateway sends the join accept packet to allow the device within this application to join the network.

Report Example

```
{
  "applicationID": "3",
  "applicationName": "test",
  "deviceName": "AM300",
  "devEUI": "24e124707e094237",
  "devAddr": "06b18ccf",
  "time": "2025-04-12T02:56:18"
}
```

Parameters

Name	Description
applicationID	Application ID
applicationName	Application name
deviceName	Device name
devEUI	Device EUI
devAddr	Assigned Device Address
time	The time to send join accept to the end device

5. ACK Notification

When subscribing to this topic, users can receive the confirmed packet of the devices when sending confirmed downlink commands to devices.

Report Example

```
{
  "applicationID": "3",
  "applicationName": "test",
  "deviceName": "AM300",
  "devEUI": "24e124707e094237",
  "acknowledged": true,
  "fCnt": 2,
  "time": "2025-04-12T02:56:18"
}
```

Parameters

Name	Description
applicationID	Application ID
applicationName	Application name
deviceName	Device name
devEUI	Device EUI
acknowledged	Whether the device receives the downlink
fCnt	Frame counter
time	The time to send join accept to the end device

6. Gateway Info

When subscribing to this topic, users can receive the gateway information.

Report Example

```
{
  "tunnel_support": true,
  "device_info": {
    "model": "UG63-L08GL-868M",
  }
}
```

```

    "region": "EU868",
    "eui": "24E124FFFEF9A1E2",
    "gateway_id": "24E124FFFEF9A1E2",
    "firmware_version": "64.0.0.3-r1",
    "hardware_version": "V1.1",
    "cpu_temperature": "53.3",
    "profile_version": "v1.1",
    "tsl_version": "v1.0"
  },
  "network_info": {
    "modem_version": "EG912UGLAAR03A09M08_01.200.01.200",
    "cellular_ip": "-",
    "imei": "869487060869384",
    "iccid": "-",
    "link": 1,
    "cellular_status": 0,
    "modem_status": 0,
    "wan_type": 1,
    "wan_status": 1,
    "wan_ip": "192.168.45.196",
    "wan_mac": "24:e1:24:f9:a1:e2"
  }
}

```

Parameters

Name		Description
tunnel_support		Whether remote access is supported
device_info		Device info
	model	Device model
	region	frequency region
	eui	Gateway EUI
	gateway_id	Gateway ID
	firmware_version	Firmware version
	hardware_version	Hardware version
	cpu_temperature	Unit: °C
	profile_version	Profile version
	tsl_version	TSL version
	gps	Coordinates (SG50 Only)
	status	0: Normal Running, 1: Sleep Mode (SG50 Only)
battery_info		Internal battery info (SG50 Only)

	battery_temperature	Unit: °C
	solar_status	0: Inactive, 1: Active
	battery_level	Unit: %
	battery_status	0: unknown, 1: Charging, 2: Discharging, 3: Fully charged, 4: Abnormal Charging
network_info		Network info
	modem_version	Firmware version of the cellular module
	cellular_ip	IP address of cellular network
	imei	IMEI of the cellular module
	iccid	ICCID of the SIM card
	link	1: WAN, 2: Cellular (UG63 Only)
	cellular_status	0: Disconnected, 1: Connected (UG63 Only)
	modem_status	0: No SIM Card, 1: SIM Card Error, 2: PIN Error, 3: PIN Required, 4: PUK Required, 5: No signal, 6: Ready, 7: Down, 8: No Cellular (UG63 Only)
	wan_type	0: DHCP Client, 1: Static IP (UG63 Only)
	wan_status	0: Disconnected, 1: Connected (UG63 Only)
	wan_ip	WAN Port IP address (UG63 Only)
	wan_mac	WAN Port MAC address (UG63 Only)

7. Request and Response Data

Milesight gateway provides MQTT API to invoke them to configure the gateway embedded network server settings. Users can subscribe to the Response Data topic to send downlink commands to configure the gateway and subscribe to Response Data topic to get the replies from the downlink commands.

Data Type	topic	QoS
Uplink data		QoS 0
Downlink data		QoS 0
Multicast downlink data		QoS 0
Join notification		QoS 0
ACK notification		QoS 0
Error notification		QoS 0
Request data		QoS 0
Response data		QoS 0

The request message should be sent via JSON format and the response format is also the JSON format.

Request Format

```
{
  "id": "123",           //Random value
  "method": "GET",       //method
}
```



```

    "url": "/ns/device/add",          //url
    "body": {
        //Add contents when method is POST or PUT
    }
}

```

Response Format

```

{
    "id": "123",                      //The same as request
    "method": "GET",                  //The same as request
    "url": "/ns/device/add",          //The same as request
    "body": {
        //Different contents depending on features
    }
}

```

7.1 Add Device

Method: POST

URL: /ns/device/add

Request Example

```

{
    "id": "1",
    "method": "POST",
    "url": "/ns/device/add",
    "body": {
        "name": "EM300",
        "description": "em300",
        "devEUI": "24E124136A456465",
        "classMode": "Class A",
        "netAccess": "OTAA",
        "appKey": "5572404c696e6b4c6f52613230313823",
        "devAddr": "",
        "nwksKey": "5572404c696e6b4c6f52613230313823",
        "appSKey": "5572404c696e6b4c6f52613230313823",
        "fCntUp": 0,
        "fCntDown": 0,
        "fPort": 1,
        "skipFCntCheck": false
    }
}

```

Response Example

```

{
    "id": "1",
    "method": "POST",

```

```

"url": "/ns/device/add",
"body": {
    "code": 200,
    "error":""
}
}

```

//Return 200 if success, failure return code see Appendix

Request Parameters

Name	Type & Range	Default	Required	Description
name	string 64	devEUI	No	Unique value on the device list
description	string 1024		No	Device description
applicationID	string	-	No	Exist application ID
devEUI	string 16(HEX)	-	Yes	Device EUI is unique
classMode	string		Yes	Option: Class A, Class C
netAccess	string		Yes	Option: OTAA, ABP
appKey	string 32(HEX)	5572404c696e6b4c6f52613230313823	No	Necessary to add when join type is OTAA
devAddr	string 8(HEX)	-	Yes	Necessary to add when join type is ABP
nwkSKey	string 32(HEX)	5572404c696e6b4c6f52613230313823	No	Necessary to add when join type is ABP
appSKey	string 32(HEX)	5572404c696e6b4c6f52613230313823	No	Necessary to add when join type is ABP
fCntUp	uint 0~4294967295	0	No	Add when join type is ABP
fCntDown	uint 0~4294967295	0	No	Add when join type is ABP
fPort	int 1-223	1	Yes	Device application port
skipFCntCheck	bool	false	Yes	Frame counter validation

7.2 Delete Device

Method: DELETE

URL: /ns/device

Request Example

```

{
    "id": "1",
    "method": "DELETE",

```

```
"url": "/ns/device",
"body": {
  "ids": ["24E124136A456465", "24E124136A456069"]
}
}
```

Response Example

```
{
  "id": "1",
  "method": "DELETE",
  "url": "/ns/device",
  "body": {
    "code": 200,
    "error": ""
  }
}
```

//Return 200 if success, failure return code see Appendix

7.3 Enquire Device

Method: GET

URL: /ns/device?search=&limit=&offset=&applicationId=

Request Example:

1. enquire all devices

```
{
  "id": "1",
  "method": "GET",
  "url": "/ns/device?search=&limit=100&offset=0"
}
```

2. enquire all devices under one application

```
{
  "id": "2",
  "method": "GET",
  "url": "/ns/device?search=&limit=10&offset=0&applicationId=1"
}
```

3. enquire one device

```
{
  "id": "3",
  "method": "GET",
  "url": "/ns/device?search=24E124136A456465&limit=10&offset=0"
}
```

Response Example

```
{
  "id": "1",
  "method": "GET",
  "url": "/ns/device?search=&limit=100&offset=0",
  "body": {
    "total": 2,
    "result": [
      {
        "name": "EM300",
        "description": "em300",
        "devEUI": "24E124136A456465",
        "appEUI": "",
        "classMode": "Class A",
        "netAccess": "OTAA",
        "fPort": 1,
        "skipFCntCheck": false,
        "devAddr": "",
        "appKey": "5572404c696e6b4c6f52613230313823",
        "nwksKey": "",
        "appSKey": "",
        "fCntUp": 0,
        "fCntDown": 0,
        "active": 0,
        "applicationId": "3",
        "applicationName": "test",
        "createTime": "2025-04-12 13:22:06+0800",
        "lastTime": "",
        "channelsConfiguredFlag": 0,
        "rx2ConfiguredFlag": 0,
        "newChannelsConfiguredFlag": 0
      },
      {
        "name": "AM300",
        "description": "",
        "devEUI": "24e124707E094237",
        "appEUI": "24e124c0002a0001",
        "classMode": "Class A",
        "netAccess": "OTAA",
        "fPort": 85,
        "skipFCntCheck": false,
        "devAddr": "06b18ccf",
        "appKey": "5572404c696e6b4c6f52613230313822",

```

```

    "nwkSKey": "cb6125fde2cc1894e5984db1016b1cda",
    "appSKey": "eda3215c1a9c34ca6bc8ec76373e9da4",
    "fCntUp": 32,
    "fCntDown": 32,
    "active": 1,
    "applicationId": "3",
    "applicationName": "test",
    "createTime": "2025-04-10 13:29:42+0800",
    "lastTime": "59 seconds ago",
    "channelsConfiguredFlag": 1,
    "rx2ConfiguredFlag": 0,
    "newChannelsConfiguredFlag": 0
  }
],
  "deviceMax": 20
}
}

```

Request Parameters

Name	Type & Range	Default	Required	Description
search	string	-	No	The devEUI or device name to search, blank means searching for all devices
limit	int	10	No	Max amount of enquiring devices
offset	int	0	No	Enquire from which device
applicationId	int	0	No	Enquire devices under this application, 0 means enquiring all devices

Response Parameters

Name	Type	Description
total	string	The device amount of enquiry
result	Array	The enquiry result
name	string	Device name
description	string	Device description
devEUI	string	Device EUI
appEUI	string	Device App EUI
classMode	string	Device class mode
netAccess	string	Device join type
fPort	int	Device application port
skipFCntCheck	bool	Frame count validation
devAddr	string	Device Address
appKey	string	
nwkSKey	string	

appSKey	string	
fCntUp	int	Uplink frame counter
fCntDown	int	Downlink frame counter
active	int	1: activate, 0: De-activate
applicationId	string	Application ID
applicationName	string	Application name
createTime	string	The time to create the device
lastTime	string	The last update time
deviceMax	int	The maximum supported device number

7.4 Modify Device

Before modifying a device, it is suggested to enquire this device first.

Method: PUT

URL: /ns/device/{devEUI}

Request Example

```
{
  "id": "1",
  "method": "PUT",
  "url": "/ns/device/24E124136A456465",
  "body": {
    "name": "EM300",
    "description": "em300",
    "devEUI": "24E124136A456465",
    "classMode": "Class A",
    "netAccess": "OTAA",
    "appKey": "5572404c696e6b4c6f52613230313823",
    "devAddr": "",
    "nwksKey": "5572404c696e6b4c6f52613230313823",
    "appSKey": "5572404c696e6b4c6f52613230313823",
    "fCntUp": 0,
    "fCntDown": 0,
    "fPort": 1,
    "skipFCntCheck": false,
    "createTime": "2025-04-12 13:22:06+0800",
  }
}
```

Response Example

```
{
  "id": "1",
  "method": "PUT",
```

```

"url":"/ns/device/24E124136A456467",
"body":{
    //Return 200 if success, failure return code see Appendix
    "code":200,
    "error":""
}
}

```

Request Parameters

Name	Type & Range	Default	Required	Description
name	string 64	-	No	Unique value on the device list
description	string 1024	-	No	Device description
applicationID	string	-	No	Exist application ID
devEUI	string 16(HEX)	-	Yes	Device EUI is unique
classMode	string		Yes	Option: Class A, Class C
netAccess	string		Yes	Option: OTAA, ABP
appKey	string 32(HEX)	5572404c696e6b4c6f52613230313823	No	Necessary to add when join type is OTAA
devAddr	string 8(HEX)	-	Yes	Necessary to add when join type is ABP
nwkSKey	string 32(HEX)	5572404c696e6b4c6f52613230313823	No	Necessary to add when join type is ABP
appSKey	string 32(HEX)	5572404c696e6b4c6f52613230313823	No	Necessary to add when join type is ABP
fCntUp	uint 0~4294967295	0	No	Add when join type is ABP
fCntDown	uint 0~4294967295	0	No	Add when join type is ABP
fPort	int 1-223	1	Yes	Device application port
skipFCntCheck	bool	false	Yes	Frame counter validation
createTime	string	-	Yes	The time to create the device

7.5 Enquire Gateway Info

Method: GET

URL: /gatewayinfo

Request Example

```

{
    "id": "1",
    "method": "GET",

```

```

    "url": "/gatewayinfo"
  }
}
Response Example
{
  "id": "1",
  "method": "GET",
  "url": "/gatewayinfo",
  "body": {           //Refer to chapter 6
  }
}

```

Appendix

Return Code List

Code	Description
200	Success
20101001	Parameter Error
20101002	devEUI exist
20101003	Device number max
20101004	URI is null

Default RX2/Ping Slot Settings

Channel Plan	RX2 Frequency/Hz	RX2 Datarate	Ping Slot Frequency/Hz	Ping Slot Datarate
CN470	Default: 505300000 Range: 470400000~509700000	Default:0 Range: 0: DR0(SF12,125kHz) 1: DR1(SF11,125kHz) 2: DR2(SF10,125kHz) 3: DR3(SF9,125kHz) 4: DR4(SF8,125kHz) 5: DR5(SF7,125kHz) 6: DR6(SF7,500KHz)	Default: 508300000 Range: 470400000~509700000	Default:2 Range: 0: DR0(SF12,125kHz) 1: DR1(SF11,125kHz) 2: DR2(SF10,125kHz) 3: DR3(SF9,125kHz) 4: DR4(SF8,125kHz) 5: DR5(SF7,125kHz) 6: DR6(SF7,500KHz)
EU868	Default: 869525000 Range: 863000000~870000000	Default: 0 Range: 0: DR0(SF12,125kHz) 1: DR1(SF11,125kHz) 2: DR2(SF10,125kHz) 3: DR3(SF9,125kHz) 4: DR4(SF8,125kHz) 5: DR5(SF7,125kHz)	Default: 869525000 Range: 863000000~870000000	Default: 3 Range: 0: DR0(SF12,125kHz) 1: DR1(SF11,125kHz) 2: DR2(SF10,125kHz) 3: DR3(SF9,125kHz) 4: DR4(SF8,125kHz) 5: DR5(SF7,125kHz)

		6: DR6(SF7,250KHz)		6: DR6(SF7,250KHz)
IN865	Default: 866550000 Range: 863000000~870000000	Default: 2 Range: 0: DR0(SF12,125kHz) 1: DR1(SF11,125kHz) 2: DR2(SF10,125kHz) 3: DR3(SF9,125kHz) 4: DR4(SF8,125kHz) 5: DR5(SF7,125kHz)	Default: 866550000 Range: 863000000~870000000	Default: 4 Range: 0: DR0(SF12,125kHz) 1: DR1(SF11,125kHz) 2: DR2(SF10,125kHz) 3: DR3(SF9,125kHz) 4: DR4(SF8,125kHz) 5: DR5(SF7,125kHz)
RU864	Default: 869100000 Range: 864000000~870000000	Default: 0 Range: 0: DR0(SF12,125kHz) 1: DR1(SF11,125kHz) 2: DR2(SF10,125kHz) 3: DR3(SF9,125kHz) 4: DR4(SF8,125kHz) 5: DR5(SF7,125kHz) 6: DR6(SF7,250KHz)	Default: 868900000 Range: 864000000~870000000	Default: 3 Range: 0: DR0(SF12,125kHz) 1: DR1(SF11,125kHz) 2: DR2(SF10,125kHz) 3: DR3(SF9,125kHz) 4: DR4(SF8,125kHz) 5: DR5(SF7,125kHz) 6: DR6(SF7,250KHz)
KR920	Default: 921900000 Range: 920900000~923300000	Default: 0 Range: 0: DR0(SF12,125kHz) 1: DR1(SF11,125kHz) 2: DR2(SF10,125kHz) 3: DR3(SF9,125kHz) 4: DR4(SF8,125kHz) 5: DR5(SF7,125kHz)	Default: 923100000 Range: 920900000~923300000	Default: 3 Range: 0: DR0(SF12,125kHz) 1: DR1(SF11,125kHz) 2: DR2(SF10,125kHz) 3: DR3(SF9,125kHz) 4: DR4(SF8,125kHz) 5: DR5(SF7,125kHz)
US915	Default: 923300000 Range: 923300000~927500000	Default: 8 Range: 0: DR0(SF10,125kHz) 1: DR1(SF9,125kHz) 2: DR2(SF8,125kHz) 3: DR3(SF7,125kHz) 4: DR4(SF8,500kHz) 8: DR8(SF12,500kHz) 9: DR9(SF11,500kHz) 10: DR10(SF10,500kHz) 11: DR11(SF9,500kHz) 12: DR12(SF8,500kHz) 13: DR13(SF7,500kHz)	Default: 923300000 Range: 923300000~927500000	Default: 8 Range: 0: DR0(SF10,125kHz) 1: DR1(SF9,125kHz) 2: DR2(SF8,125kHz) 3: DR3(SF7,125kHz) 4: DR4(SF8,500kHz) 8: DR8(SF12,500kHz) 9: DR9(SF11,500kHz) 10: DR10(SF10,500kHz) 11: DR11(SF9,500kHz) 12: DR12(SF8,500kHz) 13: DR13(SF7,500kHz)
AU915	Default: 923300000 Range: 923300000~927500000	Default: 8 Range: 0: DR0(SF10,125kHz) 1: DR1(SF9,125kHz)	Default: 923300000 Range: 923300000~927500000	Default: 8 Range: 0: DR0(SF10,125kHz) 1: DR1(SF9,125kHz)

	7500000	2: DR2(SF8,125kHz) 3: DR3(SF7,125kHz) 4: DR4(SF8,500kHz) 8: DR8(SF12,500kHz) 9: DR9(SF11,500kHz) 10: DR10(SF10,500kHz) 11: DR11(SF9,500kHz) 12: DR12(SF8,500kHz) 13: DR13(SF7,500kHz)	7500000	2: DR2(SF8,125kHz) 3: DR3(SF7,125kHz) 4: DR4(SF8,500kHz) 8: DR8(SF12,500kHz) 9: DR9(SF11,500kHz) 10: DR10(SF10,500kHz) 11: DR11(SF9,500kHz) 12: DR12(SF8,500kHz) 13: DR13(SF7,500kHz)
AS923-1	Default: 923200000 Range: 915000000~928000000	Default: 2 Range: 0: DR0(SF12,125kHz) 1: DR1(SF11,125kHz) 2: DR2(SF10,125kHz) 3: DR3(SF9,125kHz) 4: DR4(SF8,125kHz) 5: DR5(SF7,125kHz) 6: DR6(SF7,250KHz)	Default: 923400000 Range: 915000000~928000000	Default: 3 Range: 0: DR0(SF12,125kHz) 1: DR1(SF11,125kHz) 2: DR2(SF10,125kHz) 3: DR3(SF9,125kHz) 4: DR4(SF8,125kHz) 5: DR5(SF7,125kHz) 6: DR6(SF7,250KHz)
AS923-2	Default: 921400000 Range: 915000000~928000000	Default: 2 Range: 0: DR0(SF12,125kHz) 1: DR1(SF11,125kHz) 2: DR2(SF10,125kHz) 3: DR3(SF9,125kHz) 4: DR4(SF8,125kHz) 5: DR5(SF7,125kHz) 6: DR6(SF7,250KHz)	Default: 921600000 Range: 915000000~928000000	Default: 2 Range: 0: DR0(SF12,125kHz) 1: DR1(SF11,125kHz) 2: DR2(SF10,125kHz) 3: DR3(SF9,125kHz) 4: DR4(SF8,125kHz) 5: DR5(SF7,125kHz) 6: DR6(SF7,250KHz)
AS923-3	Default: 916600000 Range: 915000000~928000000	Default: 2 Range: 0: DR0(SF12,125kHz) 1: DR1(SF11,125kHz) 2: DR2(SF10,125kHz) 3: DR3(SF9,125kHz) 4: DR4(SF8,125kHz) 5: DR5(SF7,125kHz) 6: DR6(SF7,250KHz)	Default: 916800000 Range: 915000000~928000000	Default: 2 Range: 0: DR0(SF12,125kHz) 1: DR1(SF11,125kHz) 2: DR2(SF10,125kHz) 3: DR3(SF9,125kHz) 4: DR4(SF8,125kHz) 5: DR5(SF7,125kHz) 6: DR6(SF7,250KHz)
AS923-4	Default: 917300000 Range: 915000000~928000000	Default: 2 Range: 0: DR0(SF12,125kHz) 1: DR1(SF11,125kHz) 2: DR2(SF10,125kHz) 3: DR3(SF9,125kHz) 4: DR4(SF8,125kHz)	Default: 917500000 Range: 915000000~928000000	Default: 2 Range: 0: DR0(SF12,125kHz) 1: DR1(SF11,125kHz) 2: DR2(SF10,125kHz) 3: DR3(SF9,125kHz) 4: DR4(SF8,125kHz)

		5: DR5(SF7,125kHz) 6: DR6(SF7,250KHz)		5: DR5(SF7,125kHz) 6: DR6(SF7,250KHz)
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