

EC2X&AG35-QuecOpen

LAN DHCP API User

Guide

LTE Module Series

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About the Document

History

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Introduction

1 DHCP - Dynamic Host Configuration Protocol, It is a LAN protocol and works under UDP protocol. The main purpose is to automatically allocate IP address, hostname, DNS server and domain name to internal network or network service providers.

NOTE

If the access point terminal wants to get the IP assigned by the host, DHCP client function is required. Here, access point terminal enables DHCP Client function by default.

DHCP Data Structure and API

2.1. ql_lan_dhcp_config_s

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```
typedef struct {
    char gw_ip[20];           // Gateway Address, such as "192.168.20.1"
    char netmask[20];        // Subnet mask address, such as "255.255.255.0"
    unsigned char enable_dhcp; // Whether to enable DHCP; enable 1, disable 0
    char dhcp_start_ip[20];   // DHCP start IP address, such as "192.168.20.10"
    char dhcp_end_ip[20];     // DHCP end IP address, such as "192.168.20.254"
    unsigned int lease_time;  // DHCP lease time, in seconds, such as 3600
} ql_lan_dhcp_config_s;
```

2.2. QL_LAN_DHCP_Config_Set

Function	int QL_LAN_DHCP_Config_Set(ql_lan_dhcp_config_s lan_dhcp_config)
Parameter	1) lan_dhcp_config: IN dhcp configuration structure
Return	Int , nonzero means error
Feature	Dynamically configure DHCP features

2.3. QL_LAN_DHCP_Config_Get

Function	int QL_LAN_DHCP_Config_Get (ql_lan_dhcp_config_s *lan_dhcp_config);
Parameter	1) lan_dhcp_config: OUT dhcp_config pointer
Return	Int , nonzero means error
Feature	Get DHCP configuration

DHCP Example Compilation Introductions

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Compile single example_lan.c

- (1) ql-ol-sdk.tar.bz2 decompression: `tar -jxvf ql-ol-sdk.tar.bz2`
- (2) Enter ql-ol-sdk directory: `cd ql-ol-sdk`
- (3) source ql-ol-crosstool/ql-ol-crosstool-env-init **(Make sure the SDK version is the same as the module version, or may get an error.)**
- (4) Execute command: `cd ql-ol-extsdk/example/lan`
- (5) Execute command: `make clean;make`

DHCP Daemon Demo

Execute command: root@mdm9607-perf:~# ./example_lan

4 root@mdm9607-perf:/etc# ./example_lan

```
case 1: Set LAN Config
case 2: Get LAN Config
case 3: ExitPlease select case:
1
Please Input Gateway IP, such as 192.168.30.1
192.168.30.1
Please Input Subnet Mask: such as 255.255.255.0
255.255.255.0
Please Input DHCP Start IP: such as 192.168.30.1
192.168.30.1
Please Input DHCP End IP: such as 192.168.30.254
192.168.30.254
Please Input DHCP enable value, such as 1 or 0
1
Please Input DHCP lease time, in seconds
5000
Set LAN Config Success!
```

Configure DHCP.

```
case 1: Set LAN Config
case 2: Get LAN Config
case 3: ExitPlease select case:
2
Gateway IP :192.168.30.1
Subnet Mask :255.255.255.0
DHCP Start IP :192.168.30.1
DHCP End IP :192.168.30.254
LAN Enable :1
DHCP lease time :5000
```

Get DHCP configuration

```
case 1: Set LAN Config
case 2: Get LAN Config
case 3: ExitPlease select case:
3
root@mdm9607-perf:/etc# █
```

Exit operation

Appendix A References

Table 1: Terms and Abbreviations

Abbreviation	Description
DHCP	Dynamic Host Configuration Protocol