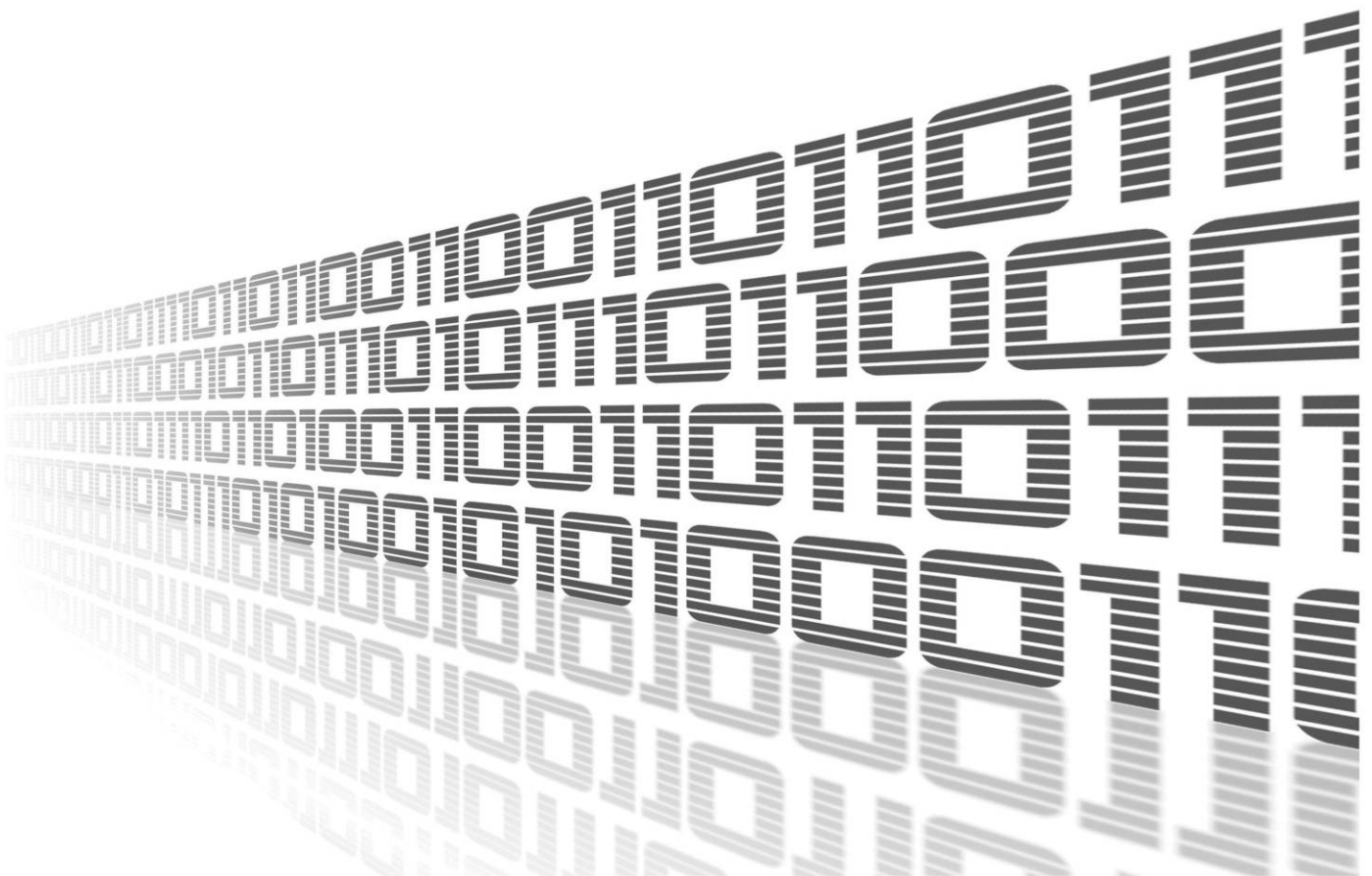


# ADVANTECH



## DHCP Based on MAC OUI



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# Used symbols



Danger – Information regarding user safety or potential damage to the router.



Attention – Problems that can arise in specific situations.



Information – Useful tips or information of special interest.

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# 1. Changelog



This Router App has been tested on a router with firmware version 6.3.10. After updating the router's firmware to a higher version, make sure that a newer version of the Router App has not also been released, as it is necessary to update it as well for compatibility reasons.

## 1.1 DHCP Based on MAC OUI Changelog

### **v1.0.0 (2019-10-11)**

- First release.

### **v1.1.0 (2020-10-01)**

- Updated CSS and HTML code to match firmware 6.2.0+.

### **v1.2.0 (2022-11-03)**

- Reworked license information

### **v1.2.1 (2024-02-29)**

- Added description and summary files
- Recompiled with ModulesSDK 2.1.3

### **v1.2.2 (2024-06-12)**

- Modified to work without unsafe-eval in HTTP header

### **v1.2.3 (2024-07-18)**

- Fixed MAC OUI validation

### **v1.3.0 (2025-01-13)**

- Limited settings editing for administrators only
- Added option to specify IPv4 address range

## 2. Description of the Router App



This router app is not included in the standard router firmware. Uploading of this router app is described in the Configuration manual (see Chapter [Related Documents](#)).

DHCP Based on MAC OUI router app handles IP address assignation for devices according to its MAC OUI.



For *DHCP based on MAC OUI* router app to work, you have to disable routers own DHCP protocol.

### 2.1 What is MAC OUI?

The MAC OUI (Organizationally Unique Identifier) is the first 24 bits (first 3 octets) of a MAC address that identifies the manufacturer of the network device. The IEEE assigns these unique OUI identifiers to companies that need to include them in their networking products.

By looking up the OUI portion of a MAC address, you can determine the manufacturer of the device. This information can be useful for network configuration, troubleshooting, and security profiling. For example, you could use the OUI to identify the vendor of devices on your network and apply appropriate security policies.

The remaining 24 bits (last 3 octets) of the 48-bit MAC address are assigned by the manufacturer to uniquely identify each individual network interface card (NIC). So the full MAC address provides both the manufacturer information (OUI) and a unique identifier for that specific device.

### 3. Web Interface

Once the installation of the module is complete, the module's GUI can be invoked by clicking the module name on the Router apps page of router's web interface.

Left part of this GUI contains menu with Status menu section and Administration menu section. Administration menu section contains only the Return item, which switches back from the module's web page to the router's web configuration pages. The main menu of module's GUI is shown on Figure 2.

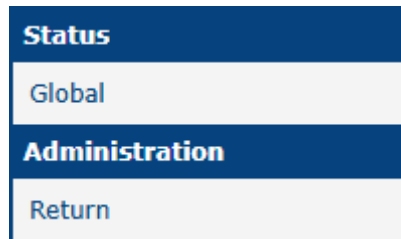


Figure 1: Menu

## 3.1 Configuration

### 3.1.1 Global

All DHCP base on MAC OUI router app settings can be configured by clicking on the *Global* item in the main menu of module web interface. An overview of configurable items is given below.

**Configuration**

Enable

Interface

Free Pool Start

Free Pool End \*

MAC OUI *	IPv4 Address or address range *
<input type="text" value="00:1E:C9"/>	<input type="text" value="192.168.100.1"/>
<input type="text" value="84:B8:02"/>	<input type="text" value="192.168.100.2 - 192.168.100.5"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>

*\* can be blank*

DHCP on the corresponding interface must be disabled in the router's configuration.

Figure 2: Configuration

Item	Description
Enable	Enables usage of DHCP based on MAC OUI functionality. In this case please disable DHCP client in Router configuration.
Free Pool Start	Enter first IP address from range
Free Pool End	Enter last IP address from range
MAC OUI	Enter up to 8 rules for IP address assignation according to MAC OUI, MAC OUI format is expected to be set octets separated by colons (FF:FF:FF)
IPv4 Address or address range	Enter IPv4 address or address range from range defined above for corresponding MAX OUI

Table 1: DHCP Based on MAC UOI Configuration items description



## 4. Related Documents

You can obtain product-related documents on *Engineering Portal* at [icr.advantech.com](http://icr.advantech.com) address.

To get your router's *Quick Start Guide*, *User Manual*, *Configuration Manual*, or *Firmware* go to the [Router Models](#) page, find the required model, and switch to the *Manuals* or *Firmware* tab, respectively.

The *Router Apps* installation packages and manuals are available on the [Router Apps](#) page.

For the *Development Documents*, go to the [Development](#) page.