



## **EdgeLink**



Advantech Czech s.r.o., Sokolska 71, 562 04 Usti nad Orlici, Czech Republic Document No. APP-0130-EN, revised on June 17, 2025.

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### **Used symbols**



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# 1. EdgeLink Introduction

EdgeLink is a software system developed for Advantech gateways, designed to serve as a central hub in IoT architectures. In typical application scenarios, a gateway connects to various smart devices through the southbound interface and to cloud or enterprise platforms via the northbound interface. Positioned in the middle layer, the gateway handles data collection, processing, and forwarding – playing a crucial role in IoT-based business operations.

The version of the router app should be identical to the version of the EdgeLink studio.

EdgeLink is supported only on ICR-32xx-EL PNs that have a valid license. If you choose to install it on a standard ICR-32xx, you can do so, but it will run with a trial license limited to 2 hours. Support is strictly only for ICR-32xx models in v3 platform.

EdgeLink consists of two main components:

- EdgeLink Studio an offline configuration tool for setting up communication and network interfaces supporting one-click deployment and real-time device monitoring.
- EdgeLink Runtime the runtime service on the gateway that executes the configurations defined in EdgeLink Studio. EdgeLink Router App serves as the runtime itself.

You can download the EdgeLink Studio and its corresponding Manual directly from the following links.

# 2. EdgeLink on ICR-3231

• *Edgelink* Router App doesn't have It's own GUI, so make sure you've got it downloaded and installed on your device from Router Apps page. **Trial** version expires after 2 hours of using.

AD\ANTECH	ICR-3231 LTE Router	
Status		Router Apps
General		Installed Apps
Mobile WAN	EdgeLink 2.8.4.1 Release (2025-01-03) Delete	
WIFI	MQTT Broker 2.0.18-1 (2024-01-31) Delete	
DHCP		Manual Installation
IPsec	New Router Apr Choose File Soubor nevybrán Add or Update	
WireGuard	Free Space: 595 MB	
DynDNS System Log		Online Installation
System Log	Load Available Apps	
Configuration		
Ethernet	🔮 Otevíít	×
VLAN		
VRRP Mobile WAN	$\leftarrow \rightarrow \checkmark \uparrow$ $\downarrow \Rightarrow$ Stažené soubery $\rightarrow$ $\checkmark$ $C$ Prohledat: Stažené souber	ry <b>₽</b>
PPPoF		
WiFi		
Backup Routes	Název Datum změny Typ	Velikost
Static Routes	V Dnes	
Firewall	matthroker-2 0 18 v3 22 04 2025 12-33 Komprimovaná složk	3 483 k
OpenVPN		22.0551
IPsec	edgelink_icr3200_2.8.4.1_release_20250103.v3 22.04.2025 10:46 Komprimovaná složk	33 066 k
WireGuard	V Před dlouhou dobou	
GRE	MSTeams Support Logs 2024 06 04 17 29 35.756 04.06.2024 19:29 Složka souborů	
DDTD		
Services		
Expansion Port 1		
Expansion Port 2		
Scripts		
Automatic Update		
Customization		_
Router Apps		
Settings	Vazev souboru: edgelink_icr3200_2.8.4.1_release_20250103.v3	
Administration	Open 😽 Ca	ancel
Manage Users		

• Open Advantech EdgeLink Studio, click the "Create Project" button.

🔏 EdgeLink Studio		x
Open Project	Sing in EdgeHub	
Create Porject	API URL: https://wise-deviceon-bi.azurewebsites.ne	t/api/   Update EdgeHub Host
Open Porject	EdgeHub Host: EdgeSync360/EdgeHub Master Station - ht	tps://api-dm-center-master-ensaas.edge365.advante 🔻
NewProject.acproj	User Name:	
	Password:	
	Remember Password:	Create EdgeHub Account
		Login
	"Seamlessly interact with your edge device anyw	/here."
	EdgeHub allows you to securely onboard and re different networks.	mote manage 101 devices at scale across

- Fill in the fields with your desired project credentials, then click  $\ensuremath{\textbf{OK}}.$ 

Project		
Name:	MyNewProject	1
Author:	Advantech.Guv	1
Path:	C:\Users\name\path\Project	
Description:	This project is used for my new ICR-3231 router.	
	<u>O</u> K <u>C</u> ancel	

• Right-click on your newly created project and select *Add Device*. Then fill in your devices credentials and click *Apply*. Details for each field can be found in Table 1 below.

Project Configuration	New Node* ×	-
MyNewProject	🖌 Apply 🗙 D	viscard
Add Device	General Information	
	Name:	ICR-3231
· ·	Model:	ICR-3200
	Password:	\$\$\$\$
	Identity:	IP Address/Domain Name 🔻
	IP Address/Domain Name:	10.0.0.1
	Time Zone:	(UTC+01:00) Belgrade, Bratislava, Budapest, Ljubljana, 🔻 🕚
		My new ICR-3231 router.
	Description:	
	Copy from existing device:	Select the device to copy the configuration to this device $\bullet$

Item	Description
Name	Enter name of the device.
Model	Select the ICR-3200 series device.
Password	Enter password of the device.
Identity	You can choose between IP Address/Domain Name or Azure identity.
IP Address/Domain Name	Enter IP Address or Domain Name Address of the
	device.
Azure	Enter IoTHub Connection String.
	Enter IoT Edge Device ID number.
Time Zone	Choose the correct time zone of the device.
Description	Write down description of the device.
Copy from existing device	Optionally you can select to copy configuration of an already existing device.

Table 1: Create Device Items Description

### 2.1 Sample Configuration

In this example, we will configure a basic setup using the Simple MQTT Tag List.

• In the Project Configuration panel, locate and uncheck the **Data Publish (Cloud)** option. Then, double-click on the *SimpleMQTT* function to configure it.



• In the Simple MQTT interface, enter the address of your MQTT broker.



• Add one or more tags to the Tag List, such as #SYS\_CURRENT\_TIME, and then click OK to confirm.



• Click Apply to save your changes.

ICR-3231 Simple	eMQTT(ICR-3231)* ×					
🖌 Apply	Discard					
Note: When enabli	ng SSL, please ensure that	the	device tim	e is consi	stent	with t
SimpleMQTT_0 ×	÷					
Connect Type:	MQTT -	Т	agList1 🗙	4		
Enable:		F	Periodic Publis	h:	True	
Use Socks5 Proxy:	Edit	F	eriodic Contr	ol Tag:	Doubl	e click to
host:	broker.advantech.com	F	Publish Period	(s):	60	
Port:	1883	F	ub all after r	econn:	$\checkmark$	
SSL Enable:					_	
SSL Scenario:	Anonymous connection			) Name	-	Alias
SSL Version:	tlsv1.2 -		Double die	ck to edit		
MQTT Version:	3.1.1 🔻		I			
chart ID.						

• If an error message appears stating "Some content in this page is error", look for a red cross icon. Hovering over it will display the exact error message.

Timeout(s): 30	
Enable data resume:	
Data before break(s):	S To enable the data resume function, you need to enable the Data Logger function at the same time
Data after reconnect(s):	0
Delay before resume(s):	120

• Once the configuration is complete, click on the projects top-level node and select *Project Download* to upload the project to the device.

ject	Help			
36	H			EdgeS 360
Close Project	Save •	Project Download	Export To SD Card	Export f EdgeSync
ect			Deploy	
iration		1	ICR-323	1 Sin
Project			1	Apply

• Optionally, you can install the *MQTT Broker* app on the device and send data to a local broker. To subscribe to the topic and receive data, connect to the router and run the following command:

mosquitto\_sub -L mqtt://localhost/data/device\_id

## 3. Known Issues

### 3.1 License Loss After EdgeLink Reinstallation

If you are using a router with a valid EdgeLink license (model with -EL suffix) and you reinstall the EdgeLink application, the license may be lost during the reinstallation process.

#### Workaround

If the license file has been lost due to reinstallation, you can restore it manually using the following command:

```
cp /var/data/.edgelink/.elic /opt/edgelink/project/
```

Make sure to execute this command in the router's command line interface (CLI) after the reinstallation process is complete.

#### Note

This issue affects only licensed routers (-EL) and occurs only when the EdgeLink application is reinstalled without preserving the license file. It is recommended to back up the license file before performing any manual updates or reinstallations.

## 4. Related Documents

You can obtain product-related documents on the Engineering Portal at *icr.advantech.com*.

To access your router's documents or firmware, go to the *Router Models* page, locate the required model, and select the appropriate tab below.

Documents that are common to all models and describe specific functionality areas are available on the *Application Notes* page.

The Router Apps installation packages and manuals are available on the Router Apps page.

If you are interested in further options for extending router functionality, either through scripts or custom Router Apps, please see the information available on the *Development* page.