

How to Choose, Insert and Set SIM card with iCex

1. How to choose the right SIM card?



- ✓ It needs to be for **GSM** network (not for CDMA).
- ✓ **Standard SIM dimensions** – so called 2FF (not micro – 3FF or nano – 4FF)
- ✓ It needs to support **3G (UMTS), GPRS** or **both** ways for data transfer.
- ✓ Needs to be **open for Data** (no need to be open for SMS and Voice).
- ✓ Data plan of the card needs to be at least **150MB/month**.
- ✓ No need for static IP address.

2. What you need to know before setting SIM card in iCex?

- **APN** of cellular provider.

APN (Access Point Name) is the gateway between provider's mobile network and Internet. It is needed by iCex to connect to COMP – RealiteQ software in the cloud.

With most of providers APN is enough to set in iCex to log to Internet. But some providers, in addition to APN, are asking for **Authentication parameters**, like:

- Authentication type – PAP or CHAP
- Username
- Password
- PIN code
- PUK code

Authentication parameters, if any, are needed for iCex modem settings too.

Usually APN and Authentication are stated in provider's site

Note: We highly recommend contacting cellular provider for details

Some examples of APN:

<u>APN</u>	<u>Provider</u>
internet.cxn	- Telenor Global
internet	- Partner (Local)
sphone or internetg	- Cellcom (Local)
Internet.pelephone.net.il	- Pelephone (Local)

3. Inserting SIM card in iCex

- The hole/holder for the SIM card is located on back of iCex, on right side (Fig. 1)



Fig.1



Fig. 2

- Insert SIM card as shown in Fig.2.
- Press firmly with sharp object (for example pen or small screwdriver) until feeling light click. SIM card remains slightly inside iCex.
- To remove SIM card, press slightly on it again with sharp object and release.

4. SIM card configuration

- Open iCex web interface

Tip: You can get more information about iCex web interface from iCex User manual. You can download it from <https://www.realiteq.com/> → Downloads → Spec and Manuals Downloads → iCEx manual V2.0 (003): [https://www.realiteq.com/media/icex_manual_v2.0_\(003\).pdf](https://www.realiteq.com/media/icex_manual_v2.0_(003).pdf)

- Open **Modem 1** tab.

Name	Value
General	
Active	<input checked="" type="checkbox"/>
Redundant to ETH	<input checked="" type="checkbox"/>
Tracing	<input checked="" type="checkbox"/>
Read available operators	<input type="checkbox"/>
APN	internet
Roaming	
Allow	<input type="checkbox"/>
Set network operator	Automatic
Operator number	42501
Authentication	
Authentication type	None
Username	
password	
PIN code	
PUK code	

- ✓ Check **Active** to activate the modem.
- ✓ Check **Redundant to ETH only** if you want to obtain redundancy between LAN and cellular network. In this case iCEx needs to be connected to LAN too.
- ✓ Check **Tracing** if you want to debug communication
- ✓ Check **Read available operators only** if using SIM card open for Roaming. For local SIM cards keep it unchecked.
- ✓ Type **APN** of the provider. See point 2 for details.
- ✓ Check **Allow Roaming only** if you are using Global SIM card, enabled for Roaming.
- ✓ Set **Network operator only** if your SIM is open for Roaming, but you want to select specific operator. Usually left to **Automatic**.
- ✓ Enter Authentication parameters, if any.

- Apply on **Write** to save settings to iCex memory.
- After setting all modem parameters and save it, return to iCex tab and apply on **Reboot**.

Note: Connecting iCex to cloud usually takes 2-3 minutes (with Global SIM can take a little longer). You can observe LED status to follow the process.

5. Monitor and troubleshooting communication via iCex LEDs.

5.1. GSM LED



The upper, **GSM** LED is showing connection to provider's GSM network.

- **Blinking** – when iCex is trying to connect to cellular network.
- **Lighting** – when iCex is connected to cellular network.

Troubleshooting tips:

If GSM LED is blinking for more than 3 minutes after iCex powered or reboot:

- Check GSM signal (compare with cellphone)
- Check if antenna is connected properly. Try to reposition it
- Check if SIM card is inserted and inserted properly .
- Check if SIM card is active at all. Remove and put on a cellphone

5.2. Connect (to Internet) LED



Second – **Connect** LED, is showing connection between Cellular network and Internet. It starts to blink only after successful connection of iCex to GSM network.

- **Blinking** when iCex is trying to connect to Internet.
- **Lighting** when successfully connected to Internet

Troubleshooting tips:

If Connect LED is blinking for more than 3 minutes after GSM LED lights:

- Check APN and other Authentication parameters.
- Check if SIM is open for Data and have enough resources - Take SIM card to unlocked cellphone or cellphone from the same provider, disable Wi-Fi and try to surf Internet.

5.3. Status B LED – Connection to COMP – RealiteQ cloud



Fourth – **Status B** LED - Starts to blink only after successful connection to Internet (GSM and Connect LEDs are lighting)

- **Blinking** when iCex is trying to connect to COMP.
- **Lighting** continuously when successfully connected to COMP. In your project, you will see iCex showing **Connected**.

Troubleshooting tips:

If Status B LED is blinking for more than 3 minutes after Connect LED lights:

- Check if **iCex name** is right (iCex web UI – iCex tab)
- Check if **Access token** is right.
- Check if **Project name** (URL) is right