

Installation and operating instructions

ICAR IK205 vehicle, person, package, boat tracking device



Introduction

In developing the products we offer, the manufacturers have acted with the utmost care and in accordance with international standards.

Warranty

We offer a 12-month warranty on the products, which is valid from the date of purchase. Keep the invoice or block you received at the time of purchase and / or the warranty card of the device, because you can only enforce your warranty claim if you have them. During the warranty period, we will replace any defective main unit, accessory or software of the product in the event of any defect attributable to a manufacturing, material or software defect. Subsequent repairs to the device or its accessories are not permitted by the manufacturer due to the design of the device.

The warranty does not cover a product (or accessory) that has been damaged or rendered inoperable due to attempts to modify or repair the software, physical impact, poor voltage, improper use.

To ensure proper, effective and safe use of the product, read the instruction manual carefully and keep it for future reference. Flexcom Kommunikációs Kft. Shall not be liable for any damage, product damage, short-term or long-term health damage that may occur as a result of use, repair, storage and transport other than those described in this manual.

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Protection of personal data

The product is a complete product as a combination of hardware and software components. For safe and correct use, proceed as described in this manual during installation and use. Keep the device or software out of the reach of unauthorized persons. Our company provides all technical and regulatory conditions to ensure that data management complies with legal requirements and that your data does not fall into unauthorized hands. We accept no liability for damage resulting from unauthorized use of the product and software.

Formats and notations

The following style settings are used in descriptions, guides, and other documents:

- Bold text** Name of product components, instructions, options, processes, services, user interface elements.
- Italic text* Links to other publications, emphasis.
- Courier text** System messages, internet addresses, document names.

Warning and cautionary signs:



Tips, advice, ideas.



Document download option.



General attention to information about the product or its operation.



Indication of situations with a lower risk to the user or the product (minor injuries, inconveniences).



Indication of situations which present a higher risk to the user (serious injury, possibly death) or which may cause damage or destruction of the product.

Product description

The device combines several functions of accurate positioning, safety, monitoring, emergency alarms and full tracking. It supports SMS / GPRS / Internet data transfer functions and can be widely used in many areas of location-based services, traffic safety and management.

Based on its design and portability, the device was designed by the manufacturer to track vehicles, containers and ships, so its users are primarily their owners and operators.

Settings that affect the operation of the device can only be changed from another device (smartphone, computer) using the appropriate application or SMS commands - so users can be sure that the device always works according to the parameters they specify.

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How to use

After charging, inserting the SIM card and setting up via SMS or mobile phone or PC application, the device is placed in the desired location. After switching on, the GPS receiver and the SIM card automatically connect to the GPS / GLONASS satellite and GSM mobile networks (if available) and start collecting position data, which can be queried using SMS or an Internet application.

To use the features of your device, you need a SIM card, similar to a mobile phone. The device communicates on the mobile service provider's network with a SIM card, via SMS, or via mobile phone or PC applications. After inserting the SIM card and charging the battery, you can make the necessary settings by sending an application or SMS (eg entering the device ID name, frequency of sending position data, etc.).

When switched on

- The device continuously registers position data, which can be queried with a limited number of SMS commands.
- If you have a software subscription, the device sends the position data to the software service center - the processed results (eg map route display, route event list, real-time tracking) - can be viewed in the phone or computer application. The subscription software provided by the distributor for the device greatly expands the range of features of the device. These extensions are only available in the mobile or PC application.

You can find detailed information on the installation, use, maintenance and decommissioning of the device in the following sections of the documentation.

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Technical parameters

Physical characteristics

Parameter	Value
Dimensions (mm)	W: 47,5, L: 60, H: 24
Weight (g)	102
Humidity	5%-től 95%-ig (none condensing)
Water resistance	IP67
Operating temperature	from -20C to +65C

Memory

Parameter	Value
Built-in	No
SD card	No

Energia ellátás

Parameter	Value
Battery	Li-ion polimer 3.7V 5000mAh
Input voltage	5V
Charging	5V 1A via USB

Operating time

Parameter	Value
Standby time	25 days

Network

Parameter	Value
GNSS	GPS / LBS / GLONASS
Type of data traffic	GSM / GPRS
SIM card	Nano
GSM frequencies	850, 900, 1800 és 1900 MHz
GSM chip	MT2503
GSM signal strength measurement	Yes
GPS chip	MTK2503
GPS sensitivity	-162 dbm
GPS accuracy	10 m

Communication

Parameter	Value
SMS	Yes
TCP	Yes

Sensors

Parameter	Value
Motion detection	Yes

Interface

Parameter	Value
GSM antenna	Internal
GPS antenna	Internal
Built-in microphone	Yes
Built-in speaker	?
Magnetic mounting	Yes

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User's guide

Transport and storage

The packaging is designed to protect the product from the usual physical effects during transport. Be careful to avoid effects other than these.

The packaging of the product is not water, flame and heat resistant and only moderately pressure resistant. Therefore, do not keep the box in a humid environment, out of the reach of heat-emitting equipment, or place heavy objects on it.

Installation



The package consists of a box containing the device and its accessories.

Unpacking



1. Open the box.
2. Remove the product and its accessories.

Contents of the package

	1 tracking device
	1 USB charging cable



Preparing the SIM card

As with mobile phones, a SIM card is required to operate the device. The device communicates with the mobile service provider's network via SIM card, SMS or mobile phone or PC applications.



You can purchase the card independently from your mobile service provider or, in the case of a software subscription, from your product distributor. If you received the SIM card from your dealer, you do not need to make any settings: the card is already set up, inserted in the device, switched on and ready for use.

If you have received the SIM card from your dealer, do not try to transfer it to another device (eg phone) and use it! The distributor (service provider) will reimburse the resulting costs or the correction of the resulting errors.

Settings for your SIM card

If you did not obtain the SIM card from your tracking device vendor, you must set it up before inserting and using it in the device, which you can do as follows.

Disable SIM card PIN and other functions

1. Insert the SIM card in your phone.
2. Among the setting functions of the phone
3. turn off the PIN code request, auto-reply and call forwarding options.

After turning off the above, insert the card into the tracking device. See the next section for instructions on how to insert the SIM card.

Setting up data traffic

If you want to operate the device not only via SMS, but also e.g. If you use the software tracking service provided by your dealer, you must activate GPRS (Internet) data traffic and enter the appropriate network settings. To do this, you need to send SMS messages from your phone to the phone number of the SIM card inserted in the tracking device, as shown in the table below.

The factory-set access password for the tracking device in the commands: 123456

Setting	SMS message	Device response
Enter the APN name	apn123456 apn-name	apn ok
	<p>APN names for domestic service providers: In case of problems, check the exact settings with your mobile service provider!</p> <p>Telenor: online or net Example: apn123456 online OR apn123456 net</p> <p>Telekom: internet Example: apn123456 internet</p> <p>Vodafone: - in case of subscription: internet.vodafone.net - in the case of a top-up card: vitamax.internet.vodafone.net Example: - apn123456 internet.vodafone.net - apn123456 vitamax.internet.vodafone.net</p> <p>Digi: internet Example: apn123456 internet</p>	
<i>If your mobile network provider has not provided you with an APN username and password, you do not need to send the following SMS messages to the tracking device.!</i>		
APN username	apnuser123456 APN-username	apnuser ok
APN password	apnpasswd123456 APN-password	apnpasswd ok

Inserting the SIM card



Only nano-sized SIM cards can be used with this product. If you have a micro or nano SIM, use a card adapter!

Insert the SIM card into the device as follows:



1. Prepare a micro SIM card that is GSM / GPRS capable and has a data frame of at least 30 Mbytes.
2. Open the protective cover.
3. Insert the SIM card into the slot (make sure it is in the correct position and direction).

Application installation, access

In order to operate the device and other services based on it, the distributor provides mobile and computer applications in the subscription system. The PC program is accessible via a browser at <https://gpspositions.net/map/>, and you can install the phone application on your phone in one of the following ways:

For Android phones

1. Open the Google Play app on your phone.
2. Search for „Flexcom” or „Flexcom tracking” on Google Play.
3. Install the tracking application.

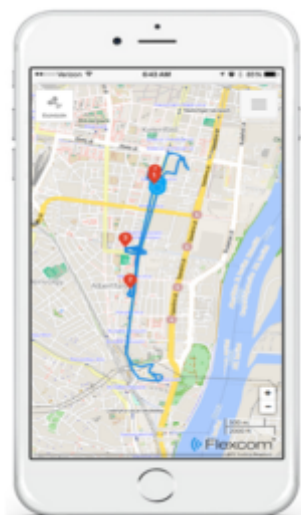
or



1. Scan the QR code shown here with your phone.
2. Open the web address decoded from this.
3. Install the Flexcom tracking application.

For iPhones

Use the browser on your phone to access the service (<https://gpspositions.net/map/>).



Using the device

User Interface

The device has a reset button, a SIM slot, an on / off button, a USB charger connector and an LED display. The latter provides information about the operation and current status of the device.



LED display statuses

Green or blue indicators related to the status and operation of the device.

Color	On	Flashes	Off
Green	GSM/GPRS connection on.	No GSM/GPRS connection.	Device off or in sleep mode.
Blue	Satellite connection on.	No satellite connection	Device off or in sleep mode.
Red		Charging.	Charged.

Switching on and off

The device turns on automatically when charged. In addition, you can turn it on or off at any time using the power button. The button responds by holding down for a few seconds, in which case the LED display flashes green.

The device automatically connects to GSM and satellite networks after start-up. The current status is indicated by the LED displays.

If the appropriate satellite connections are available, positioning will be based on these data. If not, the device performs position calculation (LBS) based on the position of the transmission towers of the mobile service providers.

Restart

The Reset button on the top of the device can be accessed through the hole, e.g. using a paper clip stem or needle. Pressing it will restart the device.

Charging the battery

The device is powered by a built-in battery, which needs to be charged at different intervals depending on the intensity of use. Your phone charger is suitable for charging, but you can also use the USB connection of a computer or energy bank. During charging, the LED flashes red. When the device is fully charged, the light turns off.



Charging takes a few hours. When the battery is fully charged, disconnect the charging cable. The device does NOT have overcharge protection, so prolonged or continuous charging will shorten the life of the device or, in worse cases, damage it.

For the device with a voltage of 5V 1 Use a charger that provides current. Chargers with a higher capacity can damage the battery.

Operating time

The device operates continuously connected to an external (vehicle) power supply. Own battery max. Allows 2 hours of operation.

Normal operation of the device

The device can be operated in the following ways:

1. using the software service provided by the distributor and the SIM card together, in addition to

- the software service provided by the distributor but using his own SIM card, or
2. without the service provider's software service, with your own SIM card.



The service provider provides a SIM card for the tracking device only if you subscribe to the software service. In the case of unsolicited use of the software, the user must provide the appropriate card with a data traffic limit (also).

With Distributor Software and SIM Card

In this case, you can receive the device in the ready state, no further settings are required to use it.

Separate software is available for setting or adjusting the operating parameters of the device, for retrieving information or for using more advanced services (eg map route display, waiting and travel points, diagrams, timetable, etc.). This is provided by the distributor in the form of a downloadable application on a desktop and tablet browser on an Android mobile phone as part of a subscription system.



To use the software, an active internet connection is required on your device (mobile phone, computer).

The software stores and processes the data sent by the tracking device to the service provider's center, from which the graphical and textual information is generated. Using the software triggers (sometimes very expensive) SMS and voice call communication with the device and provides tracking and security services that go well beyond the basic functions of the device.

After launching the application in a browser or phone:

1. In the login window, enter the username and password you received in the email from the distributor or registered on its website.
2. In the interface that appears, select Help and review the information for using the software.
3. Software management information is available in its help.

With Distributor software but with own SIM card

After setting up and inserting the SIM card as described in the setup chapter, you must register the card. To do this, contact your software service provider (device vendor). From now on, the operation of the device is the same as described in the previous chapter.

Without software, with own SIM card



If you have subscribed to the reseller's software service, DO NOT use the standalone SMS

communication method because



- redundant (the software has all the functions needed for tracking and settings),
- the software provider charges a separate fee for the possible elimination of possible operational anomalies caused by SMS commands,
- if you use your own SIM card in the device, SMS will incur extra costs,
- if you use your service provider's SIM card, your service provider will reimburse you for the cost of the SMS.

If you do not use (have not subscribed) to the software service provided by the dealer, you can only use the basic functions of the device - by sending SMS messages from your mobile phone to the phone number of the device's SIM card.

Setting options via the software

When using the desktop or mobile application of Flexcom Kft, the setup operations related to tracing can be accessed in the following ways.



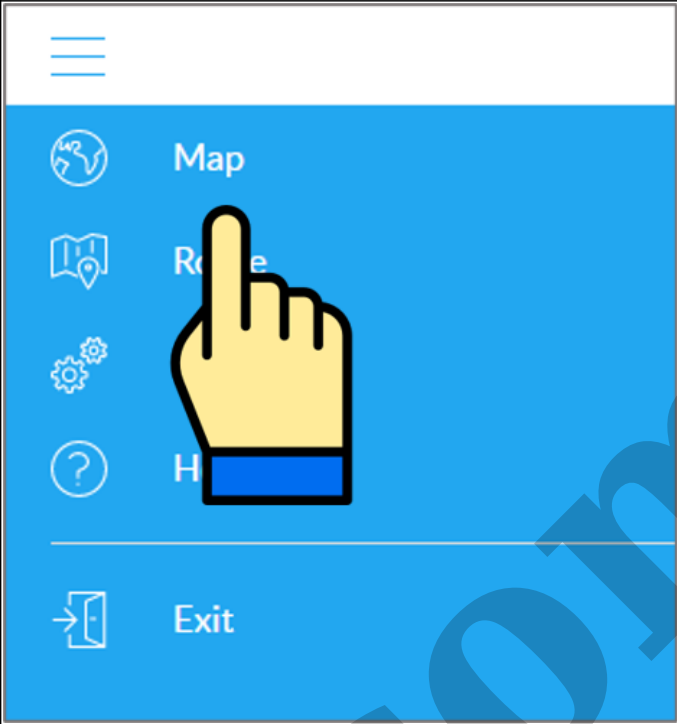
The settings and commands that can be issued depend on the type of device. See the rest of this guide for information on options for this device.

When using a desktop application:

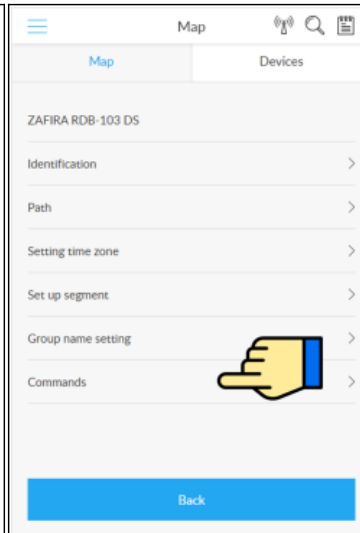
Select the desired device on the map or in the menu.

Click the Settings or Commands button to select the general setting or behavior you want.

When using a mobile application:

From the application menu, select Map.	
Switch to the Tools panel.	
Find your device in the list of devices and tap the Setup icon next to the ID.	

Select the desired setting or, when sending a command, select Commands.



Control the device with SMS commands sent from a mobile phone

The factory-set access password for the tracking device in the commands: 123456

General settings

Function	Description	SMS message	Device response
Administrator phone number	After setting the administrator's phone number, the tracking device only accepts certain commands in SMS messages from that number. The command - given the password - can be issued from any phone.	admin123456 telefonszám Example: admin123456 00361234567 Use to enter the phone number country code prefix (eg 0036, Hungary).	Admin Ok
Server setup	If you use your device through a computer service, enter the address of the server that receives the data. The command can only be issued from the administrator phone.	IP url port Example: IP www.szerver.com 8012	Set IP Ok
Setting time zone	The device default time zone is set to GMT + 0. This is changed (eg in the case of Hungary, the time zone is GMT + 1), as follows.	timezone123456 value (where value: pl. +1, -2, 0 etc). Example: timezone123456 +1	Time Ok
Frequency of data transmission	Frequency of data submission in case of data collection on a server. The command can only be issued from the administrator phone.	upmovejelszó seconds Example: upmove123456 30	Ok
Voice monitoring	Turn on the monitoring of ambient sounds and noises (microphone reception). The command can only be issued from the administrator phone.	88	Monitor Ok
Initialize satellite connection	Search for satellites. The command can only be issued from the administrator phone.	CQGPS	GPS reset Ok
Restart the device	You can also switch the device on and off (restart) from your phone. The command can only be issued from the administrator phone.	CQ	Reset Ok
Turn off the device remotely	You can also turn off your device from your phone. The command can only be issued from the administrator phone.	poweroff, 123456	Poweroff Ok
Checking the device	Retrieve device status information. The command can only be issued from the administrator phone.	CXZT	Data set characterizing the operating status of the device.
Factory default setting	Reset the device to factory settings. The command can only be issued from the administrator phone.	Format	Ok

Query the position of the device

	The device - e.g. to save energy, you can switch it to sleep mode. There are two versions of sleep mode:			
Description	SMS	Device response		
<p>Sleep mode</p> <p>The following command returns a Google Map link, which, when clicked (or tapped), displays the map with the device's position on it.</p> <p>Switch GPRS mode (data link) on and off</p>	<p>and then return to sleep mode after 3 minutes, or „Shock“ mode (vibration) and then returning to sleep mode after rest. This mode should be used, for example, while driving.</p> <p>In sleep mode, satellite communication is paused, and the mobile network connection operates at a basic level.</p> <p>The GPRS data transfer mode is switched off by default in the device's software, the GPRS mode must be turned on.</p> <p>If you have purchased the device with a software service subscription from the dealer, the GPRS mode is already activated!</p>	<p>Activation in „Shock“ mode</p> <p>SMS: sleep123456#</p> <p>To deactivate any sleep mode</p> <p>SMS: sleep123456 off</p> <p>Google map link</p>	<p>Latitude</p> <p>Speed</p> <p>Battery Voltage</p> <p>Device ID</p> <p>Google map link</p>	<p>lat:22.65655 lon:114.18573 Spd:000 T:13/10/15 15:55 bat:70% ID:8168000010 http://maps.google.cn/maps?q=+22.65655,+114.18573</p>
		<p>Activation in „Shock“ mode</p> <p>SMS: gprs123456</p> <p>Deactivate:</p> <p>SMS: nogprs123456</p>	<p>LBS position</p> <p>Time</p> <p>Battery level</p> <p>Device ID</p> <p>Last GPS connection</p> <p>Google maps link</p>	<p>lat:27a4 1223 T:24/09/15 15:17 bat:100% ID:2015070203 Last:T:25/09/15 03:04 http://maps.google.com/maps?q=+22.63949,+114.17188</p>

Troubleshooting and repair

Conditions for safe use of devices

Information for people with long-term health problems or disabilities

- This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.
- Their casing is made of plastic or metal, which currently has no known health risk (e.g., toxic or allergenic effects).

Technical service life of products

- If the device contains a battery, its life is usually approx. 3 years.
- If you find that the operating time is significantly reduced, replace the battery as soon as possible to avoid malfunction.
- Have the battery replaced by a qualified service technician - contact your product dealer for information.

Possible problems with proper use

- Cracks, breaks or deformation of the cabinet may cause skin injury or injury to the user's hands.
- Restrictions on the use of products
- Do not use the products under water or expose them to strong water jets or excessive vibration.

Maintenance

- The products do not require regular technical maintenance.
- Disconnect the device from the charger before cleaning. Do not use abrasives or cutting or abrasive tools for cleaning.

Decommissioning

- Products do not contain harmful, toxic substances.
- Their internal components, outer casings and accessories are not made of or only slowly degradable materials - they must be treated in accordance with the appropriate waste disposal procedure.

Identifying problems and possible solutions

Symptom	Possible cause	Solution
The device does not turn on or turns off immediately after turning it on.	The battery may be exhausted.	Charge the battery.
Phone calls and / or SMS communication between the device and the phone do not work.	No GSM connection.	Check the strength of the GSM connection. If the LED is solid amber, there is no connection to the service provider's network. You may be in a shaded area - change position.
	The SIM card is defective or there is a contact error.	Remove the SIM card, or clean it with a soft eraser or stylus and reinsert it. If it still does not work, have it tested by a professional (eg a mobile service provider).
Phone application services do not work.	Your device, phone or none of them have a GPS satellite and / or GSM / Wifi connection.	Check GPS, GSM and wifi connection. If the LED is solid yellow or blue, there is no satellite and / or mobile service connection. Also check the wifi connection on your phone. Look for a place that is not shaded by trees, buildings, or other landmarks, or a place where the signal strength is higher.
	Service provider system error	If you do not find a problem with the above, there may be a system error with your telephone application provider.
The device does not respond to SMS commands	APN setting error	Check the APN settings of the tracking device.
	There may be an incorrect SIM card in your device.	A card with voice call, SMS and GPRS data traffic is required for the device to work properly.
SMS mode works, but the app does not.	The device may be in sleep mode.	Check the operation of the device. For example: send an alarm SMS to the device (see Chapter 5).

Troubleshooting and warranty repair

If you can identify the error based on the above or the recommended solution does not work, contact your dealer:

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During the warranty period, if the conditions of the warranty have not been violated, the distributor will take care of the professional investigation of the cause of the failure, repair of the error or replacement of the device.

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Decommissioning

Disposing and destroying the device

If you decide to stop using the appliance, do not throw it away with the normal household waste. The device is a complex structure and its components contribute to environmental problems to varying degrees.

- The device has a printed circuit board made of copper, an epoxy resin based board, which is coated with gold in places. It is made using gallium arsenide, antimony, beryllium, brominated flame retardants, cadmium, lead, nickel, palladium, silver, tantalum and zinc, of which flame retardants and lead are the most dangerous to the environment.
- Copper, cadmium, nickel and zinc were used to make the battery.
- The cover is made of polycarbonate plastic, which is difficult to recycle, its material may also contain brominated flame retardants, which are particularly dangerous for the environment.
- The charging cable consists mainly of plastic-coated copper wires, but may also contain gold, cadmium and brominated flame retardants.

In case of improper handling, the above substances are more or less harmful to the environment. Therefore, if you dispose of the device, dispose of the device as electronic waste, hand it in to a specialist waste disposal service or dispose of it in a container for the collection of this type of waste.

Disposal of packaging

The packaging of the device (box and inner packaging materials) was made using paper and various plastics. The box paper, the internal sealing profile and the bags protecting the device should be disposed of as plastic waste.