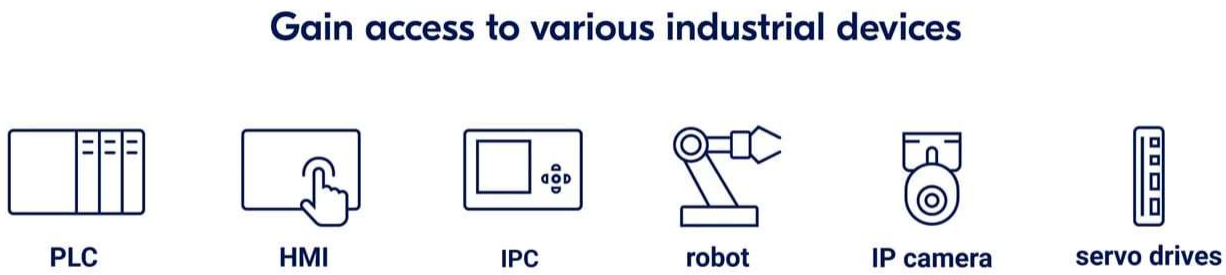
PLC remote access with IXON Cloud

Today, remote access to the PLC is indispensable for machine builders. We are in an environment where quick access to your machines is the norm. Common use cases of remote access include remote support, remote programming, remote troubleshooting, remote monitoring and remote commissioning.

How PLC remote access works

Basically, remote access to your PLC works the same as your local setup. Things you usually do locally can be done via a VPN connection so you don't have to be on-site with the machine. Think of programming the PLC so the machine's requirements are met, monitoring variables to detect bugs, monitoring machine states in detail, and taking control of your desktop.

Industrial remote access enables you to access all your equipment, including PLCs, HMIs, robots and IP cameras, from anywhere in the world. With a VNC server running on the HMI or IPC, you can view and control the same remote screen as on site. You can also access the local HTTP web servers to view settings or video streams.



Remote access to your industrial devices with IXON Cloud

Secure solution for PLC remote access

IXON Cloud makes remote access easier and more accessible for all machine builders, with a secure router, simple installation and scalable cloud platform: the IXrouter and IXON Cloud.

The IXrouter is an edge gateway and industrial VPN router in-one, compatible with all big brands. It's developed to remotely connect your PLC and HMI in minutes to the IXON Cloud platform. After following the 3 simple steps of installation you can start monitoring your PLC from any remote location.

Secure connection from machine to cloud with the IXrouter featuring a built-in firewall

Benefits of PLC remote access with IXON Cloud:

- **Quick and easy setup**
  'You don't have to deal with thousands of settings. You put the USB-stick in the IXrouter, go get some coffee and when you come back it's ready. You only have to configure it once.' - André Arends, Software engineer at Finis Food Processing.

- **Secure remote access**
  'Our customer can be confident that there won't be a security breach as a result of an open network. We have few discussions with customers about security as it is the responsibility of IXON, who have made it their profession.' - Heico Sandee, Managing Director at Smart Robotics

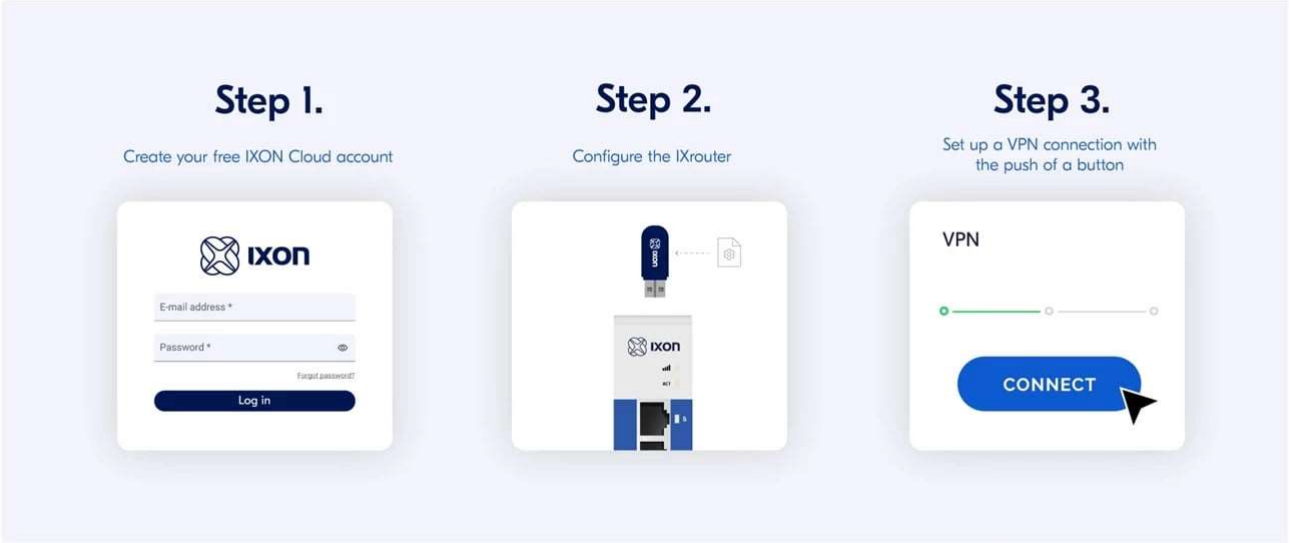
- **All-in-one solution**
  'Everything is accessible in one interface: VPN, VNC, HTTP web server and more. There's no need to download any clients, because IXON Cloud is an all-in-one platform.' - Rémy Cotton, CEO at Nexxya

- **User management system**
  'We can separate all users into groups. They can access the equipment, but all with specific access levels and rights for each situation. All this can be verified in the audit trail, which increases trust and practicality for the platform operators.' - Cielito Hitel, Automation engineer at Erzinger.

Now let's dive deeper into how you can get started with PLC remote access in just 3 simple steps.

How you can access your PLC remotely with IXON Cloud

To access your PLC remotely you need to connect your PLC to the internet. With IXON Cloud this can be done securely via Wi-Fi, Ethernet or 4G. In 3 simple steps you can connect your PLC to the internet using the IXrouter and the IXON Cloud platform.



Quick and easy setup of the IXrouter for remote access to your PLC

Security measures

IXON's security strategy is based on the CIA triad: a security management model for protecting the confidentiality, integrity and availability of information. To protect your customer from cyber threats, the IXrouter only sets up **outgoing connections**, which means that there are no open ports. The IXrouter also features a **built-in firewall** that separates the machine network from the IT network. The role-based user management system helps you to stay in control of each user's access rights.

On top of that, IXON complies with international industry security standards: ISO 9001, ISO 27001, ISO 27017, ISO 27701 and IEC 62443 security level 2.

Read all about our security measures in our security whitepaper.

Initiate your digital transformation with PLC data

Ready to take the next steps in your digital transformation? Get the most out of your machines and the IXON Cloud with PLC data logging. Data is sent directly from the PLC to the cloud. Data and parameters are locally collected by the IXrouter via industrial protocols like OPC-UA and Modbus. The data will be securely stored in the IXON Cloud databases.

Want to know more about industrial remote access with IXON Cloud?

Learn more

If you have any further questions, contact us here.

Frequently asked questions about PLC remote access

Can I remotely access and control HMI panels via VNC?

Yes, you can access and control your HMI with the built-in VNC service. Does your customer want access to the HMI too? The VNC service allows you to give him access to the HMI without a VPN connection. Read more about HMI remote access with IXON Cloud here.

Can I remotely access PLC web servers?

Yes, with PLC remote access you can access your web servers via a VPN connection. Does your customer want access to the web server too? With HTTP you can give them access to the web server without VPN.

Which PLC brands are supported?

We support a wide range of PLC, robot and HMI brands. Find a list below of devices that are compatible with IXON Cloud:

A	ABB, Advantech, AEG, Aermec, Allen Bradley, Alstom, ASEM, Autonics
B	B&R, Bachmann, Battenfeld, Beckhoff, Beijer, Berghof, Bihl+Wiedemann, Bonfiglioli
C	ComAp, Controllino, Corinex, Crouzet, Cutler Hammer
D	Dalroad, Danfoss, Datalogic, Delta
E	Eaton, Elsist, Emko, Esa, EXOR
F	FANUC, FATEK, Festo
G	GE, Gould
H	Harmony (formerly Magelis), Hirschman, Hitachi, Honeywell, Horner, Hoyer
I	IDEC, IFM, Ilevo, IMO, InTouch, INVT, IO-Link
K	Keyence, Kinco, Koyo, Kunbus
L	Lenze, LS Electric

M	Mitsubishi, Modicon, Monitouch, Motorola
N	Nachi, Netsyst
O	Omron
P	Panasonic, Panelmate, Pepperl, Phoenix contact, Pilz, PLC Direct, PLCnext, Pro-Face
R	Reliance, Revolution Pi / RevPI, Riduttori, Rockwell Automation
S	Saia Burgess, Schneider, Servo, Sharp, SiConnect, Siemens S7, Sigmatek, SIMATIC, SPiDCOM, Stahl, Sysmac
T	Telemecanique, Thomson, Toshiba, Toyoda
U	Unitronics, Universal Robots
V	VIPA
W	Wago, Weidmüller, Weintek, Wittmann
Y	Yamar, Yaskawa, Yokogawa

Missing your PLC, robot or HMI brand? No worries, just contact us to take a look at your specific situation.

What if IXON doesn't support certain connection types?

You may want to set up a connection with an older connection type, for example one without an Ethernet cable. There are two ways to solve this: a converter can help you to convert the communication, but it may also be that the device manufacturer offers an extension module.

There are two scenarios that make it impossible to set up a connection with IXON Cloud:

- The software that is used to communicate with the PLC can’t communicate over TCP/IP, and the IP address of the converter can’t be entered into the development software.
- The development software isn’t able to handle the delay of the internet connection and this timeout cannot be manually changed in the software.

Is there a difference between the way PLC remote access works per brand?

Basically, you do the same abstract actions. However, the exact steps may vary because the Siemens software, for example, is different from Allen Bradley’s software. The programming language may also differ.

Some PLC brands come with their own remote access solution (built-in or separate). What is the difference with IXON?

In most cases, you are limited to the hardware of the PLC brand. With IXON, it doesn't matter which brand you connect to. Moreover, the costs of these associated solutions are often higher than the costs of IXON Cloud.