How does TOSIBOX® technology work
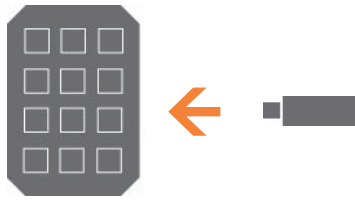
TOSIBOX® is the easiest way to create secure remote connections. From box to use takes just under five minutes.
Basicly there are just two easy steps to set up a secure connection:

1.

1. Insert the TOSIBOX® Key to the TOSIBOX® Lock.
During this physical matching process, the devices exchange their security certificates (and public keys). This trust relationship is the basis for all communication happening afterwards.

2.

2. Plug in the TOSIBOX® Key.
As the connection is established, the Key and the Lock register to the distributed MatchMaker service*. The connection between MatchMaker and TOSIBOX® devices is encrypted using TLS and mutually authenticated using certificates and PKI.

Key requests a connection to the Lock. The VPN tunnel is mutually authenticated using certificates and PKI.

As illustrated below, the VPN tunnel is established directly between the TOSIBOX® devices. The connection is end-to-end authenticated and encrypted. Encryption and decryption take place at the connection end points.

PC

VPN tunnel through Internet

TOSIBOX®
Key

TOSIBOX®
Lock

Firewall

HMI

PLC

Camera

PC
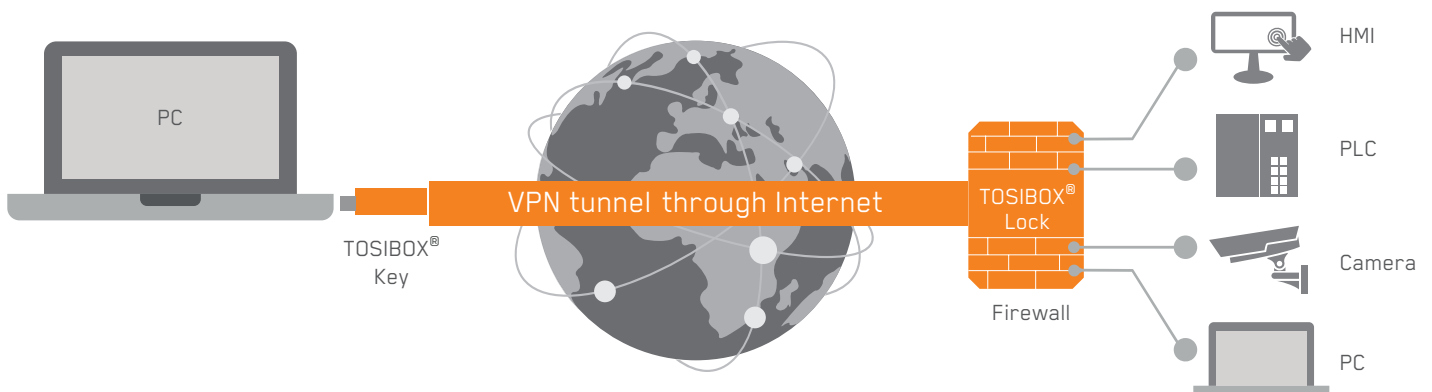
*Distributed **MatchMaker** is needed for device discovery. It helps with setting up the VPN tunnel but is not required after the VPN connection is established. MatchMaker is distributed across multiple data centers in different countries. It is fault-tolerant, backed up and monitored 24/7 by Tosibox Oy.

TOSIBOX®

LAPP