# TOSIBOX®
Simplifying IoT

TOSIBOX® solution

How it works

By connecting your device with TOSIBOX® Key and TOSIBOX® Lock, you are able to create a safe VPN connection.

This Lock and Key combination enables a secure connection between the user device and a remotely operated device. Unlike other encrypted remote connection solutions, TOSIBOX® is entirely operator, network and device-independent.
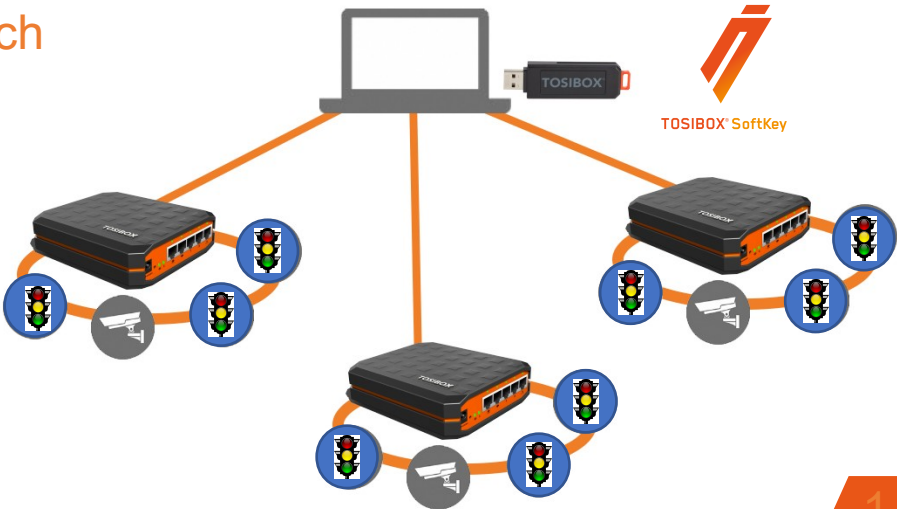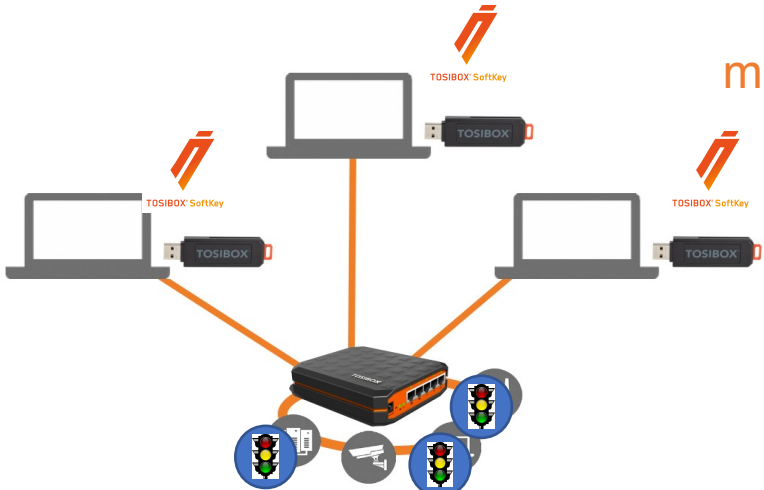
Scalable TOSIBOX® ecosystem
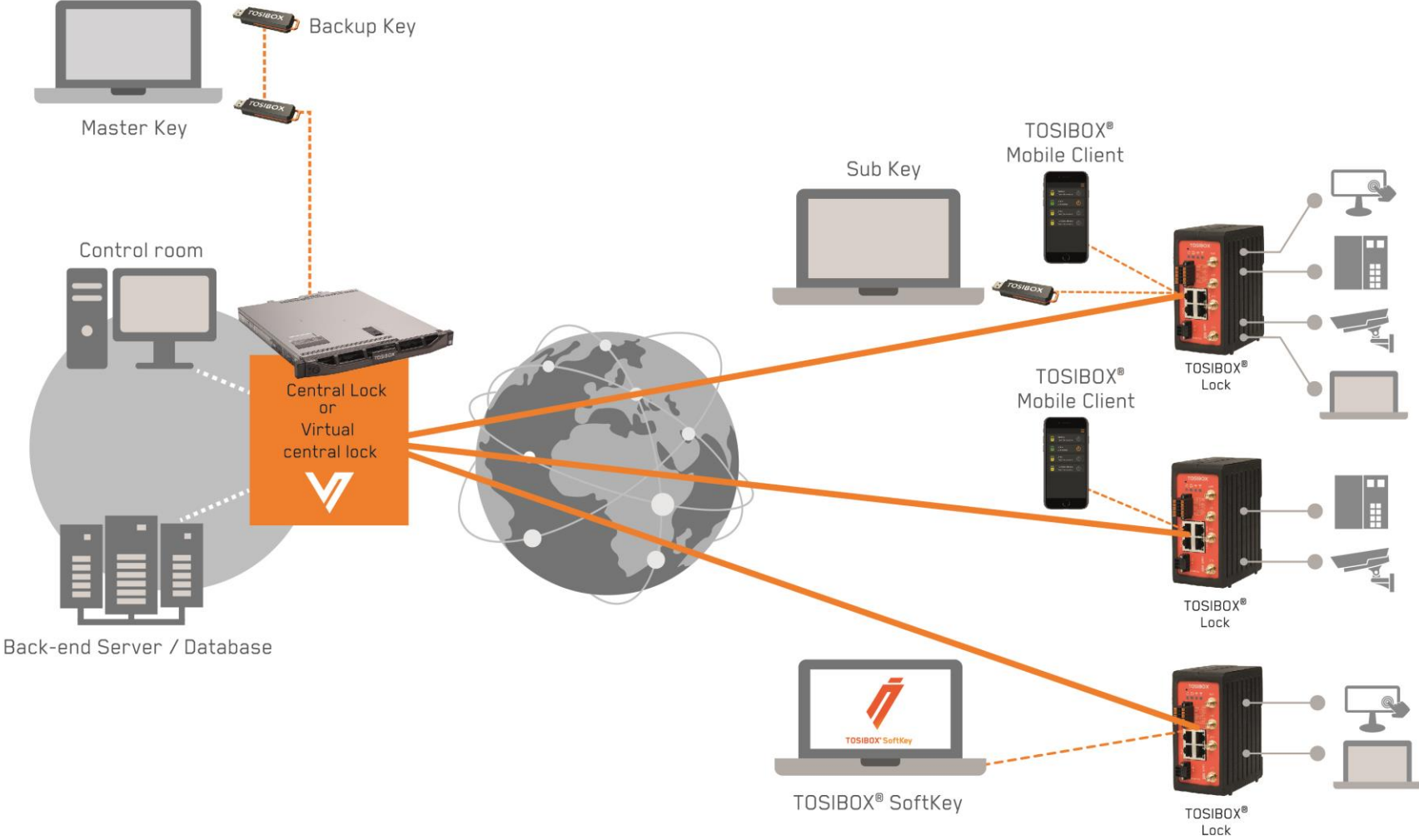
Build Up User and Connections in Seconds with unlimited Scalability
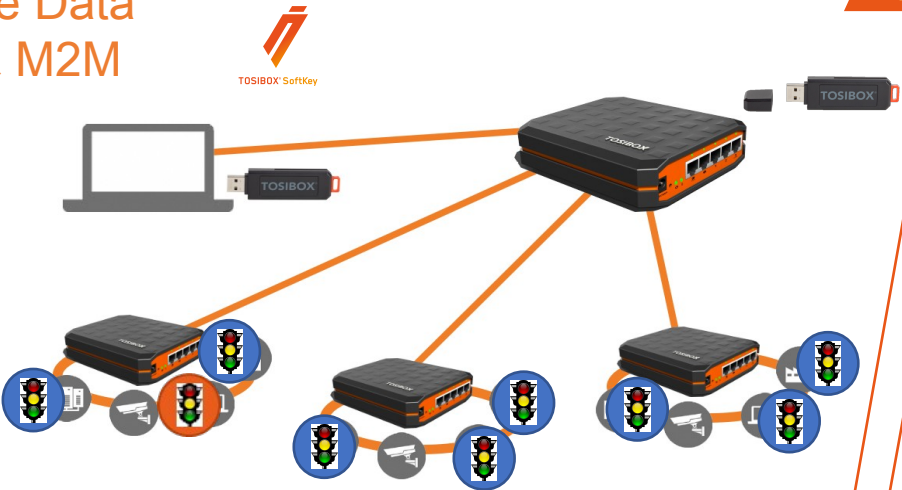
Keys can match with unlimited Locks

Many Keys can match to one Lock

Easily create Data Collection & M2M Networks

Give admin control down to lock, port and device level

1 2 3 4
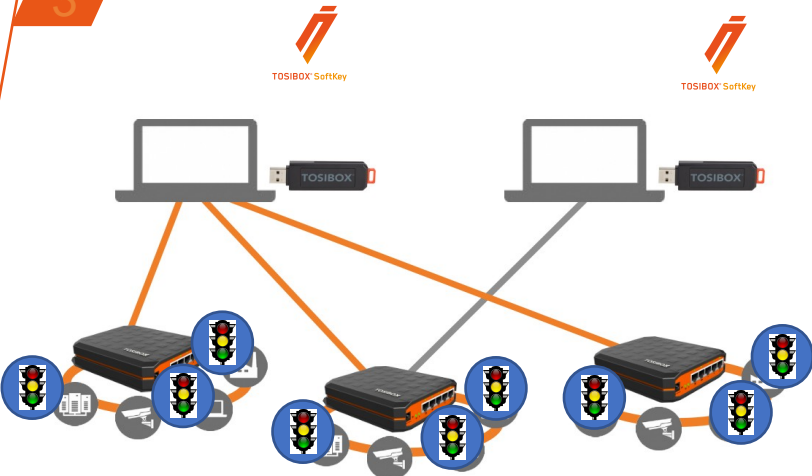
Industries

Industrial automation & machinery

Machine tools
Industry maintenance
Energy
Food & beverage
Water & wastewater

Building automation

Energy consumption monitoring
HVAC monitoring
Ventilation
Central heating
Smart homes

Security

Camera remote monitoring
Access control
Locking
Burglary alarms
Fire alarms

TOSIBOX® products

Modular TOSIBOX® technology

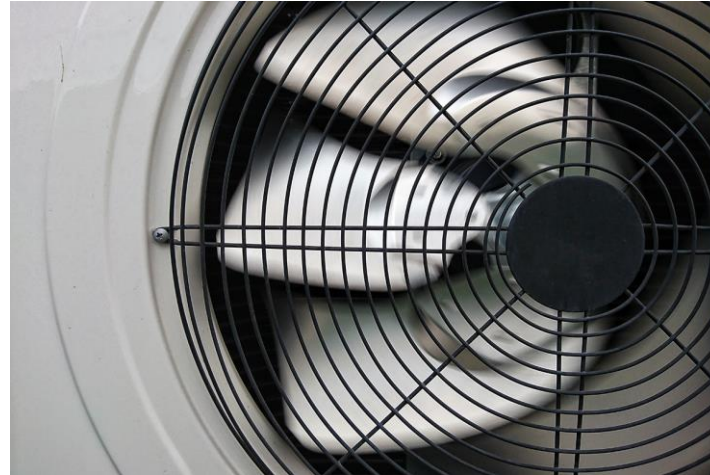TOSIBOX® solution consists of modular components that offer unlimited expandability and flexibility. All products are compatible with each other. The technology can also be integrated into OEM devices.

- TOSIBOX® Key is a dongle used to access the network.

- TOSIBOX® Lock is an industry router sharing access to devices.

- TOSIBOX® Virtual Central Lock is the platform for network and access rights management.

User building blocks

Intelligent crypto-processing device or software that enables a secure connection between you and your TOSIBOX® infrastructure.

Key
Durable light metal alloy casing
Including one Mobile Client
for Android or iOS

Mobile Client
Remote Access for
Android or iOS
Smartphones or Tablets

Soft Key
Intelligent crypto processing software
for use as TOSIBOX® Sub Key in
computers (PC, MAC)

Platform building blocks

Connecting devices & networks to your TOSIBOX® infrastructure.

Lock 150

VPN throughput 10 Mbit/s

Max 10 concurrent VPN connections

WLAN support

CE, FCC, UL & ISED approval

Lock 500/500i

VPN throughput 70 Mbit/s

Max 50 concurrent VPN connections

Digital I/O

CE, FCC, UL & ISED approval

Built-In LTE modem & dual SIM slots (500i)

Network building blocks

Platform for network and access rights management.

TOSIBOX® Virtual Central Lock

Virtual Central Lock

Turns your TOSIBOX® ecosystem into a controlled IoT network for remote maintenance, continuous monitoring, real-time data collection and data logging.

References

Arctic Drilling Company serves its customers around the world, always reliably and safely, guaranteeing efficient drilling even in extreme conditions.

Arctic Drilling Company enjoys secure data collection

Challenge

ADC's moving drilling units can be posted in a remote location for months. It was important that a reliable connection can be created to the machines for remote maintenance, from anywhere in the world. The company also wanted to collect data about the drilling units' performance for product development purposes. As the data is then processed by an external partner, easy access management was also of high importance. A high level of data security was essential to avoid any personal injury on site and to ensure protection of company's innovations.

Solution

TOSIBOX® Lock 500 is installed to drilling units at the company's factory in Finland, before they're shipped off to work sites. For moving drilling units, a compact installation of one remote access device was optimal: Lock 500i with integrated modem does not require any additional pieces, is of compact size and fits well with other systems. Dual SIM feature means ADC can utilize various operators for connectivity.

TOSIBOX® Virtual Central Lock act as the platform for centralized access management. The data analysis partner's server storing the collected data is connected to it, and access is granted to just that.

"Thanks to TOSIBOX®, we have been able to solve 80% of issues remotely this year. On an annual basis, the savings from remote maintenance can be measured in millions of euros."

Joni Niskala,
Manager, Maintenance,
Arctic Drilling Company Ltd

Fidelix supplied building automation systems for the new Helsinki Central Library Oodi and Amos Rex art museum.

TOSIBOX® secures building automation systems even during construction

Challenge

Fidelix's building automation system controls the buildings' heating, ventilation and lighting. Amos Rex is built underground, which creates particularly demanding conditions that need to be monitored and adjusted. End users of the systems include maintenance companies etc. A secure remote access was needed already in construction phase for programming and testing the system.

Solution

Fidelix takes secure remote connectivity seriously and has chosen the TOSIBOX® solution for both establishing remote access and monitoring the performance of building automation systems. Oodi and Amos Rex are just two examples of hundreds of Fidelix's sites whose building automation is secured by TOSIBOX®.

"We use TOSIBOX® for practically all our sites. For us, information security, connection reliability and centralized management are the most important criteria."

Kyösti Alatupa, Group Manager, Fidelix Oy

Helvar Oy Ab are a specialist in intelligent and energy efficient lighting solutions.

Lighting systems supplier creates new service business with TOSIBOX®

Challenge

The optimal running of Helvar's lighting systems can be ensured through continuous monitoring and maintenance. Helvar also wanted to improve its range of services by offering a continuous Service Care package. Customer security was also a significant factor for remote connections for Helvar.

Solution

Now services offered by Helvar include a safe Service Care Account that can be monitored and this has been made possible by TOSIBOX®. Helvar is now able to remotely monitor the technical data and energy consumption of its sites. Helvar can now offer an automatic Service Care Account to all of its new sites for a two-year warranty period.

"We experimented with a range of remote management alternatives but ended up rejecting every one of them. However, Tosibox's secure remote connection has now made us a clear market leader."

Jukka Riikkula, Sales Director, Finland, Helvar Oy Ab

ToP's is a SALTO partner, who provides the SALTO access control solution for mountain lodges' doors' online readers at ski resorts.

Secure connectivity for SALTO access control system

Challenge

Accommodation bookings were made and transferred using an online booking and administration system, which was also used to create a physical key card or a key in a mobile app for accommodating guests. To be able to run the system as a key as a service (KaaS) for the ski resorts' reception, the SALTO BLE readers required connectivity with a SALTO server in Stockholm and the reception. However, building a VPN to connect three sites would be extremely expensive. They needed to be in the same, secure network with same IP range, without exposing the units to the Internet.

ToP's wanted to find a secure network solution to combine SALTO system with spread out locations transporting data through several different telecom operator networks. However, operators can only provide a solution where their network is, requiring APN and entailing also dark fiber. An alternative to APN would not be viable.

Solution

ToP's set up a network to remotely connect access systems using the TOSIBOX® solution. ToP's was able to build a local network between the sites and set up a VPN that would be the alternative to APN by operators. This has made them operator independent, superseding the offer of APN and dark fiber by operators. Not using dynamic host configuration protocol (DHCP) makes the solution secure, since only fixed IP is used, and no IP addresses are delivered.

"I did not expect the solution to be as fast to deploy as it was."

Peter Eriksson, CEO, ToP's Gruppen AB

PehuTec utilizes TOSIBOX® Virtual Central Lock for secure remote access and easy distribution and management of access rights.

TOSIBOX® provides reliable connectivity solution for remote work

Challenge

PehuTec was using a basic VPN solution for sharing remote access to its team members in remote locations. However, the connection was not regarded as fast enough for effortless remote work. At a certain time of day, the connections even dropped, causing not only disconvenience and annoyance for remote workers, but also interruptions and loss of data. PehuTec was looking for a reliable solution for providing secure remote access and easy distribution and management of access rights.

Solution

TOSIBOX® helped PehuTec replace a traditionally cumbersomely and laboriously configurable VPN solution with modern, configuration-free technology. PehuTec installed TOSIBOX® Virtual Central Lock into their office server, and TOSIBOX® SoftKeys were installed on the remote workers' laptops.

PehuTec's employees can now connect to their company server using the SoftKey computer software without using a physical Key. They no longer suffer from unreliable connections and can enjoy working the same way they would at their company headquarters'. The IT responsible's job became considerably easier as he can manage access rights with the Virtual Central Lock from anywhere by using a TOSIBOX® Key that acts as the Master Key. New SoftKeys can be created and access rights can be granted immediately even from the other side of the country.

"With TOSIBOX®, we have been able to tackle the issues in connection reliability. This has saved our team the trouble that they previously experienced with broken connections. TOSIBOX® provides us a secure remote connection that ensures our customers' data remains safe."

Jussi Vepsäläinen,
Technology and SW Manager,
PehuTec Oy

For more Success Stories, please visit www.tosibox.com/references

TOSIBOX®