TOSIBOX Overview

Tosibox - Connecting OT systems and devices with enterprise applications, IT systems and cloud-based services via Tosibox Platform.

Lapp Australia are proud to be a platinum Tosibox partner and to help build your Tosibox ecosystem.

Tosibox have headquarters in Finland and are sold globally in more than 140 countries.

For many automation engineers, Tosibox provides the platform to allow transparent connectivity to a remote site's controls network to remotely monitor, troubleshoot and program automation devices including PLCs, HMI, RTU, PCs, etc. Tosibox is brand agnostic – if your device can be connected to an Ethernet network and has an IP address, it can be connected to Tosibox.

Robust cybersecurity is provided by:

- Automated Firewall Setups
- VPN Access Control
- Point to point VPN Tunnelling
- 256-bit AES Encryption
- SSL/TLS
- IT/OT Segmentation

Tosibox eliminates the need for fixed static IPs and DNS servers or unsafe port forwarding, making networks invisible to the internet and protecting against network-based attacks.

Tosibox Enterprise Connectivity

TOSIBOX Overview

LAPP
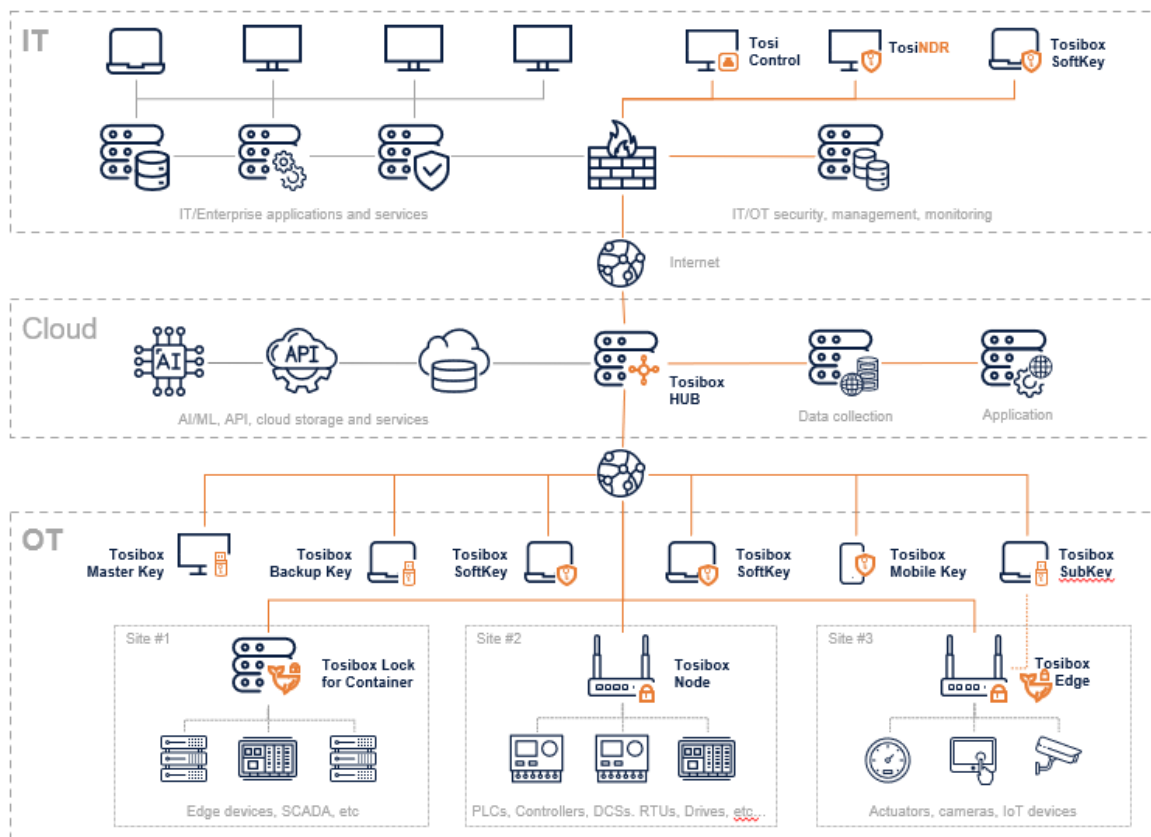
Tosibox Components

Tosibox components are sold separately and comprise Tosibox keys (including softkeys and mobile client keys), Tosibox locks and external antennas & cables. In the past, Tosibox was available as a kit (master key + lock) but this concept was scrapped and is no longer available as customers would only need to buy master keys once.

Tosibox Keys

Master Key	**Softkey**	**Mobile Client**
TOSI-TBK2	01 license – TOSI-TBSKL1	01 license – TOSI-TBMC1
	05 licenses – TOSI-TBSKL5	05 licenses – TOSI-TBMC5
	10 licenses - TOSI-TBSKL10	10 licenses – TOSI-TBMC10

Tosibox Locks - Current Models

Tosibox 175 – Part no. TOSI-TBL175	Tosibox 350 – Part No. TOSI-TBL350	Tosibox 375 – Part No. TOSI-TBL375
Tosibox 175 is a cost-effective Plug & Go connectivity device. It is ideal for demanding industry sectors that require an all-in-one solution that is compact, able to handle all environments and suited to global market usage.	Tosibox 350 is tailored for businesses seeking a compact, all-encompassing solution that operates seamlessly across the globe.	With Tosibox 375 's fixed ethernet interface, Wi-Fi, or internal LTE module complemented with external antennas, you can enjoy stable remote access wherever you are.
Integrated Wi-Fi, built-in global LTE modem	Integrated Wi-Fi, Digital I/O support	Integrated Wi-Fi, built-in global LTE modem, Digital I/O support
1 x RJ-45 WAN connection 1 x RJ-45 LAN connection	1 x RJ-45 WAN connection 4 x RJ-45 LAN connections 1 x USB 2.0, type A	1 x RJ-45 WAN connection 4 x RJ-45 LAN connections 1 x USB 2.0, type A
Up to 10 concurrent VPN connections	Up to 10 concurrent VPN connections	Up to 10 concurrent VPN connections
VPN throughput up to 10 Mbps	VPN throughput up to 10 Mbps	VPN throughput up to 10 Mbps
CE, FCC, RCM, IMDA, JATE, MIC, WPC, ANATEL	CE, FCC	CE

Tosibox 610 – Part No. TOSI-TBL610AU	Tosibox 675 – Part No. TOSI-TBL675AU	Tosibox 695 – Part No. TOSI-TBL695AU
Tosibox 650 is our all-around Plug & Go connectivity device. It is ideal performer in enterprise solutions.	Tosibox 675 is a high-performance Plug & Go connectivity device. This device is very powerful with a wide range of internal hardware interfaces.	Tosibox 695 5G enabled Plug & Go connectivity device tailor-made for power-hungry applications in the most demanding industrial settings.
High VPN throughput, Gigabit LAN ports, integrated Wi-Fi, robust aluminum alloy shell, extended IP30 rating	High VPN throughput, Gigabit LAN ports, integrated Wi-Fi, built-in global LTE modem, dual SIM slots, GNSS receiver, robust aluminum alloy shell, extended IP30 rating	High VPN throughput, Gigabit LAN ports, integrated Wi-Fi, built-in global 5G/LTE modem, dual SIM slots, GNSS receiver, robust aluminum alloy shell, extended IP30 rating
1 x RJ-45 WAN connection 3 x RJ-45 LAN connection 1 x USB 2.0, type A	1 x RJ-45 WAN connection 3 x RJ-45 LAN connection 1 x USB 2.0, type A	1 x RJ-45 WAN connection 4 x RJ-45 LAN connection 1 x USB 2.0, type A
Up to 50 concurrent VPN connections	Up to 50 concurrent VPN connections	Up to 50 concurrent VPN connections
VPN throughput up to 70 Mbps	VPN throughput up to 70 Mbps	VPN throughput up to 70 Mbps
CE, FCC, IC, PTCRB, RCM, SGS (UL safety)	CE, FCC, IC, PTCRB, RCM, SGS (UL safety)	CE, FCC, IC, PTCRB, RCM, SGS (UL safety)

TOSIBOX

TOSIBOX Overview

External Antennas

When a Tosibox lock is installed in a metal enclosure, the Tosibox antennas will be ineffective, and an external antenna will be required. Lapp Australia provide 2 external Tosibox antennas for LTE connections – either an omnidirectional antenna or magnetic mounting antenna. Other options not included in this document are wifi antennas, extension cables if mounting the antenna on a roof or pole and Ethernet patch leads, all available from Lapp Australia.
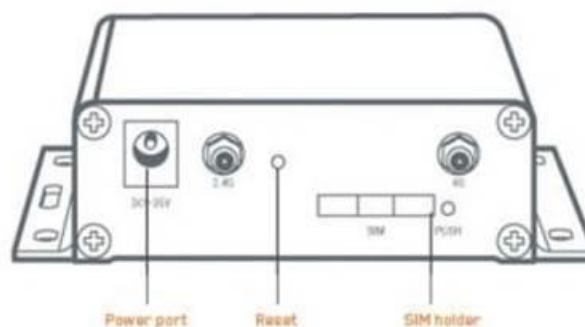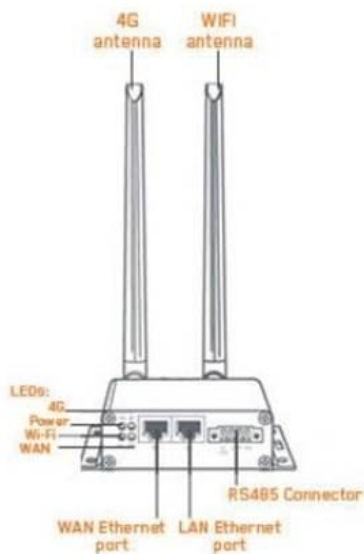
TOSI-TBANT1

Omnidirectional external antenna

8m cable

TOSI-TBANT2

Magnetic mount external antenna

3m cable

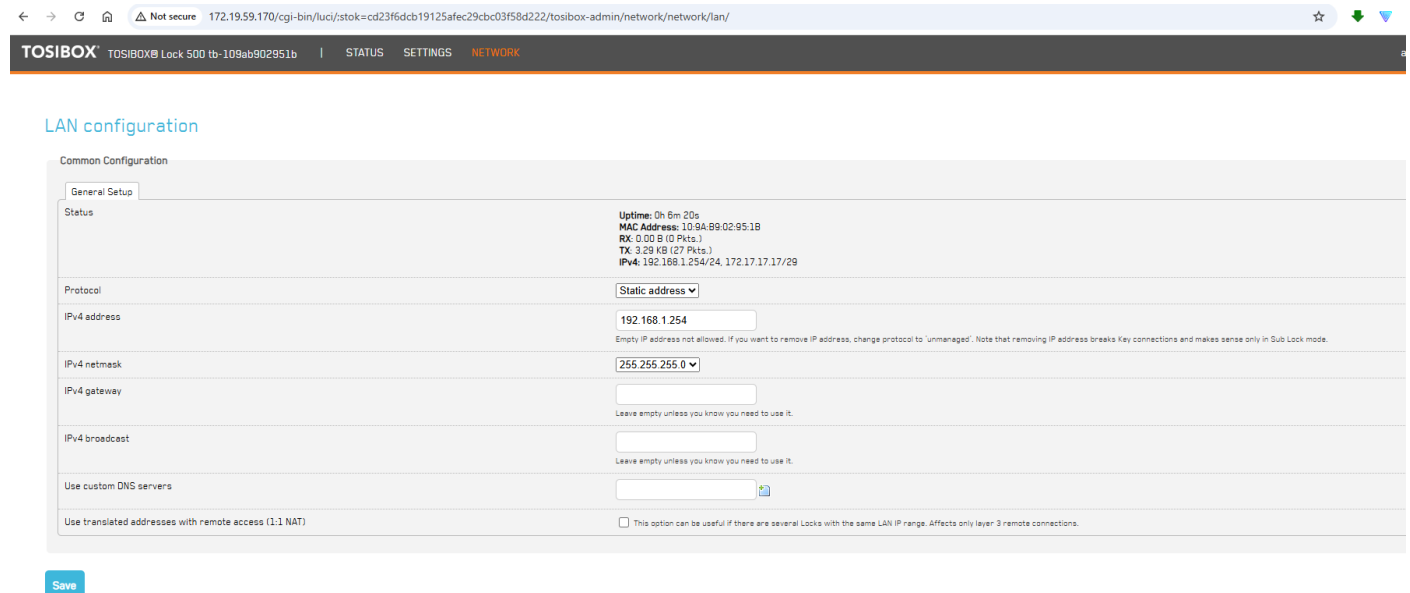## Typical Tosibox Hardware

TOSIBOX Overview

Tosibox architecture is based on keys and locks.

- A client or user with a Tosibox master key (or sub key or softkey) pairs a key with a Tosibox lock.
- The user will then have unconditional access to the Tosibox lock/s linked with the master.
- Generally, you purchase a single master key and then build up an infrastructure of multiple locks which are unlimited. The trick here is that your master key is a physical USB device – which can be damaged, lost, etc. If you have an infrastructure of field installed Tosibox locks, we recommend that a second master key is purchased and kept in a safe place as a backup key. To create a Tosibox backup key >> https://www.youtube.com/watch?v=7IkWb9p5DfI
- Many of the locks have multiple connection paths e.g. Ethernet WAN, wifi access point or client or 4G/5G network.
- Tosibox can be connected to Starlink networks to provide global network connectivity – contact Lapp Australia's automation team for a solution >> automation@lappaustralia.com.au
- Make sure that your passwords are known and backed up. Security protocols dictate that the Tosibox locks cannot be user reset if a password is lost.
- A fixed IP address via the SIM is not necessary. Tosibox works with an encrypted cybersecure connection between the master key or soft key and the Tosibox lock/s. If multiple Tosibox locks are configured and able to be connected to, you would see multiple Tosibox locks. Simply click on the Tosibox lock you want to connect to, and press Connect.

TOSIBOX Overview
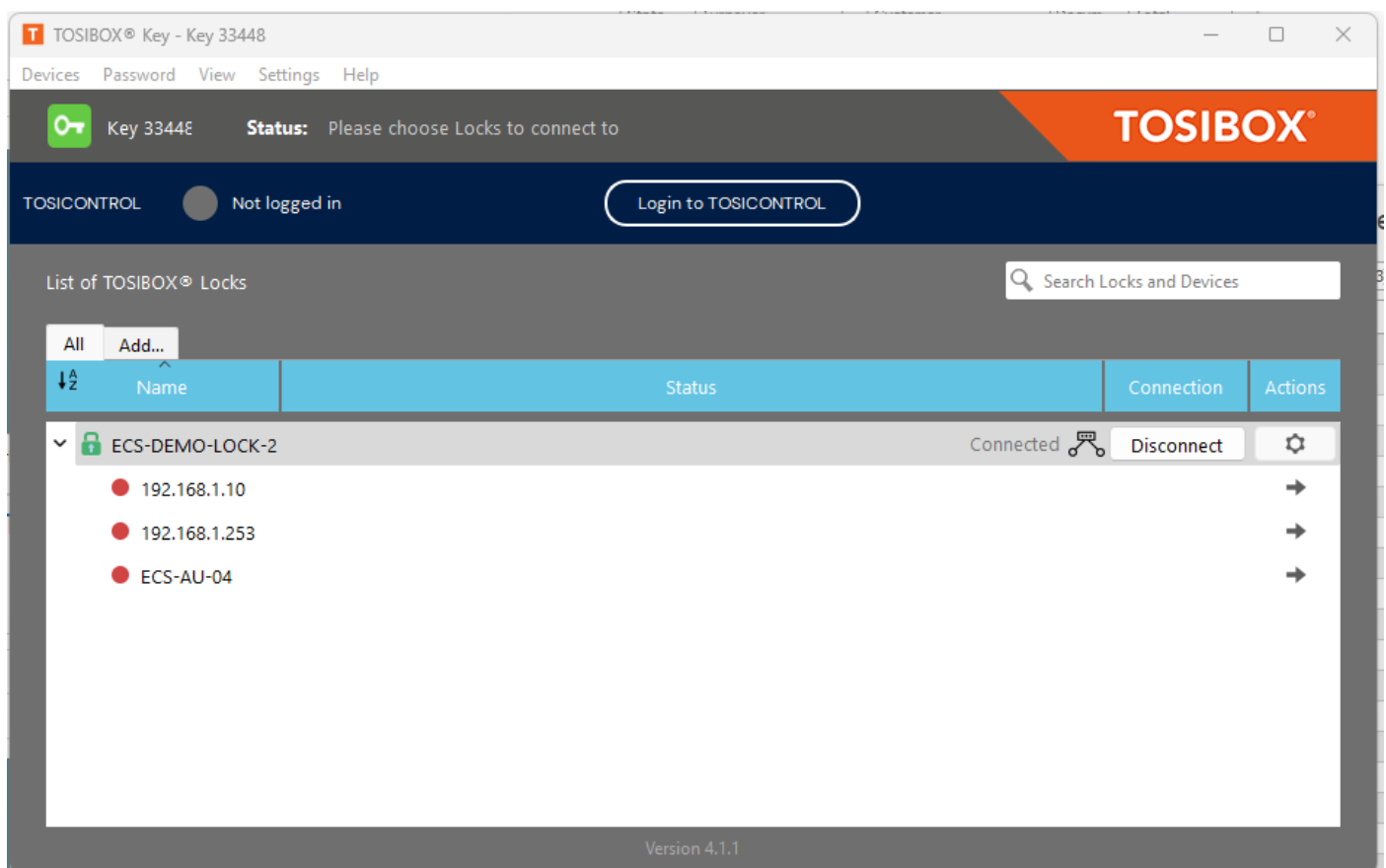
The Lock's local area network is configured in the Tosibox LAN configuration settings.

Below, we are setting the Tosibox as a gateway with address 192.168.1.254. A PLC is connected to the Tosibox LAN port - in this case is 192.168.1.10. The network connection is transparent – from laptop user to Tosibox remote network, coexisting on the 192.168.1 network in this case.


Softkeys

- A user with a master key can assign a softkey to any user. The master user then provides a code to the remote user to activate the softkey access.
- Once the remote user enters the code, the master key user must approve the activation.
- Softkey assignment can be removed from the user by the master key user at any time.
- How to create a softkey >> https://www.youtube.com/watch?v=y8U3Uf5zt2Y&t=37s
- To purchase a softkey or mobile client, please provide the unique master key number (e.g. EC33776). The softkey license is then linked to the master key – this process takes about 24 hours. You do not receive anything when you purchase a softkey license apart from an email from Lapp Australia indicating that the softkey license has been activated. Once the softkey is linked to a master key, the person with a master key can thereafter allocate softkeys as required.
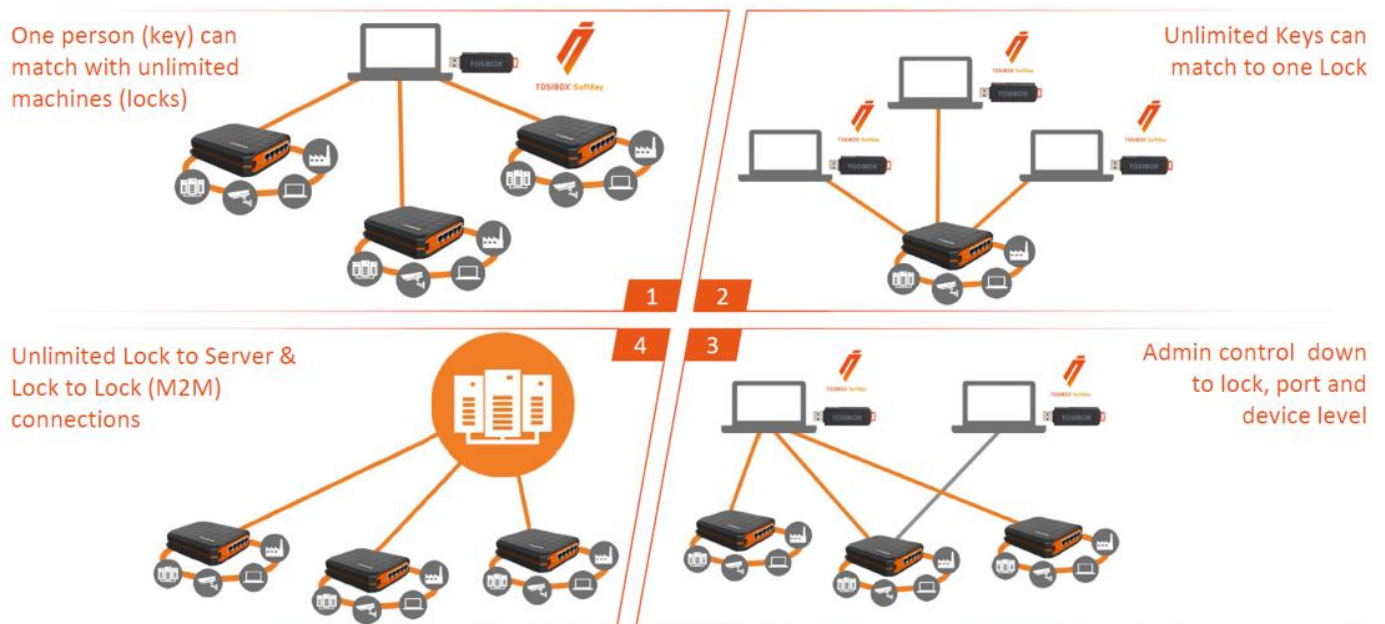
Mobile Client

- Mobile clients allow secure and easy remote access to the Tosibox lock using iPhones, iPads and Android devices.
- With this device connection, you can use your device or connect to network devices seamlessly OR use a software tool such as VNC to monitor and control a VNC enabled touchscreen.

- How to create a Tosibox Mobile Client >> https://www.youtube.com/watch?v=x7Ee-0A4IO8
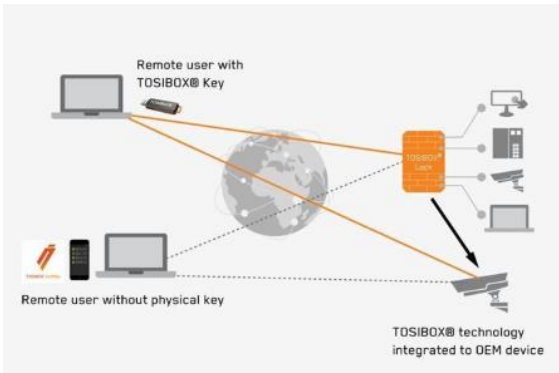
Licensing and key works as below, and in future, if you must add another site, you will only need a lock, and the key you will be purchasing with the first lock can be reused.

Build up Networks in Seconds with Unlimited Scalability

TOSIBOX Overview

Why TOSIBOX?

Tosibox vs. Existing Networking Solutions

Tosibox does not require any recurring subscription costs unless using Tosi Hub or Tosi Control at higher enterprise levels. For remote connectivity, all you need is your required Tosibox components and if you use 4G or 5G; a suitable SIM card with a data plan. Data plans are provided by your telecommunications provider, not Lapp Australia or Tosibox.

If you have any questions, please contact LAPP Australia's industrial automation team via email:

automation@lappaustralia.com.au.