TEST VERSION -
DO NOT SHARE

USER MANUAL

TOSIBOX® Lock 100

TOSIBOX® Lock 150

TOSIBOX® Lock 200

TOSIBOX® Lock 500

TOSIBOX® Key

Version 1.7

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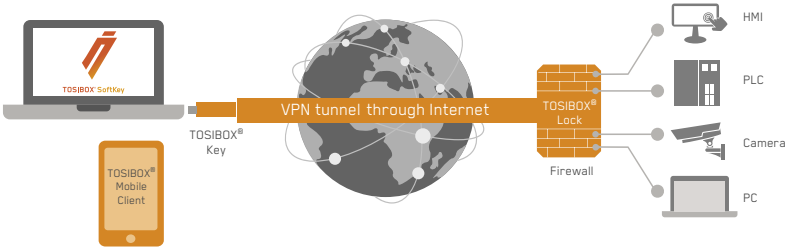
Congratulations for choosing TOSIBOX® solution! It consists of modular components that offer unlimited expandability and flexibility. All products are compatible with each other as well as internet connection, operator, and device agnostic. The system works both in internal and external networks.

- TOSIBOX® Key is a client used to access the network.
- TOSIBOX® Lock is a router with firewall sharing access to devices.

In physical matching, the Key is inserted to the Lock's USB port. The devices exchange their security certificates (and public keys). This trust relationship is the basis for all communication happening afterwards.

TOSIBOX® creates direct VPN tunnel between the physical devices. Only trusted devices can access the network.

TOSIBOX® is globally audited, patented and performs at the highest security levels in the industry. The technology is based on two-factor authentication, automatic security updates and the latest encryption technology.



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TOSIBOX HELPDESK

http://www.tosibox.com/support

1. REGULATORY INFORMATION

1.1 TOSIBOX® LOCK INTENDED USE

The Lock is used for controlling other devices remotely over the Internet via a VPN connection. To be installed into a DIN rail, inside a cabinet with the controlled devices. Alternatively, the Lock may be standing on its rubber feet on a table or a shelf. The product conformity with the requirements is guaranteed only when using the antennas supplied with the product. The use of other antennas will void the conformity and is not allowed.

- **Lock 100/150:** Office and residential environment

  Norway: Use of this radio equipment (Wi-Fi) is not allowed in the geographical area within a radius of 20 km from the centre of Ny-Ålesund, Svalbard, Norway.

- **Lock 200**: Office, residential and light industrial environment
- **Lock 500:** Office, residential and light industrial environment

  Norway: Use of this radio equipment (Wi-Fi) is not allowed in the geographical area within a radius of 20 km from the centre of Ny-Ålesund, Svalbard, Norway.

1.2 IMPORTANT NOTICE FOR WIRELESS OPERATION OF TOSIBOX® LOCK

Because of the nature of wireless communications, transmission and reception of data can never be guaranteed. Data may be delayed, corrupted (i.e., have errors) or be totally lost. Although significant delays or losses of data are rare when wireless devices are used in a normal manner with a well-constructed network, TOSIBOX® Lock with cellular modem should not be used in situations where failure to transmit or receive data could result in damage of any kind to the user or any other party, including but not limited to personal injury, death, or loss of property.

Tosibox Oy and its affiliates accept no responsibility for damages of any kind resulting from delays or errors in data transmitted or received using TOSIBOX® Lock with cellular modem, or for failure of the TOSIBOX® Lock with cellular modem to transmit or receive such data.

1.3 SAFETY AND HAZARDS

At least 20 cm separation distance between the antennas and persons must be maintained at all times.

Do not operate your Lock with internal or external cellular modem:

- In areas where blasting is in progress
- Where explosive atmospheres may be present including refuelling points, fuel depots, and chemical plants
- Near medical equipment, life support equipment, or any equipment which may be susceptible to any form of radio interference. In such areas, the Lock and the cellular modem MUST BE POWERED OFF. Otherwise, the cellular modem can transmit signals that could interfere with this equipment.
- In an aircraft, the Lock and the cellular modem MUST BE POWERED OFF. Otherwise, the Lock and the cellular modem can transmit signals that could interfere with various onboard systems and may be dangerous to the operation of the aircraft or disrupt the cellular network. Use of a cellular phone in an aircraft is illegal in some jurisdictions. Failure to observe this instruction may lead to suspension or denial of cellular telephone services to the offender, or legal action or both. Some airlines may permit the use of cellular phones while the aircraft is on the ground and the door is open. The Lock and the cellular modem may be used normally at this time.

1. INFORMATIONS RÉGLEMENTAIRES

1.1 UTILISATION PRÉVUE DE TOSIBOX® LOCK

Le verrou sert à contrôler d'autres appareils à distance via Internet via une connexion VPN. Pour être installé sur un rail DIN, à l'intérieur d'une armoire avec les appareils contrôlés. Sinon, la serrure peut reposer sur ses pieds en caoutchouc sur une table ou une étagère. La conformité du produit aux exigences n'est garantie que si vous utilisez les antennes fournies avec le produit. L'utilisation d'autres antennes annulera la conformité et n'est pas autorisée.

- **Lock 100/150**: environnement de bureau et résidentiel

  Norvège: l'utilisation de cet équipement radio (Wi-Fi) n'est pas autorisée dans la zone géographique située dans un rayon de 20 km du centre de Ny-Ålesund, Svalbard, Norvège.

- **Lock 200**: environnement de bureau, résidentiel et industriel léger
- **Lock 500**: environnement de bureau, résidentiel et industriel léger

  Norvège: l'utilisation de cet équipement radio (Wi-Fi) n'est pas autorisée dans la zone géographique située dans un rayon de 20 km du centre de Ny-Ålesund, Svalbard, Norvège.

1.2 AVIS IMPORTANT CONCERNANT LE FONCTIONNEMENT SANS FIL DU TOSIBOX® LOCK

En raison de la nature des communications sans fil, la transmission et la réception de données ne peuvent jamais être garanties. Les données peuvent être retardées, corrompues (c'est-à-dire avoir des erreurs) ou totalement perdues. Bien que les retards importants ou les pertes de données soient rares lorsque les périphériques sans fil sont utilisés de manière normale avec un réseau bien construit, TOSIBOX® Lock avec modem cellulaire ne doit pas être utilisé dans les cas où le défaut de transmission ou de réception des données pourrait entraîner des dommages matériels. en nature à l'utilisateur ou à toute autre partie, y compris, sans toutefois s'y limiter, les dommages corporels, le décès ou la perte de biens.

Tosibox Oy et ses filiales n'acceptent aucune responsabilité pour les dommages de quelque nature que ce soit résultant de retards ou d'erreurs dans les données transmises ou reçues à l'aide de TOSIBOX® Lock avec modem cellulaire, ou en cas d'échec de TOSIBOX® Lock avec modem cellulaire pour transmettre ou recevoir ces données.

1.3 SÉCURITÉ ET DANGERS

Une distance minimale de 20 cm entre les antennes et les personnes doit être respectée à tout moment.

N'utilisez pas votre serrure avec un modem cellulaire interne ou externe:

- Dans les zones où le dynamitage est en cours
- Où des atmosphères explosives peuvent être présentes, y compris des points de ravitaillement en carburant, des dépôts de carburant et des usines chimiques
- À proximité d'équipements médicaux, d'équipements de survie, ou de tout équipement susceptible de subir toute forme d'interférence radio. Dans ces zones, le verrou et le modem cellulaire DOIVENT ÊTRE ÉTEINTS. Sinon, le modem cellulaire peut émettre des signaux susceptibles d'interférer avec cet équipement.
- Dans un avion, le verrou et le modem cellulaire DOIVENT ÊTRE ÉTEINTS. Sinon, le verrou et le modem cellulaire peuvent émettre des signaux susceptibles de perturber le fonctionnement de divers systèmes embarqués et de nuire au bon fonctionnement de l'avion ou de perturber le réseau cellulaire. L'utilisation d'un téléphone cellulaire dans un avion est illégale dans certaines juridictions. Le non respect de cette instruction peut entraîner la suspension ou le refus des services de téléphonie cellulaire pour le contrevenant, ou des poursuites judiciaires, ou les deux. Certaines compagnies aériennes peuvent autoriser l'utilisation de téléphones cellulaires lorsque l'avion est au sol et que la porte est ouverte. Le verrou et le modem cellulaire peuvent être utilisés normalement à ce moment.

2. OVERVIEW TO TOSIBOX® KEY AND LOCKS

2.1 TOSIBOX® KEY

TOSIBOX® Key is an intelligent USB-connected device that contains a secure cryptoprocessor. The Key is used to establish a secure connection to the Lock. All TOSIBOX® Keys and Locks are interoperable.

SUB KEY

An additional Key that has restricted access rights.

BACKUP KEY

A duplicated backup copy of the Key. All matched Keys and Locks are automatically synchronized between the original Key and the Backup Key.

Key user interface (installed from the Key device). In the image you can see TOSIBOX® Lock devices which are matched with the TOSIBOX® Key and the network devices connected to each TOSIBOX® Lock.

2.2 TOSIBOX® LOCK

TOSIBOX® Lock is a device that accepts remote connections from matched Keys and creates private and secure access to connected network devices. The network devices that are connected to the Lock´s LAN port are automatically found. The Lock automatically distributes IP addresses for the Keys, Sub Keys and the network devices connected to LAN port(s) of the Lock. The Lock can also control network devices with fixed IP addresses.

Lock settings can be changed via service port, encrypted TOSIBOX® VPN connection local network

Lock 100/150

Lock 200

Lock 500/500i

SUB LOCK

A Sub Lock is a Lock that has been converted to Sub Lock mode. When connecting two Locks to each other, one must be in Sub Lock mode of operation.

LOCK 100/150 CONTENT

TOSIBOX® Lock 100/150

AC Adapter*

USB Cable

DIN Rail Bracket

Ethernet Cable

Antennas (2)

DC Feed Plug

* AC Adapter model is subject to change according to the market area.

LOCK 200 CONTENT

TOSIBOX® Lock 200

AC Adapter*

USB Cable

DC Feed Plug

Cable Saddle

Rubber Feet

Ethernet Cable

DIN Rail Bracket

* AC Adapter model is subject to change according to the market area.

LOCK 500/500i CONTENT

TOSIBOX® Lock 500/500i
(LTE ports only in Lock 500i)

Ethernet Cable

LTE-Antennas* (only Lock 500i)

WiFi-Antennas

Digital I/O Connector

Power Connector

SIM Card Slot Cover

*) Antenna model is subject to change according to the market area.

LOCK 500 POWER SOURCE KIT CONTENT

AC Power Source*

AC Plug Adapters

DC-Conversion Cable

*) AC Adapter model is subject to change according to the market area.

MODEL	REGION	WLAN	LTE	POWER KIT	WLAN ANT	LTE ANT
TBL5	EU/Global	x			x	
TBL5PS	EU/Global	x		x	x	
TBL5iA	EU/US	x	x		x	x
TBL5iAPS	EU/US	x	x	x	x	x
TBL5iB	APAC	x	x		x	x
TBL5iBPS	APAC	x	x	x	x	x

LOCK CONNECTIONS

LOCK 100/150

WLAN antenna ports

1. USB Port for matching and USB Modem
2. WAN Port
3. LAN1 Port
4. LAN2 Port
5. LAN3 Port
6. Service port
7. Reset button (not in use)
8. DC Power Input

Led indicators:

9. Power
10. WLAN
11. Service
12. LAN3
13. LAN2
14. LAN1
15. WAN

LOCK 200

1. DC Power Input
2. Reset button (not in use)
3. Power led indicator
4. Info led indicator
5. WAN Port
6. Service Port
7. LAN1 Port
8. LAN2 Port
9. LAN3 Port

USB Port for matching and USB Modem

LOCK 500/500i

* LAN3 Port can be configured as a Service Port

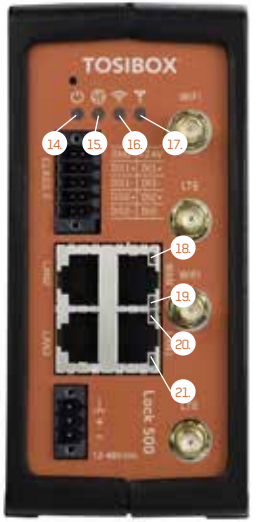
1. SIM card slot
2. USB Port for matching and USB Modem
3. Reset button for Service Port activation only
4. Digital I/O -Connection

Ethernet Connections:

5. LAN2 Port
6. WAN Port
7. LAN3 Port*
8. LAN1 Port

9. Power Connection

10. WiFi Antenna Port 1
11. LTE Antenna Port 2 (Lock 500i only)
12. WiFi Antenna Port 2
13. LTE Antenna Port 1 (Lock 500i only)



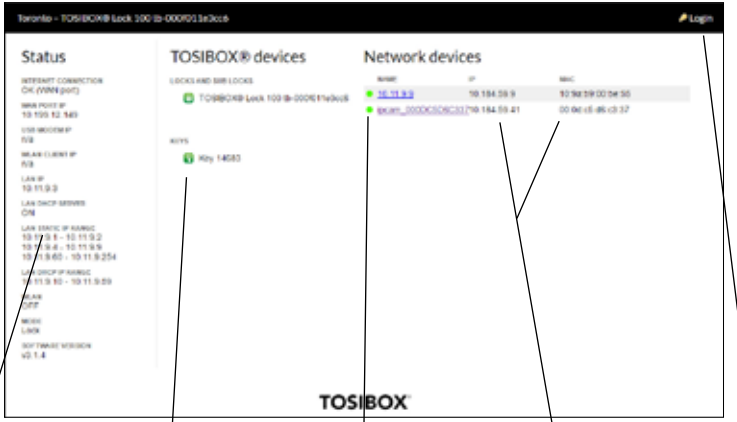
LED indicators:

14. Power
15. Internet
16. WiFi
17. LTE

Ethernet Port Leds:

18. LAN2
19. WAN
20. LAN3
21. LAN1

LOCK USER INTERFACE



Status bar shows general information.

Locks and Keys

Green: Connected

Red: Disconnected

Remotely controlled devices

Green: Connected

Red: Disconnected

Details of the remotely controlled devices

Login using "admin" user.
Password can be found on the bottom of the Lock

3. GETTING STARTED

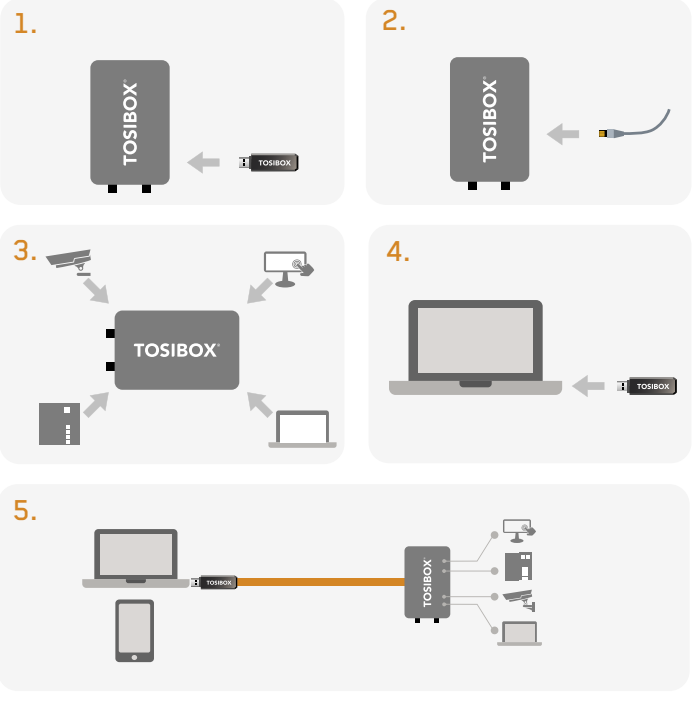
THE FIRST DEPLOYMENT

1. Make sure the Lock is powered before proceeding to matching the Key with the Lock. Insert the Key into the USB port of the Lock. When the LED on the Key turns off, the matching is complete (approximately 10 seconds). Remove the Key from the Lock. You can also match additional Locks to the same Key.

2 - 3. Connect the Lock to your network according to your use case. Remember to make sure that the Lock has a working internet connection.

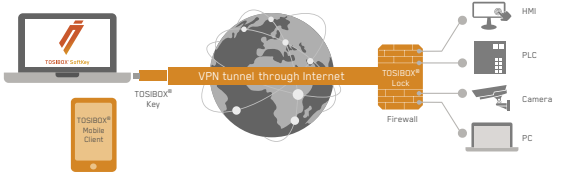
4. Connect the Key to your computer and install the Key software. Follow the section "Deploying the Key".

5. Secure TOSIBOX® connection is now ready to be used for controlling and monitoring devices remotely.



4. TOSIBOX® LOCK INSTRUCTIONS

4.1.1 DEPLOYING LOCK IN "LOCK MODE"



With its factory default settings, the Lock is connected to the Internet via its WAN port or a USB modem which can be connected to the USB port of the Lock. In this mode, the Lock creates its own protected local network for the connected devices. In this configuration, only devices that are connected to the Lock by cable or via WLAN access point are accessible with the Key.

Note:

- See "USB Modem settings for the Lock" (page 18) to connect a USB modem to the Lock's USB port.
- If the Lock is connected to a DHCP enabled network via any of its LAN ports (LAN1, LAN2 or LAN3) the Lock's own LAN functionality can be restored by resolving any DHCP conflicts by removing improper LAN connections to the Lock.

CONNECTING NETWORK DEVICES TO THE LOCK

A) Connecting device(s) that use dynamic IP addresses (DHCP)

Devices with a DHCP client enabled will automatically connect to the Lock. Plug the device(s) into the Lock's LAN port(s) and go!

B) Connecting device(s) with Fixed IP addresses by configuring the DEVICE to the LOCK:

1. Before connecting device to Lock, connect to device per device manufacturer's instructions on your PC and assign a new static IP address to device(s) from the Lock's IP range printed on the bottom label of the Lock. Do not add same IP address. We recommend adding the next IP sequential address ABOVE the IP address on the lock, and so forth for each additional device. (*Note: Lock's IP and netmask address can also be found in the service port at Network → LAN)
2. Plug the device(s) into the Lock's LAN port(s) and go!

C) Connecting device(s) with Fixed IP addresses by configuring the LOCK to the DEVICE:

1. Get the device(s') IP address(es) and netmask.
2. Connect your PC to the Lock's service port and log in following the step 1 on page 17 "Updating the Lock software".
3. Go to Network-→LAN and change the IP address in the "IPv4 address" field to the next IP address above the IP address of the device (step 1). Also check that the "IPv4 netmask" field corresponds to the netmask set on the device and change it if necessary.
4. Plug the device(s) into the Lock's LAN port(s) and go!
5. ADVANCED/ENTERPRISE USERS ONLY: Go to Network→LAN DHCP SERVER and set the "Start" value so that it's higher than all used static addresses. Set the limit value to a suitable value so that it covers the rest of the unused addresses in the LAN range. For example, the range 192.168.5.50 – 192.168.5.254 contains 205 addresses so the "Start" value would be 50 and the "Limit"value would be 205.

4.1.2 DEPLOYING LOCK IN "CLIENT MODE"

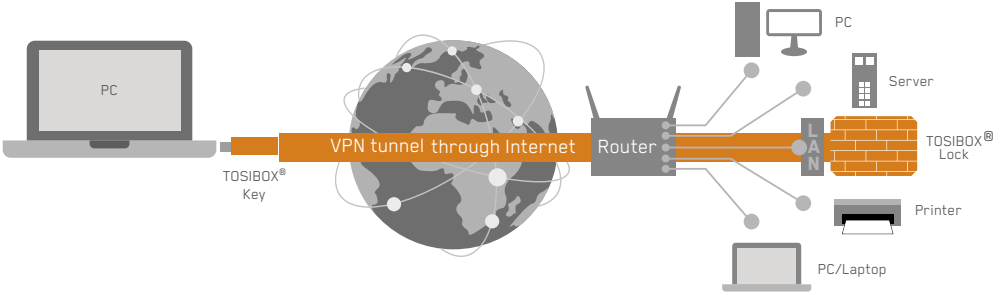
Client mode can be used for connecting the Lock to an existing network (e.g. an office network). In this mode, the Lock joins the network like any other device (e.g. a PC) and provides remote users with access to other devices in the same network. The Lock will obtain its address from the DHCP, so the local network needs to have a working DHCP server that allocated IP addresses.

A) Connecting network devices in Client Mode

1. Log into the Lock's web user interface as admin and open the LAN settings by clicking Network → LAN.
2. Change the LAN interface protocol field to "DHCP Client". Click the "Switch Protocol" button and click "Save".
3. Plug in a cable from the local network into one of the Lock's LAN ports and go!

Note:

- Do not connect the internet to the Lock's WAN Port or a USB modem to the USB port. Doing so will automatically deactivate the client mode and revert the Lock's LAN settings back to factory defaults.
- Do not connect any LAN port directly to the internet.
- Do no connect the controlled devices to any LAN port.
- The lock will scan the entire LAN network for connected devices and will grant device access to any user with a matched Key. Please keep this in mind when considering network and information security.
- In cases where access rights need to be restricted, switch on MAC/IP Filtering (under Advanced Settings) or set up the Lock in its factory default configuration.
- In this mode, the Lock's inbuilt firewall does not protect the devices in the LAN network.
- Client Mode is deactivated from the Lock's web user interface



4.2 CONNECTING LOCKS

With TOSIBOX® Locks one can connect machines in separate places so that the connection between them is permanently and automatically on. One example is a real-time protected connection between home and office. This is made with a Lock/Sub Lock solution (see accompanying image Connecting Locks). To Lock 100 and Lock 150 can be connected to up to 10 Sub Locks, to Lock 200 and Lock 500 can be connected to up to 50 Sub Locks.

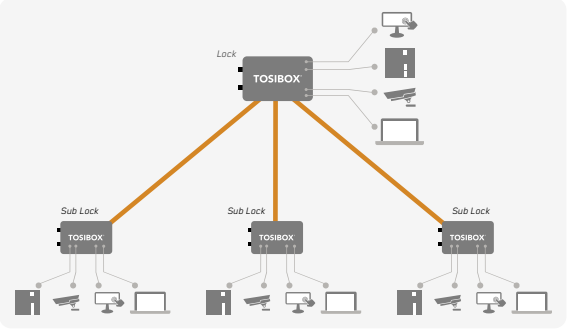
First match the Key to all the Locks to be connected as described in section "Instructions for TOSIBOX® Key and Lock setup".

CONNECTING LOCKS

1. Insert a matched Key to the USB port of the computer.
2. Choose "Devices" from the Key user menu and "Connect Locks" from the drop down menu.
3. Choose the Locks that you want to connect together and choose "Next".
4. Choose the Lock that you want to attach the Sub Locks. The other Locks will be changed to Sub Lock operating mode.
5. Confirm the selection → Save → matching is ready.

NOTE: The connections will come into effect when the Locks have access to the Internet.

The Sub Lock ends of the connection in the picture do not have their own DHCP service. If the connection between the Lock and the Sub Lock is interrupted, the network devices connected with the Sub Lock can no longer connect to the Internet and each other.



4.3 UPDATING THE LOCK SOFTWARE

1. a. Connect the computer to the service port of the Lock with an ethernet cable. First check that you have access to the Internet via the service port. Open an internet browser and type http://172.17.17.17 into the address field to access the Lock user interface. Do not type "www" before the "http://" in the address.

   b. Alternatively you can also log in remotely. When the connection between the Key and the Lock is active, double click the Lock symbol in the Key user interface.
2. Log in using "admin" for the user ID. The default admin password is visible on the bottom of the Lock.

3. Choose "Settings" → "Software update". If there is a software update available for the Lock, you can start the update by clicking the "Start software update" button.
4. Wait until the update has been downloaded and installed. Do not interrupt the power of the Lock during the software update process. The update is complete when the software gives a notice "Software updated successfully".

Automatic software updates are activated as a default setting. You can select the time when the automatic update of the released software is allowed. You can deactivate the automatic software update from the Lock user interface.

Choose "Settings" → "Software update" → uncheck the box "Auto-update enabled".

4.4 USB MODEM SETTINGS FOR THE LOCK

You can connect the Lock to the Internet with a USB Modem. For information on supported modems go to: http://www.tosibox.com/support.

1. Log in as admin user, select "Network" → "USB Modem".
2. Either use the Automatic APN setting or fill in the APN and if necessary the PIN field according to the SIM card settings. For APN settings information, please contact your mobile operator.
3. Confirm the selection → Save.
4. Connect a Tosibox supported USB Modem to the USB port of the Lock.

4.5 INTERNAL MODEM SETTINGS FOR LOCK 500I

You can connect the Lock to the Internet with an internal Modem. Before inserting or removing the SIM card(s), disconnect the Lock power supply.

1. Log in as admin user, select "Network" → "Internal Modem"
2. Either use the Automatic APN setting or fill in the APN and if necessary the PIN field according to the SIM card settings. For APN settings information, please contact your mobile operator.
   Note: when using an older SIM card (non-USIM) the PIN code has to be disabled before putting the SIM into the Lock 500 SIM slot. Setting PIN code for non-USIM cards is not supported.
3. Confirm the selection → Save.

4.6 WLAN SETTINGS FOR LOCK 100, LOCK 150 AND LOCK 500

On Lock 100, Lock 150 and Lock 500 you can configure the WLAN as Client (providing Internet access for the Lock) or as Access Point (providing access to Lock LAN and Internet for wireless devices). For detailed set-up instructions visit http://www.tosibox.com/support.

4.7 KEY CONNECTION SETTINGS FOR THE LOCK

You can change the Key connection type from Layer 3 -routed (default) to Layer 2 -bridged ("Connection type" → "Layer 2-bridged").

On Layer 2 connections you can allow connections from Lock to Key. Log into the Lock as admin, select "Settings" → "Keys and Locks" → remove selection "Deny access towards client"

For more details on Layer 2 and Layer 3 connections visit http://www.tosibox.com/support.

4.8 ADVANCED SETTINGS FOR THE LOCK

On the Advanced settings page you can configure LAN and Internet access restrictions and security related settings.

1. Log in as admin
2. Choose "Settings" → "Advanced settings"
3. Confirm changes → Save

4.9 INTERNET CONNECTION PRIORITIES

Several alternative Internet connections can be used by the Lock:

1. WAN
2. USB modem
3. WLAN (Lock 100, Lock 150 and Lock 500 only)
4. Internal modem (Lock 500i only)

One of the available connections can be selected as a main connection and the other connections can be set as backup connections. In the event that the main connection is interrupted, the connection is automatically shifted to preselected backup connections according to the priority setting (eg. WAN port → USB Modem). The connection is switched back to the main connection once it is available again.

4.10 POE

(LOCK 200 ONLY)

The "PoE out" port supports PoE output, with auto detection feature. This means you can connect laptops and other non-PoE devices without damaging them. The PoE on "PoE out" outputs approximately 2V below input voltage and supports up to 0.58A (So e.g. 24V PSU will provide 22V/0.58A output to the "PoE out" port).

The device accepts powering from the power jack or from the "PoE in" port (passive PoE)

1. DC power jack (5.5mm outside and 2mm inside diameter, female center pin positive) accepts 8-27V DC +/-10%
2. The "PoE in" port accepts passive Power over Ethernet 8-27V DC +/-10%

Under maximum load, the power consumption of this device is 7W.

4.11 SERVICE PORT

On Lock 100, Lock 150 and Lock 200 a dedicated Service Port is available. On Lock 500, LAN3 port can be configured as Service port by pressing the reset button for 3 seconds when there is no cable in LAN3. When completed, the Internet status LED will blink for three seconds. Lock Management Interface can then be accessed by entering http://172.17.17.17 on the address bar of your browser. Assigning the port back to LAN range can be done following the same procedure or by restarting the device.

4.12 MOUNTING INSTRUCTIONS

LOCK 100/150 QUICK INSTALLATION TO DIN RAIL

The bottom of the Lock has integrated hooks that allow a quick installation to DIN rail with the LAN/WAN ports facing upwards.

LOCK 100/150 SECURE INSTALLATION TO DIN RAIL

For environment where a more robust installation method is needed or another installation orientation is wanted, the Lock can be installed to DIN rail with the clip and screws included in the sales package. There are M4 threaded mounting holes on the bottom of the equipment. The screws shall be placed through the bottom sticker which has the hole locations indicated. Use only the screws included in the sales package. Using longer screws pose a risk of damaging the device internal electronics. More versatile installation options to DIN rail, such as angle brackets are available from an authorized TOSIBOX® reseller as an accessory.

Lock 100/150 with DIN rail bracket

LOCK 100/150 WALL MOUNTING

The bottom of the Lock has two keyhole shaped openings that allow the Lock to be installed on the wall with countersunk screws.

LOCK 200 INSTALLATION TO DIN RAIL

The Lock can be installed to DIN rail with the clip and screws included in the sales package. There are M3 threaded mounting holes on three sides of the equipment. For attachment on either of the narrow sides, the screws with length of 10 mm shall be used. For attachment on the bottom of the Lock, the screws with length of 6mm shall be used. The screws shall be placed through the bottom sticker which has the hole locations indicated.

See pictures 1 - 4 for the mounting options.

Picture 1.

Picture 2.

Picture 3.

Picture 4.

LOCK 200 USING THE RUBBER FEET

Rubber feet included in the sales package can be installed in the bottom of the Lock for more convenient installation horizontally e.g. on a table.

See picture 5 and 6 for the mounting.

Picture 5.

Picture 6.

LOCK 500 INSTALLATION ON THE TABLE

The Lock can be placed standing vertically on its rubber feet. There are vent holes on both sides of the device, designed to provide cooling air passing through the device. Allow enough free space, minimum of 25mm around the Lock to ensure the free flow of cooling air.

Make sure there is no risk of the device falling aside as this would block the cooling air flow through the vent holes. Have all the cables secured in such a way that they cannot make the Lock fall aside and routed as far away from the antennas as possible. Position the antennas in orthogonal pattern, i.e. in such a way that they form 90 degrees angle between each other.

Observe the gender of the antenna connectors to make sure each antenna is fitted into the correct antenna port. To achieve the maximum radio performance, follow the antenna pattern shown in Picture 7.

Avoid installing the Lock close to other high-power radio transmitters as they may affect the performance of the Lock. Also avoid installing the Lock close to any sensitive devices that may be affected by the antenna signals emitted by the radio transmitter of the Lock. In case of unwanted disturbance, relocate the cables and/or the Lock in a place where the devices do not disturb each other.

LOCK 500 INSTALLATION TO DIN RAIL

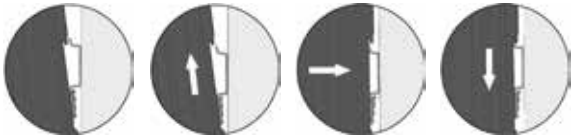
The Lock can be installed to DIN rail by using the integrated DIN rail bracket located in the backside of the device. Follow the sequence shown in picture 7.

Removal is the reverse of installation. There are vent holes on both sides of the device, designed to provide cooling air passing thru the device. Allow enough free space, minimum of 25mm around the Lock to ensure the free flow of cooling air. Route and secure all cables as far away from the antennas as possible. Position the antennas in orthogonal pattern, i.e. in such a way that they form 90 degrees angle between each other. Observe the gender of the antenna connectors to make sure each antenna is fitted into the correct antenna port.

To achieve the maximum radio performance, follow the antenna pattern shown in Picture 7. Installing the Lock inside of metal cabinet may result in the degradation or loss of radio performance. In such case have the antennas installed outside of the cabinet using coaxial RF extension cables, available at your local specialized dealer or service technician.

Avoid installing the Lock close to other high-power radio transmitters as they may affect the performance of the Lock. Also avoid installing the Lock close to any sensitive devices that may be affected by the antenna signals emitted by the radio transmitter of the Lock. In case of unwanted disturbance, relocate the cables and/or the Lock in a place where the devices do not disturb each other.

Picture 7.



1. Place the DIN-rail bracket slider under the lower edge of the DIN rail.

2. Push the Lock upwards until the slider travel is in the end

3. Push the upper edge of Lock parallel to the wall

4. Slide the Lock down and check that the DIN rail bracket has a firm grip of the DIN rail

Picture 8. Lock 500i installed to DIN rail. See the antenna directions.

4.13 INPUT POWERING OPTIONS

LOCK 100/150

Use the AC adapter included in the sales package. Alternatively, in case the operating voltage of 8-30V DC (absolute value) is available from an external power source, a DC input plug included in the sales package can be used. Connect the stripped wires by tightening the screws with a flat blade screwdriver. Follow the polarity marking in the plug.

The external power source should be an approved power source evaluated to 60950-1 or 62368-1, with SELV/ES1, LPS/PS2 outputs, with temperature rating to cover the environmental conditions of the installation site.

LOCK 200

Use the AC adapter included in the sales package. Alternatively, in case the operating voltage of 8-27V DC +/-10% is available from an external power source, a DC input plug included in the sales package can be used. Connect the stripped wires by tightening the screws with a flat blade screwdriver. Follow the polarity marking in the plug.

To secure the input power cable from being accidentally pulled away from the power input jack, the use of the cable saddle is recommended. The cable saddle is included in the sales package and it is locked in place by inserting it into the 4mm diameter hole in the front panel. Loop the power cable around the frame and snap the jaw closed.

LOCK 500

A power source with voltage of 12-48V DC +/-20% is required to operate the Lock. The power input port is equipped with a removable plug-in connector included in the sales package. Remove the connector if needed and connect the stripped power wires by tightening the wire connector screws with a flat blade screwdriver.

A device frame connection ⏚ is available at the power input port. It is recommended to wire this connection to the installation cabinet protective earth potential with as short cable as possible. This will enhance the immunity of the equipment against conducted and radiated RF disturbance, as well as against electrical transients that may be propagated by the ethernet cables. Use + and - terminals to power the device. Follow the polarity and grounding symbols in the front panel.

Make sure the connector is completely plugged in and secure the connector into the Lock frame by tightening the locking screws with a flat blade screwdriver. The wires with a cross-section of up to 1.5mm^2 (AWG 16) can be used with the connector. The stripping length of the conductor is 6 mm.

The Lock is equipped with a 2 Amp internal fuse. In case of a device malfunction, the fuse is blown to protect the power circuitry. The fuse cannot be replaced by the user. In case of a blown internal fuse, do not open the device. Instead, contact your local Tosibox distributor for service.

LOCK 500*PS

In addition to the powering options for Lock 500, an AC adapter included in the Lock500*PS-version sales package may be used. The AC adapter is supplied with interchangeable plugs that makes it possible to connect to different electrical outlets. Select and fit the plug that complies with your local requirements. The AC adapter DC output connector is coaxial. Therefore, a conversion cable is necessary to convert from coaxial DC connector to stripped wires required by the Lock power input connector. The conversion cable is included in the Lock500*PS-version sales package. Follow the same procedure as with Lock 500 powering options.

4.14 LOCK 500 - DIGITAL IN/OUT PORT WITH 24V DC OUT

The Digital I/O port is equipped with a removable plug-in connector included in the TOSIBOX Lock 500 sales package. Remove the connector if needed and in case of a solid wire simply insert the stripped signal wire to the correct port opening. In case a flexible wire is used, press the release button with a flat blade screwdriver to open the locking springs and insert the wire. Follow the signal symbols in the front panel and connect all needed signals. Make sure the connector is completely plugged in and secure the connector into the Lock frame by tightening the locking screws with a flat blade screwdriver. The wires with a cross-section of up to 1.5mm^2 (AWG 16) can be used with the connector. The stripping length of the conductor is 10mm. The wire is released from the connector by pushing the corresponding release button with a flat blade screwdriver.

4.15 LOCK 500 - SOFTWARE CONFIGURABLE I/O

The Digital I/O state information and configuration can be accessed from Settings -→ Digital I/O menu. For signal physical properties, please refer to section I/O specifications at the end of this manual.

Input port roles can be selected from:

Not selected – no action based on port state

Allow Internet connection – when port voltage is set high, Lock allows Internet connections. When port voltage is set low, there is no Internet access and the Lock visibility is "offline" for all Keys matched with it.

Prevent Internet connection – when port is set high, Lock prevents Internet connection and the Lock visibility is "offline" for all Keys matched with it. When port voltage is low, Internet access is allowed.

Allow VPN connections – when port voltage is set high, Lock allows incoming VPN connections from matched Keys. When port voltage is low, VPN connections are not allowed and the Lock visibility is "offline" for all Keys matched with it.

Prevent VPN connections – when port is set high, VPN connections are not allowed and the Lock visibility is "offline" for all Keys matched with it. When port voltage is low, Lock allows incoming VPN connections from matched Keys.

Output port roles can be selected from:

Not selected – no action based on port state

Internet connection OK – when Lock detects Internet connection to be OK, the port voltage is set high. If the Internet connection is not OK, the port voltage is set low.

Internet connection failed - when Lock detects there is no Internet connection, the port voltage is set high. If the Internet connection is OK, the port voltage is set low.

VPN connection active – when Lock detects active VPN connection(s) from matched Keys, the port voltage is set high. When there are no active VPN connections, the port voltage is set low.

VPN connection inactive – When there are no active VPN connections the port voltage is set high. When Lock detects active VPN connection(s) from matched Keys, the port voltage is set low.

4.16 LOCK 500 - DIGITAL I/O SMS ALERT

In order for the SMS alert feature to work, make sure to use a SIM card that supports sending SMS messages.

SMS alert feature can be activated on Digital I/O settings by selecting "Send SMS" for "Input port 1 role" and/or "Input port 2 role". After this, more settings for the SMS alert feature will become visible.

The following settings need to be defined for input port 1 or input port 2 or both:

Input port <X> SMS action
Select the trigger (high / low) for SMS sending: "Send message when input <X> is high" or "Send message when input <X> is low"

Input port <X> SMS message
Define the message to be sent. Concatenated SMS is not supported so the maximum length of a message is 160 characters (western alphabet). If using non-western alphabet, the limit is 70 characters.

Input port <X> SMS phone numbers
Enter phone number(s) to send the message to. Only one number per input field is allowed. More phone numbers can be added by adding a new input field.

Input port <X> SMS send limit
Determines how many messages per minute will be sent. "0" stands for no limit. Use this feature when the I/O may switch high-low several times and you do not want to send SMS for each state change.
Any message sent will be sent to all numbers defined in "Input port <X> SMS phone numbers"

Input port <X> SMS target modem
Currently only internal modem is supported. In case there are two SIMs inserted, the SMS will be sent from the active SIM at the time of the alarm.

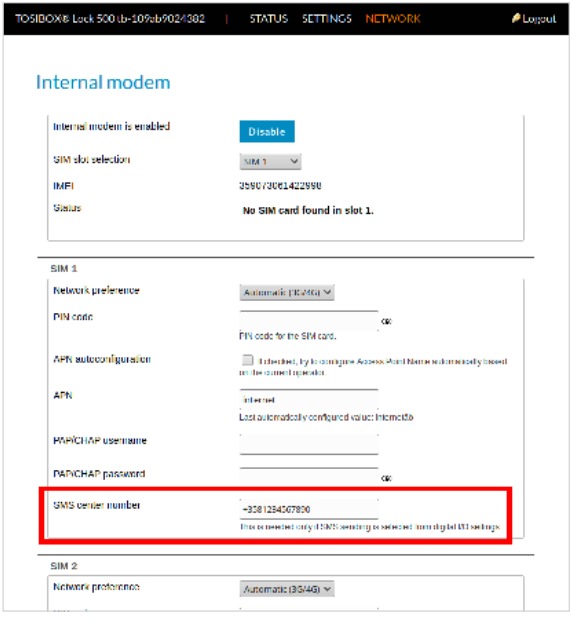
Both I/O ports have SMS settings independent of each other.

Sending an SMS will happen in 1-10 seconds of the trigger. In case the SIM subscription does not support sending SMS, the messages will not be sent.

Once the SMS has been sent by the Lock 500, the time to get it delivered to the destination is dependent on the Operator used.

Some subscriptions need the Message Service Center number defined to be able to send SMS messages. This can be set in "Internal Modem " settings where "SMS center number" can be defined. The number should be defined in international format (e.g. "+358…"

Note that the setting can be defined separately for both SIM slots.



5. TOSIBOX® KEY INSTRUCTIONS

5.1 TAKING MASTER KEY INTO USE

1. Insert the matched Key into the USB port of your computer. You should notice an auto play window open up on your desktop. If not, double click the executable file located in the Key's folder (Setup_Tosibox.exe). If your computer asks whether you want to allow Tosibox to make changes to your computer click yes.
2. The Key software will ask for a password that you can enter if you wish (recommended). By entering a password, you can prevent the unauthorized use of the Key. Store the password safely. Also pay attention to PUK code instructions on section 6.5.
3. The Key software opens up a window that shows the Locks that have been matched to the Key. Connect the Key with the wanted Lock by clicking the Lock's "Connect" icon.
4. The Key info dialogue shows the status of the connection between the Key and Lock.

The Key is now ready to be used

The Lock symbol displays a different colour according to the operating status of the Lock:

- Red = The Lock is not connected to the Internet.
- Yellow = The Lock is connected to the Internet, but the Key doesn't have a remote connection to the Lock.
- Green = The Lock is connected to the Internet and the Key has a remote connection to the Lock.

The Key symbol located in the computer's task bar displays different colours according to the operating status of the Key:

- Red = The Lock is not connected to the Internet.
- Yellow = The Key is connected to the Internet, but not to any found Locks.
- Green = The Lock is connected to the Internet and the Key has a remote connection to the Lock.

REMOTE MATCHING

Remote Matching is an alternative way to match the first master Key to a new Lock, Central Lock, or Virtual Central Lock. In Remote Matching, the Key does not have to be physically connected to a Lock, but it uses a unique, cryptographic code instead. This can be useful e.g. if the Lock needs to be reset and the master Key is not available in the same place. With Virtual Central Lock, remote matching is the only way to match it with a master Key.

The process is initiated by generating the remote matching code on the Lock that shall be matched, which enables remote matching on the Lock with that code only. Then, the remote matching wizard is opened on the master Key software and the code is entered there. This completes the process and the devices will establish a trust relationship over the Internet. The Lock appears on the master Key similarly as after physical matching.

Note: make sure to keep the code safe when transferring it to the master Key as anybody who knows the code can match the Lock and connect to it. If the code gets lost, deactivate remote matching on the Lock's web user interface and start it again by generating a new code.

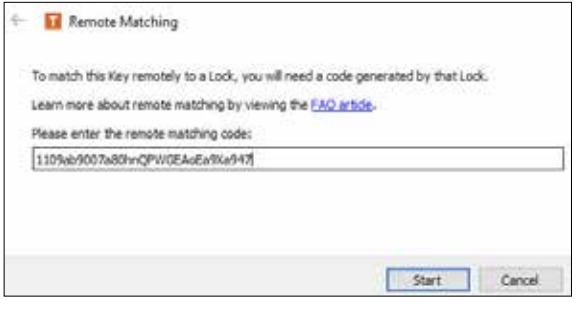
Currently Remote Matching is supported on following Lock products:

- Lock 500/Lock 500i
- Lock 150
- Virtual Central Lock with SW 2.2.0 or later
- Central Lock with SW 2.3.0 or later
- Lock 100 and Lock 200 with SW 3.3.0 or later
- You will also need TOSIBOX® Key SW v2.15.0 or later to complete the matching process. Both the Lock and the Key need to be connected to the Internet for the feature to work.

Required Steps to Perform Remote Matching

1. Log in as admin on Lock or (Virtual) Central Lock
2. Go to Settings → Keys & Locks click Generate button under Remote Matching title

3. Start Key SW on a PC/Mac
4. Open Devices → Remote Matching
5. Enter the code in the wizard and click Start



If both devices are online, the process completes after a few seconds and the Lock is now matched with the Key.

5.2 RENAMING AND USING DEVICES

This is the start window for the Key user interface. You can open the Lock user interface by double clicking the Lock icon on the left side of the window.

By clicking ⚙ an extra menu opens.

1. Click “Open browser automatically when connected” to have the Lock user interface launch automatically when the Key connects to the Lock.
2. Selecting “Show all details” allows you to view all the details of the connected device.
3. Click “Rename” to rename the selected Lock. The Lock names are global so a Lock’s name change will be reflected on all locks and Keys. Only Master and Back-up Keys can rename Locks.

1. You can open the browser user interface of the controlled device in “Open with browser (http)”.
2. You can connect to network sharing in “Open windows network share”.
3. You can open the remote desktop connection in “Open Remote Desktop Connection (RDP), if available”.
4. You can check the functionality of the controlled device with PING command in “Check if host available (PING)”.

5.3 ADDING EXTRA KEYS

Additional Keys can be matched with a Lock.

1. Insert a previously matched Key into the USB port of your computer.
2. Insert a new Key to another USB port of the computer.
3. Wait until "New Key" window opens.
4. If you are adding a Sub Key, follow the steps 1-4 ADDING SUB KEY. If you are adding a Backup Key, follow the steps 1-4 ADDING BACKUP KEY.

ADDING TOSIBOX® SOFTKEY

To activate SoftKey on a PC or Mac, you will need:

1. SoftKey license for the master Key – please contact our sales to purchase one
2. Key SW v3.0.0 or later both on the master Key and the client computer – see download instructions here

Also, to connect to Locks with SoftKey, the software on the Lock needs to support SoftKeys. SoftKey is supported by these versions:

1. Lock 100 and Lock 200: SW v3.3.0 onwards
2. Central Lock and Virtual Central Lock: SW v2.3.0 onwards
3. Lock 500 / Lock 500i: all versions
4. Lock 150: all versions

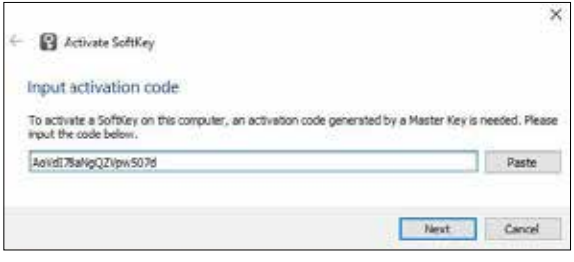
ACTIVATION

The activation process has five steps as outlined below:

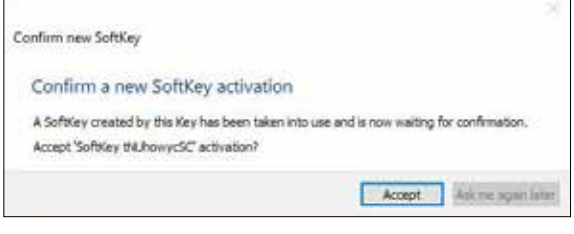
1. On master Key: generate activation code:
   Go to Devices → Manage Keys → Add Key, and add a new Key of type "SoftKey" and give it a name.

2. An activation code will be generated, send it over to the end user who shall activate and use the SoftKey client.

3. On client computer: activate SoftKey: Make sure TOSIBOX® Key software v3.0.0 or later is installed on the PC. Start the software. Activate the SoftKey by choosing Devices → Activate SoftKey and enter the activation code.



4. On Master Key: Confirm SoftKey. Confirm the activation from the pop-up dialog.



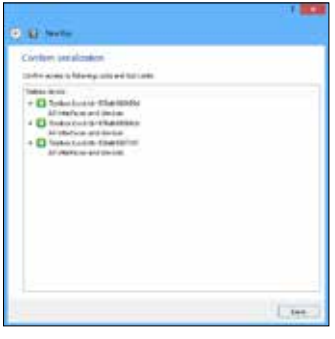
5. Define access rights for the new SoftKey by following the wizard.

The SoftKey is now ready to be used and can connect to the Locks where access was granted in step 5.

ADDING SUB KEY

1. When a new Key is turned into a Sub Key, choose "Sub Key", provide a descriptive name for it, and click "Next". A Sub Key is able to connect to chosen Locks but it has no rights to create new Keys.

2. Select the Lock(s)/Sub Lock(s) to which you want to grant access for the extra Key and choose "Next".

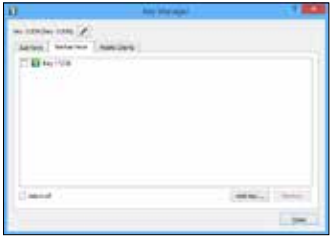


3. Confirm the selection by pressing "Save". Matching of the extra Key is now complete.

4. The extra Keys can be removed in the Lock user interface by clicking Settings → Keys and Locks (admin only).

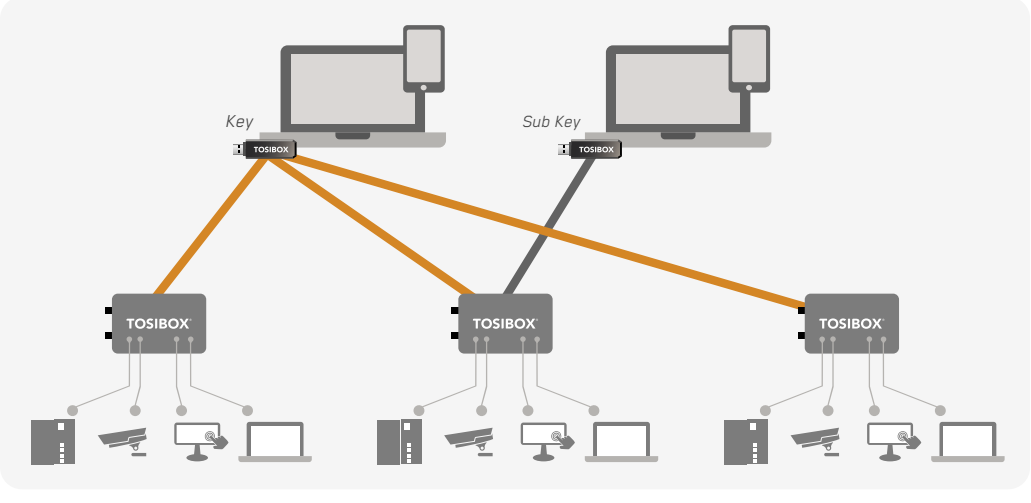
ADDING BACKUP KEY

1. Choose “Backup Key” and press “Next”. All Keys and Locks are automatically synchronized between the Backup Keys.



2. Confirm by pressing “Save”.
3. The Backup Key is now created. Press “Close” button to exit the feature.
4. The Backup Keys can be managed later in the Key user interface under “Manage Keys”. Important: This feature creates a Backup Key with equal user rights. Later, when the new locations are deployed by the other Key, the access rights are automatically copied to both Keys.

EXTRA KEY USE CASE



5.4 REMOTE MATCHING OF EXTRA KEYS

This feature is only available for Keys that have already been matched locally.

1. Insert the Key into the USB port of the computer and wait for the TOSIBOX® Key application to start.
2. Choose “Manage Keys” from the “Devices“ menu in the user interface and open the “Sub Keys” tab.
3. Choose the extra Keys to which you want to add new Locks and press the “Match...” button.
4. Choose the Locks to which you want to add to the extra Keys and press the “Next” button.
5. A list of targeted Locks is displayed. Confirm the choises and click “Save”.
6. Matching of the extra Keys is now complete. Press “Finish” button to exit the wizard.

5.5 PUK CODE FOR THE KEY

1. In the event that a wrong Key password has been entered six consecutive times, the Key will be locked. To unlock the Key a personal unlocking code, PUK is needed. The PUK code is delivered with the Key. Store it safely.
2. Go to the “Password” menu in the Key software and choose “Change password using PUK code...”.
3. Enter the PUK code into the “PUK-code” field.
4. Enter a new password into the “New password” field.
5. Confirm your password by typing it once more into the “New password (again)” field.
6. Choose “OK”.

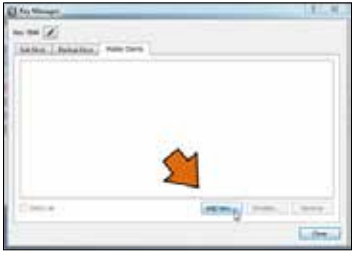
6. TOSIBOX® MOBILE CLIENT INSTALLATION

6.1 MOBILE CLIENT FOR ANDROID DEVICES

1. Download and install the TOSIBOX® Mobile Client from the Google Play store.

2. Open the TOSIBOX® Key software by plugging a matched Key into the USB port of your computer.

3. Go to the software menu and select Devices → Manage Keys.



4. Select the mobile clients tab and click Add new...

5. Enter the name of your mobile device and click Next.

6. Select the Locks that you would like to access through your mobile device and click Next.

7. Open the TOSIBOX® Mobile Client on your device.

8. Tap the screen to start matching.

9. Scan the QR code displayed on your computer or enter the matching code where prompted on your device.

10. Click Finish once the matching is complete.

11. Create a password for the mobile client.

12. Connect to a Lock by selecting its on/off icon.

13. Check the I trust this application dialogue box and click OK.

14. Now your mobile client is matched and can connect to the selected Locks and devices connected to them.

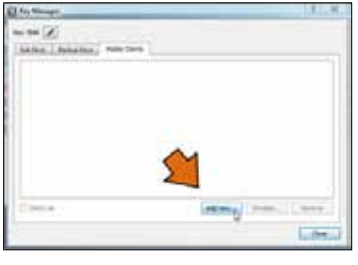
    You can open network devices through your web browser (if available) by clicking the the appropriate globe icon. Note: If your network device does not have a web interface (HTTP / HTTPS), you can use a third party application to make the connection. You can find third party applications from the Google Play store. You can copy the network device IP address to the device's clipboard by clicking the IP button. Doing so will allow you to paste the IP address to a third party application.

6.2 MOBILE CLIENT FOR IPHONES AND IPADS

1. Download and install the TOSIBOX® Mobile Client from the App Store.

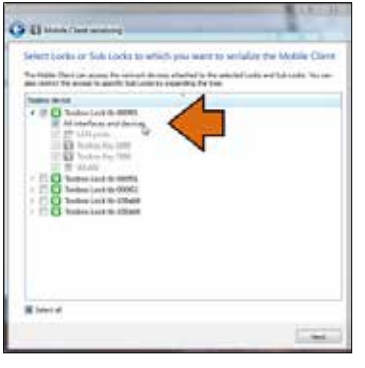
2. Open the TOSIBOX® Key software by plugging a matched Key into the USB port of your computer.

3. Go the software menu and select Devices → Manage Keys.



4. Select the Mobile Clients tab and click Add new...

5. Enter the name of your mobile device and click Next.



6. Select the Locks that you would like to access through your mobile device and click Next.

iOS

7. Open the TOSIBOX® Mobile Client on your device.

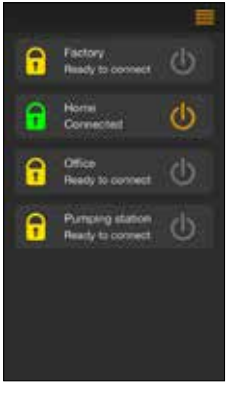
iOS

8. Tap the screen to start matching.

9. Scan the QR code displayed on your computer or enter the matching code where prompted on your device.

10. Click Finish once the the matching is complete.

11. Create a password for the mobile client.



12. Connect to a Lock by selecting its on/off icon.

13. On the first time when connecting to a Lock, the user needs to authorize the installation of the VPN profile by entering the device passcode.

14. Now your mobile client is matched and can connect to the selected Locks and devices connected to them.

    You can open network devices through your web browser (if available) by clicking the the appropriate globe icon. Note: If your network device does not have a web interface (HTTP / HTTPS), you can use a third party application to make the connection. You can find third party applications from the App Store. You can copy the network device IP address to the device's clipboard by clicking the IP button. Doing so will allow you to paste the IP address to a third party application.

7. TROUBLESHOOTING

The Key software cannot be installed:

- Check whether your computer has an operating system supported by TOSIBOX®: Windows 10, Windows 8/8.1 (32/64 bit), Windows 7 (32/64 bit), Windows Vista (32/64 bit), Windows XP (SP3), Windows Server 2003, Windows Server 2008, Mac OS X 10.9 Mavericks or more recent (Intel 64-bit)
- Restart the computer and plug in the Key.

The Key's connection window does not show the connections:

- The computer is not connected to the Internet.
- The Key is not matched with the Lock.
- The Lock does not have an internet connection or is not connected to the AC adapter.

The Lock connection in the window remains yellow:

- The Key has found a Lock, but VPN has not yet been established.

Device connections or the Lock connection in the window remains red:

- Make sure the controlled devices are connected to the Lock.
- If connected wirelessly (Lock 100, Lock 150, Lock 500), use the ethernet service port to log in to the Lock. Check that the wireless connection is enabled and that the Lock and the controlled device have the same password and encryption settings.
- Make sure the controlled device has a DHCP-service. If not, add the device in the device list of the Lock and specify the IP address of the device .

Visit http://www.tosibox.com/support for more instructions.

7. DÉPANNAGE

Le logiciel Key ne peut pas être installé:

- Vérifiez si votre ordinateur dispose d'un système d'exploitation pris en charge par TOSIBOX®: Windows 10, Windows 8 / 8.1 (32/64 bits), Windows 7 (32/64 bits), Windows Vista (32/64 bits), Windows XP (SP3) , Windows Server 2003, Windows Server 2008, Mavericks Mac OS X 10.9 ou plus récent (Intel 64 bits)
- Redémarrez l'ordinateur et branchez la Key.

La fenêtre de connexion de la Key n'affiche pas les connexions:

- L'ordinateur n'est pas connecté à Internet.
- La Key n'est pas associée au Lock.
- Le Lock ne dispose pas d'une connexion Internet ou n'est pas connecté à l'adaptateur secteur.

La connexion de Lock dans la fenêtre reste jaune:

- La Key a trouvé un Lock, mais le VPN n'a pas encore été établi.

Les connexions de périphérique ou la connexion de verrouillage dans la fenêtre reste rouge:

- Assurez-vous que les appareils contrôlés sont connectés au Lock.
- Si vous êtes connecté sans fil (Lock 100, Lock 150, Lock 500), utilisez le port de service Ethernet pour vous connecter à Lock. Vérifiez que la connexion sans fil est activée et que le Lock et le périphérique contrôlé ont le même mot de passe et les mêmes paramètres de cryptage.
- Assurez-vous que le périphérique contrôlé dispose d'un service DHCP. Sinon, ajoutez le périphérique à la liste des périphériques du verrou et spécifiez l'adresse IP du périphérique.

Visitez http://www.tosibox.com/support pour plus d'instructions.

8. MAINTENANCE INSTRUCTIONS

TOSIBOX® devices should be treated with care. By observing the following instructions you can enjoy the maximum performance of the devices and ensure full warranty coverage.

- Keep the devices dry. Protect the devices from precipitation, moisture and liquids as they can cause corrosion to electronic circuits. The devices are intended for indoor use only. Do not use them in wet environment or outdoors.
- Protect the devices from dirt and dust. When necessary, clean the devices with a soft, dry cloth. Do not use chemicals, solvents, detergents or pressurized air.
- Protect the devices from heat. High temperatures can damage plastic parts and shorten the life of the electronics.
- Protect the devices from cold. Low temperatures can make them more susceptible to breakage. Let the device's temperature stabilize properly before deploying them into the network..
- Protect the devices from mechanical shocks. Do not shake, knock or drop the devices.
- Do not paint the devices.
- Do not cover the devices or install them on top of each other. This can cause overheating. Allow enough free space around the devices to ensure the free flow of cooling air.
- Do not open the devices. There are no serviceable parts inside the devices. If the devices malfunction or need servicing, contact an authorized service facility.
- After the service life of the devices is over, do not throw them into domestic waste. Instead, take them to an authorized waste electronics collection facility.

8. CONSIGNES D'ENTRETIEN

Les appareils TOSIBOX® doivent être traités avec précaution. En observant les instructions suivantes, vous pouvez profiter des performances maximales des appareils et assurer une couverture complète de la garantie.

- Gardez les appareils au sec. Protégez les appareils des précipitations, de l'humidité et des liquides, car ils peuvent corroder les circuits électroniques. Les appareils sont conçus pour une utilisation en intérieur uniquement. Ne les utilisez pas dans un environnement humide ou à l'extérieur.
- Protégez les appareils de la saleté et de la poussière. Si nécessaire, nettoyez les appareils avec un chiffon doux et sec. N'utilisez pas de produits chimiques, solvants, détergents ou air sous pression.
- Protégez les appareils de la chaleur. Les températures élevées peuvent endommager les pièces en plastique et raccourcir la durée de vie des composants électroniques.
- Protégez les appareils du froid. Les basses températures peuvent les rendre plus susceptibles de se briser. Laissez la température de l'appareil se stabiliser correctement avant de les déployer sur le réseau.
- Protégez les appareils des chocs mécaniques. Ne secouez pas, ne frappez pas et ne laissez pas tomber les appareils.
- Ne peignez pas les appareils.
- Ne couvrez pas les appareils et ne les installez pas les uns sur les autres. Cela peut provoquer une surchauffe. Laissez suffisamment d'espace libre autour des appareils pour assurer la libre circulation de l'air de refroidissement.
- Ne pas ouvrir les appareils. Il n'y a aucune pièce réparable à l'intérieur des appareils. Si les périphériques ne fonctionnent pas correctement ou nécessitent une réparation, contactez un centre de réparation agréé.
- Une fois la durée de vie des appareils terminée, ne jetez-les dans les ordures ménagères. Au lieu de cela, prenez-les dans une installation agréée de collecte de déchets électroniques.

9. TECHNICAL DATA

TOSIBOX® LOCK 100

Ports

- 1x USB 2.0, type A, 500 mA maximum load allowed
- 1 x RJ-45 WAN conn., 10/100 Mb/s, auto-negotiation (MDI / MDI-X)
- 3 x RJ-45 LAN conn., 10/100 Mb/s, auto-negotiation (MDI / MDI-X)
- 1 x RJ-45 Service conn., 10/100 Mb/s, auto-negotiation (MDI / MDI-X)

WAN connection features

- Independent of operating systems
- Works in all Internet connections (operator independent)
- Firewall friendly
- Works with dynamic, static and private IP addresses
- Built-in firewall, NAT
- Up to 10 concurrent VPN connections
- VPN throughput up to 6 Mb/s (BF-CBC 128 bit)

Physical properties

- 132 mm x 99 mm x 35.5 mm / 5.2" x 3.9"x 1.4" (L x W x H)
- Weight 365 g / 1.31 lbs (net weight article)
- Operating temperature -25 °C … +70 °C / -13 °F … 158 °F
- Oparating humidity 20 - 80% RH, non condensing
- Storage temperature -40 °C … +70 °C / -40 °F … 158 °F
- Cast aluminium casing
- IP protection class: IP20
- Maximum operating altitude 2000 m / 6562 ft
- Overvoltage category I

USB modem options

- TB4GM2EU, TB4GM2AU, for 3rd party options, please see: http://www.tosibox.com/support

WLAN

- IEEE 802.11 b/g/n, max. 150 Mbps
- WEP, WPA-PSK, WPA2-PSK, WPA-PSK/WPA2-PSK Mixed, WPA-EAP, WPA2-EAP TKIP/AES encryption
- Frequency 2.412 – 2.462 GHz, 11 channels
- Output power 20 dBm max

Powering requirements

- 8-30V DC (absolute value), 7.2W max, reverse polarity protected

TOSIBOX® LOCK 100 POWER SOURCE

- Model ATS00ST-W120E
- Operating temperature: 0 °C … +40 °C / 32°F… 104 °F
- Operating humidity: 20 - 80% non-condensing
- Storage temperature: -20 °C … +60 °C / -4°F… 140 °F
- Storage humidity: 10 - 90% non-condensing

TOSIBOX® LOCK 150

Ports

- 1x USB 2.0, type A, 500 mA maximum load allowed
- 1 x RJ-45 WAN conn., 10/100 Mb/s, auto-negotiation (MDI / MDI-X)
- 3 x RJ-45 LAN conn., 10/100 Mb/s, auto-negotiation (MDI / MDI-X)
- 1 x RJ-45 Service conn., 10/100 Mb/s, auto-negotiation (MDI / MDI-X)

WAN connection features

- Independent of operating systems
- Works in all Internet connections (operator independent)
- Firewall friendly
- Works with dynamic, static and private IP addresses
- Built-in firewall, NAT
- Up to 10 concurrent VPN connections
- VPN throughput up to 10 Mb/s (BF-CBC 128 bit)

Physical properties

- 132 mm x 99 mm x 35.5 mm / 5.2" x 3.9"x 1.4" (L x W x H)
- Weight 365 g / 1.31 lbs (net weight article)
- Operating temperature: -20 °C … +55 °C / -4 °F … 131 °F
- Oparating humidity 20 - 80% RH, non condensing
- Storage temperature -40 °C … +70 °C / -40 °F … 158 °F
- Cast aluminium casing
- IP protection class: IP20
- Maximum operating altitude 2000 m / 6562 ft
- Overvoltage category I

USB modem options

- TB4GM2EU, TB4GM2AU

WLAN

- IEEE 802.11 b/g/n, max. 150 Mbps
- WEP, WPA-PSK, WPA2-PSK, WPA-PSK/WPA2-PSK Mixed, WPA-EAP, WPA2-EAP TKIP/AES encryption
- Frequency 2.412 – 2.462 GHz, 11 channels
- Output power 18 dBm max

Powering requirements

- 10-30 V DC +/- 10% (absolute value), 7.2W max, reverse polarity protected

TOSIBOX® LOCK 150 POWER SOURCE

- Model ATS024T-W240V
- Operating temperature: 0 °C … +70 °C / 32°F… 158 °F (@ 375mA / 9W load
- Operating humidity: 20 - 80% non-condensing
- Storage temperature: -20 °C … +70 °C / -4°F… 158 °F
- Storage humidity: 10 - 90% non-condensing

TOSIBOX® LOCK 200

Ports

- 1x USB 2.0, type A, 500 mA maximum load allowed
- 1 x RJ-45 WAN conn., 10/100 Mb/s, auto-negotiation (MDI / MDI-X)
- 3 x RJ-45 LAN conn., 10/100 Mb/s, auto-negotiation (MDI / MDI-X)
- 1 x RJ-45 Service conn., 10/100 Mb/s, auto-negotiation (MDI / MDI-X)

WAN connection features

- Independent of operating systems
- Works in all Internet connections (operator independent)
- Firewall friendly
- Works with dynamic, static and private IP addresses
- Built-in firewall, NAT
- Up to 50 concurrent VPN connections
- VPN throughput up to 15 Mb/s (BF-CBC 128 bit)

Physical properties

- 140 mm x 36 mm x 125 mm / 5.51" x 1.42" x 4.92" (L x W x H)
- Weight 530 g / 1.17 lbs
- Operating temperature --20 °C … +50 °C / -4 °F … +122 °F
- Operating humidity 20 – 80% RH, non condensing
- Storage temperature -40 °C … +70 °C / -40 °F … +158 °F
- Cast aluminium casing
- IP protection class: IP20
- Maximum operating altitude 2000 m / 6562 ft
- Overvoltage category I

USB modem options

- TB4GM2EU, TB4GM2AU, for 3rd party options, please see: http://www.tosibox.com/support

Powering requirements

- 8-27V DC +/-10%, 7.0W max, reverse polarity protected

TOSIBOX® LOCK 500

Ports

- 1x USB 2.0, type A, 500 mA maximum load allowed
- 1 x RJ-45 WAN connection, 10/100 Mb/s, auto-negotiation (MDI / MDI-X)
- 3 x RJ-45 LAN connection, 10/100 Mb/s, auto-negotiation (MDI / MDI-X)
- LAN3 can be assigned as Service connection, 10/100 Mb/s, auto-negotiation (MDI / MDI-X)
- Ethernet port isolation: 1500 Vrms 1 minute (when connected to protective ground)

WAN connection features

- Independent of operating systems
- Works in all Internet connections (operator independent)
- Supports HTTP proxy servers with and without authentication
- Firewall friendly
- Works with dynamic, static and private IP addresses
- Built-in firewall, NAT
- Up to 50 concurrent VPN connections
- VPN throughput up to 70 Mb/s (BF-CBC 128 bit)

Physical properties

- 110 mm x 58 mm x 127 mm / 4.33" x 2.28" x 5.0" (L x W x H)
- Weight 495 g / 1.09 lbs (TBL5*) / 505g / 1.11 lb (TBL5i*)
- Operating temperature -20 °C … +60 °C / -4 °F … +140 °F
- Operating humidity up to 96% RH, non-condensing
- Storage temperature -40 °C … +70 °C / -40 °F … +158 °F
- Cast aluminium casing
- IP protection class: IP20
- Maximum operating altitude 2000 m / 6562 ft
- Overvoltage category I

USB modem options

- TB4GM2EU, TB4GM2AU

TOSIBOX® LOCK 500

Internal modem connection features

TBL5iA*

- Region: EMEA
- LTE Cat-6
- Up to 300 Mbps DL, 50 Mbps UL
- Frequency Bands (4G LTE): B1, B2, B3, B4, B5, B7, B12, B13, B20, B25, B26, B29, B41
- Supported technology (HSPA+, UMTS) Bands: B1, B2, B3, B4, B5, B8
- Dual SIM

LTE frequency band support

Band	Frequency (Tx)	Frequency (Rx)
Band 1	1920–1980 MHz	2110–2170 MHz
Band 2	1850–1910 MHz	1930–1990 MHz
Band 3	1710–1785	1805–1880 MHz
Band 4	1710–1755	2110–2155 MHz
Band 5	824–849 MHz	869–894 MHz
Band 7	2500–2570 MHz	2620–2690 MHz
Band 8	880–915 MHz	925–960 MHz
Band 12	699–716 MHz	729–746 MHz
Band 13	777–787 MHz	746–756 MHz
Band 20	832–862 MHz	791–821 MHz
Band 25	1850–1915 MHz	1930–1995 MHz
Band 26	814–849 MHz	859–894 MHz
Band 29	n/a	717–728 MHz
Band 41	2496–2690 MHz (TDD)	

- For bandwidth support details, see 3GPP TS 36.521-1 v11.3.0, table 5.4.2.1-1

WCDMA frequency bands support

Band	Frequency (Tx)	Frequency (Rx)
Band 1	1920–1980 MHz	2110–2170 MHz
Band 2	1850–1910 MHz	1930–1990 MHz
Band 3	1710–1785 MHz	1805–1880 MHz
Band 4	1710–1755 MHz	2110–2155 MHz
Band 5	824–849 MHz	869–894 MHz
Band 8	880–915 MHz	925–960 MHz

Conducted TX (Transmit) Power tolerances

Parameter	Cond. tr. p.	Notes
LTE		
LTE Band 1, 3, 5, 8, 18, 19,21,28,39	+23 dBm +- 1 dB	
LTE Band 7, 38, 40, 41	+22 dBm +- 1 dB	
UMTS		
Band 1 (IMT 2100 12.2 kbps)		
Band 5 (UMTS 850 12.2 kbps)		
Band 6 (UMTS 850 12.2 kbps)	+23 dBm +- 1 dB	Connectorized (Class 3)
Band 8 (UMTS 900 12.2 kbps)		
Band 9 (UMTS 1700 12.2 kbps)		
Band 19 (UMTS 850 12.2 kbps)		
TD-SCDMA frequency band		
Band 39	+23 dBm +- 1 dB	

TOSIBOX® LOCK 500

Internal modem connection features

TBL5iB*

- Region: APAC
- LTE Cat-6
- Up to 300 Mbps DL, 50 Mbps UL
- Frequency Bands (4G LTE): B1, B3, B5, B7, B8, B18, B19, B21, B28, B38, B39, B40, B41
- Supported technology 1 (HSPA+, UMTS) Bands: B1, B5, B6, B8, B9, B19
- Supported technology 2 (TD-SCDMA) Band 39
- Dual SIM

LTE frequency band support

Band	Frequency (Tx)	Frequency (Rx)
Band 1	1920–1980 MHz	2110–2170 MHz
Band 3	1710–1785	1805–1880 MHz
Band 5	824–849 MHz	869–894 MHz
Band 7	2500–2570 MHz	2620–2690 MHz
Band 8	880–915 MHz	925–960 MHz
Band 18	815–830 MHz	860–875 MHz
Band 19	830–845 MHz	875–890 MHz
Band 21	1447.9–1462.9 MHz	1495.9–1510.9 MHz
Band 28	703–748 MHz	758–803 MHz
Band 38	2570–2620 MHz (TDD)	
Band 39	1880–1920 MHz (TDD)	
Band 40	2300–2400 MHz (TDD)	
Band 41	2496–2690 MHz (TDD)	

- For bandwidth support details, see 3GPP TS 36.521-1 v11.3.0, table 5.4.2.1-1

WCDMA frequency bands support

Band	Frequency (Tx)	Frequency (Rx)
Band 1	1920–1980 MHz	2110–2170 MHz
Band 5	824–849 MHz	869–894 MHz
Band 6	830–840 MHz	875–885 MHz
Band 8	880–915 MHz	925–960 MHz
Band 9	1749.9–1784.9 MHz	1844.9–1879.9 MHz
Band 19	830–845 MHz	875–890 MHz

TD-SCDMA frequency band

Band 39	1880–1920 MHz

TOSIBOX® LOCK 500

Conducted TX (Transmit) Power tolerances

Parameter	Cond. tr. p.	Notes
LTE		
LTE Band 1, 3, 5, 8, 18, 19,21,28,39	+23 dBm +- 1 dB	
LTE Band 7, 38, 40, 41	+22 dBm +- 1 dB	
UMTS		
Band 1 (IMT 2100 12.2 kbps)		
Band 5 (UMTS 850 12.2 kbps)		
Band 6 (UMTS 850 12.2 kbps)	+23 dBm +- 1 dB	Connectorized (Class 3)
Band 8 (UMTS 900 12.2 kbps)		
Band 9 (UMTS 1700 12.2 kbps)		
Band 19 (UMTS 850 12.2 kbps)		
TD-SCDMA		
Band 39	+23 dBm +- 1 dB	

WLAN

- IEEE 802.11 b/g/n, max. 150 Mbps
- WEP, WPA-PSK, WPA2-PSK, WPA-PSK/WPA2-PSK Mixed, WPA-EAP, WPA2-EAP TKIP/AES encryption
- Frequency 2.412 – 2.462 GHz, 11 channels
- Output power 20 dBm max

I/O Specification

- 2 x digital inputs, galvanic isolation, current limited to 5mA, voltage 0 - 32V nominal, input voltage of 0-5V is interpreted as '0', input voltage over 12V is interpreted as '1'
- 2 x digital outputs, type: transistor sourcing, output voltage 24V DC +/- 5% nominal
- 1 x 24V DC out: 24V DC +/- 5% nominal, always active, non-configurable
- Total combined maximum current output for digital outputs and 24V DC out is limited to 50mA
- Software Configurable I/O state

Powering requirements

- 12-48V DC +/-20%, 10.0W max, reverse polarity protected

TOSIBOX® LOCK 500

Internal modem connection features

TBL5iC*

- Region: US/CAN
- LTE Cat-6
- Up to 300 Mbps DL, 50 Mbps UL
- Frequency Bands (4G LTE): B1, B2, B3, B4, B5, B7, B12, B13, B20, B25, B26, B29, B41
- Supported technology (HSPA+, UMTS) Bands: B1, B2, B3, B4, B5, B8
- Dual SIM

LTE frequency band support

Band	Frequency (Tx)	Frequency (Rx)
Band 1	1920–1980 MHz	2110–2170 MHz
Band 2	1850–1910 MHz	1930–1990 MHz
Band 3	1710–1785	1805–1880 MHz
Band 4	1710–1755	2110–2155 MHz
Band 5	824–849 MHz	869–894 MHz
Band 7	2500–2570 MHz	2620–2690 MHz
Band 8	880–915 MHz	925–960 MHz
Band 12	699–716 MHz	729–746 MHz
Band 13	777–787 MHz	746–756 MHz
Band 20	832–862 MHz	791–821 MHz
Band 25	1850–1915 MHz	1930–1995 MHz
Band 26	814–849 MHz	859–894 MHz
Band 29	n/a	717–728 MHz
Band 41	2496–2690 MHz (TDD)	

- For bandwidth support details, see 3GPP TS 36.521-1 v11.3.0, table 5.4.2.1-1

WCDMA frequency bands support

Band	Frequency (Tx)	Frequency (Rx)
Band 1	1920–1980 MHz	2110–2170 MHz
Band 2	1850–1910 MHz	1930–1990 MHz
Band 3	1710–1785 MHz	1805–1880 MHz
Band 4	1710–1755 MHz	2110–2155 MHz
Band 5	824–849 MHz	869–894 MHz
Band 8	880–915 MHz	925–960 MHz

Conducted TX (Transmit) Power tolerances

Parameter	Cond. tr. p.	Notes
LTE		
LTE Band 1, 3, 5, 8, 18, 19,21,28,39	+23 dBm +- 1 dB	
LTE Band 7, 38, 40, 41	+22 dBm +- 1 dB	
UMTS		
Band 1 (IMT 2100 12.2 kbps)		
Band 5 (UMTS 850 12.2 kbps)		
Band 6 (UMTS 850 12.2 kbps)	+23 dBm +- 1 dB	Connectorized (Class 3)
Band 8 (UMTS 900 12.2 kbps)		
Band 9 (UMTS 1700 12.2 kbps)		
Band 19 (UMTS 850 12.2 kbps)		
TD-SCDMA frequency band		
Band 39	+23 dBm +- 1 dB	

TOSIBOX® KEY

- 2048 bit RSA key in the cryptographic module
- 4 GB or larger flash memory storage for TOSIBOX® Key software and settings
- USB 2.0 interface, type A
- Standard CSP/PKCS#11

Supported operating systems:

- Windows 10
- Windows 8/8.1 (32/64 bit)
- Windows 7 (32/64 bit)
- Windows Vista (32/64 bit)
- Windows XP (SP3)
- Windows Server 2003
- Windows Server 2008
- Mac OS X 10.9 Mavericks or more recent (Intel 64-bit)

Physical properties

- 83 mm x 22 mm x 10 mm / 3.27" x 0.87" x 0.39" (L x W x H)
- Weight 27 g / 0.06 lbs
- Casing aluminium + plastic
- Operating temperature 0 °C … +70 °C / +32 °F … +158 °F
- Storage temperature -20 °C … +80 °C / -4 °F … +176 °F

10. LIMITED WARRANTY

Subject to the exclusions set forth below, Tosibox Oy will repair or replace, at its option without charge, any TOSIBOX® product which fails due to a defect in material or workmanship within Two Years following the initial consumer purchase.

This warranty does not apply to water damage, abuse or misuse of unauthorized accessories, unauthorized service or modification or altered products.

This warranty does not include the cost of labor for removal or re-installation of the product.

ANY IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED AS SET FORTH HEREIN AND TO THE DURATION OF THE LIMITED WARRANTY, OTHERWISE THE REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS EXPRESS LIMITED WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER AND IS PROVIDED IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. IN NO EVENT SHALL TOSIBOX OY BE LIABLE, WHETHER IN CONTRACT OR TORT (INCLUDING BUT NOT LIMITED TO NEGLIGENCE, GROSS NEGLIGENCE, BODILY INJURY, PROPERTY DAMAGE AND DEATH) FOR DAMAGES IN EXCESS OF THE PURCHASE PRICE OF THE PRODUCT OR ACCESSORY, OR FOR ANY INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY KIND, OR LOSS OF REVENUE OR PROFITS, LOSS OF BUSINESS, LOSS OF INFORMATION OR DATA OR OTHER FINANCIAL LOSS ARISING OUT OF OR IN CONNECTION WITH THE ABILITY OR INABILITY TO USE THE PRODUCTS OR ACCESSORIES TO THE FULL EXTENT THESE DAMAGES MAY BE DISCLAIMED BY LAW.

The complete information about Tosibox Terms and Conditions is available at www.tosibox.com/warranty

For Product Purchased in the USA:

Performance of any obligation under this warranty may be obtained by returning the warranted product, prepaid freight, along with proof of purchase to:

Tosibox, Inc.
7778 McGinnis Ferry Road
Suite 301
Suwanee, GA 30024

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

Note: The above warranty applies only to merchandise purchased in the United States of America or any of the territories or possessions thereof, or from a U.S. Military exchange.

For Product Purchased in Canada:

Performance of any obligation under this warranty may be obtained by returning the warranted product, along with proof of purchase, to your place of purchase in Canada.

This warranty gives you specified legal rights. Additional warranty rights may be provided by law in some within Canada

11. LEGAL NOTICES

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sourcecode.request@tosibox.com or by mail:

Tosibox Oy
Teknologiantie 12 A
90590 OULU, FINLAND

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sourcecode.request@tosibox.com ou par courrier:

Tosibox Oy
Teknologiantie 12 A
90590 OULU, FINLANDE

12. DECLARATIONS

TOSIBOX® LOCK 100

EU DECLARATION OF CONFORMITY

Hereby, Tosibox Oy declares that the radio equipment type Lock 100 is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address:

www.tosibox.com/product/lock-100/EU-DoC

FEDERAL COMMUNICATION COMMISSION INTERFERENCE STATEMENT

This device complies with FCC part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC CAUTION: Any changes or modifications not expressly approved by the party responsible for compliance could void the user´s authority to operate this equipment.

This equipment should be installed and operated with a minimum distance of 20 cm between the antenna and the user or bystanders.

FCC ID: 2AHCNLOCK100

TOSIBOX® LOCK 200

EU DECLARATION OF CONFORMITY

Hereby, Tosibox Oy declares that the radio equipment type Lock 200 is in compliance with Directives 2014/35/EU and 2014/30/EU.

The full text of the EU declaration of conformity is available at the following internet address:

www.tosibox.com/product/lock-200/EU-DoC

UL DECLARATION OF CONFORMITY

This device is UL listed in USA and Canada with UL file number E474664.

Proc. Cont. Eq.

E474664

TOSIBOX® LOCK 150

EU DECLARATION OF CONFORMITY

Hereby, Tosibox Oy declares that the radio equipment type Lock 150 is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address:

www.tosibox.com/product/lock-150/EU-DoC

UL DECLARATION OF CONFORMITY

This device is UL listed in USA and Canada with UL file number E507259.

I.T.E.

E507259

FEDERAL COMMUNICATION COMMISSION INTERFERENCE STATEMENT

This device complies with FCC part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user´s authority to operate this equipment.

This equipment should be installed and operated with a minimum distance of 20 cm between the antenna and the user or bystanders.

FCC ID: 2AHCNLOCK150

IC: 25009-LOCK150

INDUSTRY CANADA STATEMENT

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

This radio transmitter IC: 25009-LOCK150 has been approved by ISED to operate with the antenna types listed below with the maximum permissible gain indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for

that type, are strictly prohibited for use with this device.

Lock 150: Wi-Fi monopole antenna max peak gain 2.0 dBi.

Under ISED regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by ISED. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication!

This equipment should be installed and operated with a minimum distance of 20 cm between the antenna and the user or bystanders.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Le CI émetteur radio: 25009-LOCK150 a été approuvé par ISED pour fonctionner avec les types d'antennes énumérés ci-dessous avec le gain maximal admissible indiqué. Les types d'antenne non inclus dans cette liste, ayant un gain supérieur au gain maximal indiqué pour ce type, sont strictement interdits d'utilisation avec cet appareil.

Lock 150: gain de crête maximum de l'antenne monopôle Wi-Fi de 2,0 dBi.

Selon les réglementations ISED, cet émetteur radio ne peut fonctionner qu'avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par ISED. Afin de réduire les interférences radio potentielles avec d'autres utilisateurs, le type d'antenne et son gain doivent être choisis de manière à ce que la puissance rayonnée isotrope équivalente (par exemple) ne soit pas supérieure à celle nécessaire pour une bonne communication!

Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre l'antenne et l'utilisateur ou des tiers.

TOSIBOX® LOCK 500

EU DECLARATION OF CONFORMITY

Hereby, Tosibox Oy declares that the radio equipment type Lock 500 is in compliance with Directive 2014/53/EU.

The full text of the EU declaration of conformity is available at the following internet address:

www.tosibox.com/product/lock-500/EU-DoC

UL DECLARATION OF CONFORMITY

This device is UL listed in USA and Canada with UL file number E497243.

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LISTED
I.T.E.
E497243

FEDERAL COMMUNICATION COMMISSION INTERFERENCE STATEMENT

This device complies with FCC part 15 of the FCC rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user´s authority to operate this equipment.

This equipment should be installed and operated with a minimum distance of 20 cm between the antenna and the user or bystanders.

FCC ID: 2AHCNLOCK500I

Contains FCC ID: N7NEM7455

IC: 25009-LOCK500IC

Contains IC: 2417C-EM7455

INDUSTRY CANADA STATEMENT

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

This radio transmitter IC: 25009-LOCK500IC has been approved by ISED to operate with the antenna types listed below with the maximum permissible gain indicated. Antenna types not included in

this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

Lock 500: Wi-Fi monopole antenna max peak gain 2.0 dBi.

Lock 500iC: Wi-Fi monopole antenna max peak gain 2.0 dBi, LTE dipole antenna max peak gain 0.3 dBi.

Under ISED regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by ISED. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication!

This equipment should be installed and operated with a minimum distance of 20 cm between the antenna and the user or bystanders.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Le CI émetteur radio: 25009-LOCK150 a été approuvé par ISED pour fonctionner avec les types d'antennes énumérés ci-dessous avec le gain maximal admissible indiqué. Les types d'antenne non inclus dans cette liste, ayant un gain supérieur au gain maximal indiqué pour ce type, sont strictement interdits d'utilisation avec cet appareil.

Lock 500: gain de crête maximum de l'antenne monopôle Wi-Fi de 2,0 dBi.

Verrouillage 500iC: gain de crête maximum de l'antenne monopole Wi-Fi de 2,0 dBi, gain de crête maximal de l'antenne dipôle de LTE de 0,3 dBi.

Selon les réglementations ISED, cet émetteur radio ne peut fonctionner qu'avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par ISED. Afin de réduire les interférences radio potentielles avec d'autres utilisateurs, le type d'antenne et son gain doivent être choisis de manière à ce que la puissance rayonnée isotrope équivalente (par exemple) ne soit pas supérieure à celle nécessaire pour une bonne communication!

Cet équipement doit être installé et utilisé avec une distance minimale de 20 cm entre l'antenne et l'utilisateur ou des tiers.

TOSIBOX®

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