

TOSIBOX – YOUR PRIVATE HIGHWAY THROUGH THE INTERNET OF THINGS

Tosibox is the world's first solution for enabling remote VPN connections to devices connected to the internet of things – easily, cost-efficiently and securely. The technology is globally patented, and is currently used in more than 70 countries. It has quickly become the standard the industry has been waiting for.

Today the need for reliable internet connections is greater than ever, and if the predicted growth of the internet of things (IoT) is anything to go by, the demand for ubiquitous connectivity will continue to grow at an unforeseen pace in the coming years. According to some estimates, the internet of things is expected to explode the number of connected devices to 100 billion by the year 2025.

The internet of things consists of intelligent connected machines and devices that gather and use vast amounts of data to accomplish things that we could not even dream of a few years back. Expectations are high regarding the market opportunities and new business models made possible by these new connected technologies, especially regarding the so called industrial internet of things (IIoT).

“If a tourist can fly across oceans without knowing anything about airplanes, why can’t an entrepreneur enjoy the benefits of technology without having an IT degree?”

Veikko Ylimartimo, Tosibox founder

Solving the challenges of connectivity

There are challenges, however, that have to be solved for the IoT to really live up to the promises. One of the main challenges has to do with the reliability, security and costs of the connection technologies used.

So far, the connectivity challenges have been tackled by solving single network connection problems using tailor-made solutions. The problem with such a case-by-case approach is that it is time consuming and expensive. Also, compatibility issues can make adding items to the system at a later stage problematic.

Seen from a wider perspective, the basic problem with remote connections has been the lack of standards and, as a result, the countless different ways of establishing the internet connection and ensuring data security. This is where Tosibox has entered the arena with a new kind of device-based end-to-end VPN solution, that has quickly been accepted as the standard for secure and reliable connectivity in the industrial internet of things.

Security and safety are crucial

With a growing amount of sensitive data being gathered by connected sensors and devices, and a growing dependency on the utilisation of this data, the challenges of data security and privacy have become a critical issue regarding the development of the internet of things. Basically, any “thing” or device connected to and controlled by internet-connected networks is vulnerable to being hacked. With cloud-based solutions this risk is higher than with device-based solutions. According to research 78% of companies see cloud services as a risk for their data security (Centre for European Economic Research, 2015).

A related challenge to data security is safety. As the IoT involves automatic transfer of data between countless interconnected appliances and devices – from locks and home alarm systems to subway trains, ocean-going ships and passenger airplanes, even nuclear power plants – cyber-attacks could potentially have disastrous effects.

The new VPN standard for the IoT

Tosibox is a standard solution that replaces the currently available cloud-based connection methods and the site and supplier-specific tailored remote connections with a plug-and-go, easy-to-use, secure and cost-efficient solution that can be deployed by anyone in a few minutes.

The solution turns an internet connection between two devices into an encrypted and automatic end-to-end connection. Firewalls do not need to be opened. The owner of the Tosibox Lock and Key pair can be sure that the data and the connections are completely secured, and never stored on any third-party server.

Benefits

Fast and easy deployment

The time it takes to install a new object, including the definition of access rights, can range from a few minutes to ten minutes. Normally five minutes is enough.

Data security

Tosibox offers high-level data security and the most reliable recognition of privacy – the access key is physically stored on a memory stick's cryptoprocessor, not on a computer's or other device's disk that could be copied.

Mobile access (Android and iOS)

Each physical key includes a free-of-charge mobile licence. This enables access without the physical key using Android or iOS mobile phones and tablets. The mobile device acts as a sub key governed by the main key.

Fully operator neutral

Tosibox works with all operators and all connection types. There is no need for static IP addresses or expensive M2M connections. Operators and connections can be changed on the fly without the need for any reconfiguration or other procedures. The solution also works over 3G/4G mobile networks with a Tosibox-supported modem.

Fully equipment and manufacturer neutral

All IoT devices from all manufacturers can be easily connected and securely accessed with the Tosibox solution – ethernet-connected devices directly into the Tosibox, series and profibus-connected devices with adapters.

Best IoT connection quality and reliability

The technology enables direct end-to-end connections that work reliably and without delay. The connections do not rely on cloud services that tend to cause security and connection problems as the amount of users grows. In mobile applications, using the Tosibox-supported modem, Tosibox's unique connection monitoring and fixing automation keeps the connections up, and in fault situations automatically re-establishes the connection without the need for physical rebooting on site.

Want to know more?

Please contact us: www.tosibox.com

© 2016 Tosibox Oy – All rights reserved

No part of this publication may be reproduced or copied in any form or by any means (electronic, mechanical, graphic, photocopying, recording, taping or other information retrieval systems) without the prior written permission of the copyright holder. Tosibox Oy makes any representation or warranty (express or implied) in this publication and neither assumes any responsibility for the correctness, errors or omissions of information contained herein. Information in this publication is subject to change without notice.

No liability, whether direct, indirect, special, incidental or consequential, is assumed with respect to the information contained herein. This publication is intended for information purposes only.