susietec
a brand of kontron

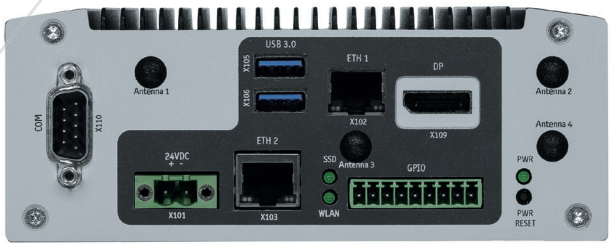
K-PORT

susietec® K-PORT IoT-Bundle

The Complete FleetManagement Solution for Edge Devices

The K-PORT IoT Bundle supports component and equipment manufacturers by automating the commissioning, operation and maintenance of their IoT solution in the field: With K-PORT, we offer you a solution that combines device and docker management as well as remote support with the hardened operating system KontronOS. You receive a coordinated IoT Bundle that includes hardware, software, and connectivity, enabling not only OT and IT integration, but also automated management of thousands of device connections – globally and at a glance.

- Accelerate time to market
- Take pressure off IT managers
- Reduce service costs
- Boost machine turnover
- Encrypt end-to-end applications



kontron

K-PORT services – integrated but usable independently

Device Management

- Monitor condition of IoT devices
- Manage all machines worldwide in a cloudbased environment for edge devices
- Onboard IoT devices the easy way
- Manage device fleets

KontronOS

- Hardened operating system for X86 or Arm®, based on Yocto-Linux®
- Two redundant operating system partitions, highest uptime
- Secure management interface for updates and deployment
- Can be updated at short notice in the event of "critical" weaknesses

Docker Management

- Encapsulate customer applications (images) in containers

Deploy Docker containers to device fleets in the field

Automatic image upload via CLI and Docker Compose support

Remoting

- Central management of desktop and remote access such as RDP & SSH access
- Set up secure remote connections

VPN-Service

- Activate and deactivate temporary direct access „Tunneling" to the machine and plant network
- Manage, monitor and log VPN connections
- Concurrent connections to one device

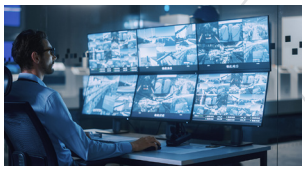
This is how you benefit as a

IT-Manager

- Minimize complexity for IT teams
- 24/7 overview of globally distributed device fleet
- Securely encrypt applications end-to-end
- Continuous deployment during operation

Service & Support

- Reduce costs of hardware, installation and maintenance
- Save time due to effective troubleshooting
- Immediate depth of support down to PLC level
- Act proactively and with foresight



CDO & R&D manager

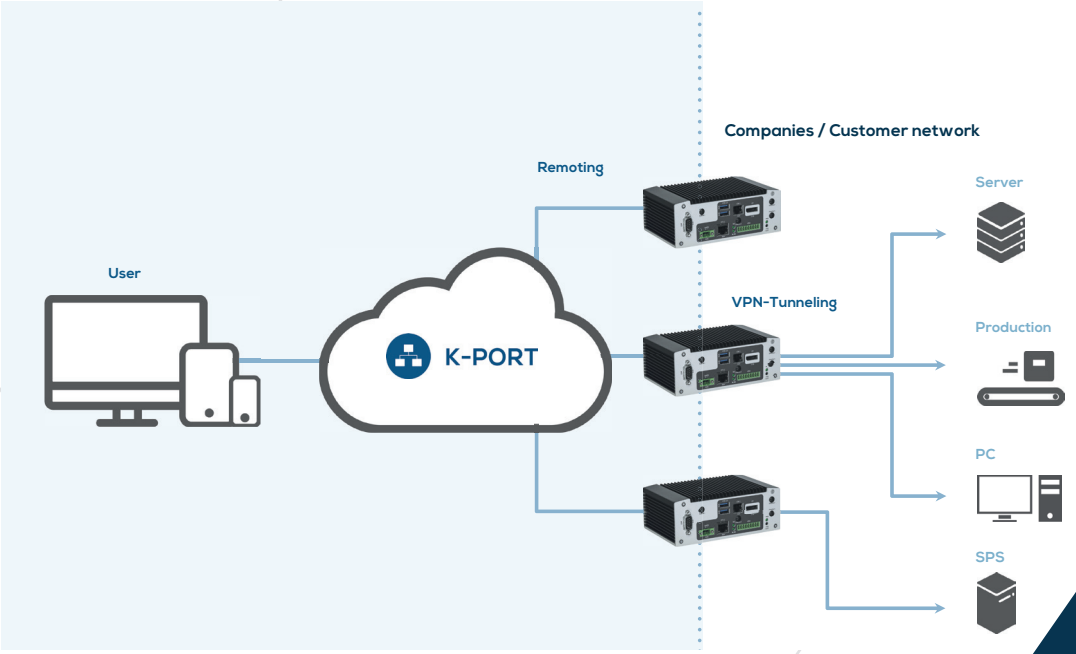
- Monetize software licenses and custom applications
- Increase machine turnover through digital service
- Stay competitive due to accelerated time-to-market

Easy onboarding and management

Using IoT devices in the context of digitalization could not be more diverse. This makes it all the more difficult for IT managers to ensure the secure operation of the devices and to maintain an overview of interfaces, hardware levels and software configurations at all times. New IoT devices can be easily onboarded using a factory-installed script. Once up, running and connected to the K-PORT, the IoT device is automatically assigned to a customer or machine using a stored profile. An intuitive GUI makes it possible to view the communication status of the five services across the entire fleet and to manage the master data and parameters of individual devices.

Increase reaction speed with remote maintenance 24/7

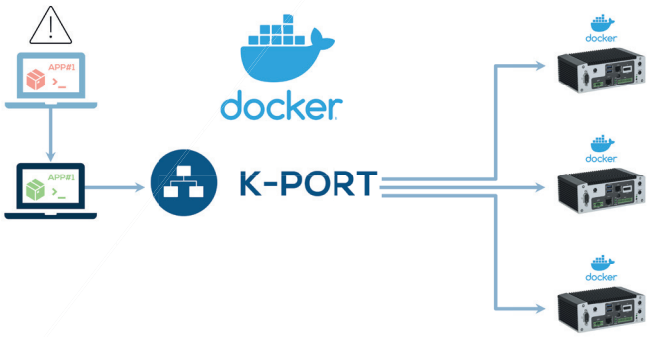
Globally distributed IoT devices are used in a variety of ways in the field, such as machine adapters or for AI-supported monitoring of applications. With K-PORT's integrated health monitoring, important IoT device parameters (memory and CPU usage, connection status, operating time temperature, etc.) can be continuously monitored. If disruptions occur, the service must be able to react quickly to prevent connection interruptions or data loss. The K-PORT remoting service allows technicians to remotely access the device using RDP (Remote Desktop Shell) or SSH (Secure Shell) services. By which RDP allows remote access to the device's console, while SSH allows remote access to the graphical connection to the desktop. If the cause of the malfunction is at machine level, the machines and systems connected to the IoT gateway, server or PC in the customer network can be accessed in encrypted form using a temporary virtual network (VPN tunnel) connection. The K-PORT VPN service not only allows the programming software to be operated or parameterized on the respective controller (PLC), but also allows several service technicians to work together remotely on one machine regardless of location.



> AI-based asset management of IoT devices for monitoring and early detection of problems in the field.

Reliably roll out applications as mass updates

Managing fleets of devices with custom applications, typically bundled in Docker containers, presents IT managers with major challenges in terms of cost, security and complexity when it comes to configuration and deployment. The combination of K-PORT's Docker Management and KontronOS services enables simple yet secure fleet management by a clear separation between the operating system and application layers. The included Docker environment allows Docker containers to be run and used independently of the operating system. Both configuration and testing of software images for applications Docker-packaged can be significantly accelerated via CLI communication with the integrated Docker Registry. In addition, the support of Docker Compose enables the orchestration of multiple containers and the automatic rollout to the respective devices. When changes are made to the configuration or image as a result, K-PORT can determine which devices are affected by an update and at the same time allows to select the devices to which the update is being rolled out. This enables a step-by-step geographic or machine-based implementation of scenario testing to minimize risks before a global deployment.



Benefits for users

Scalable

Secure

Save resources

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