

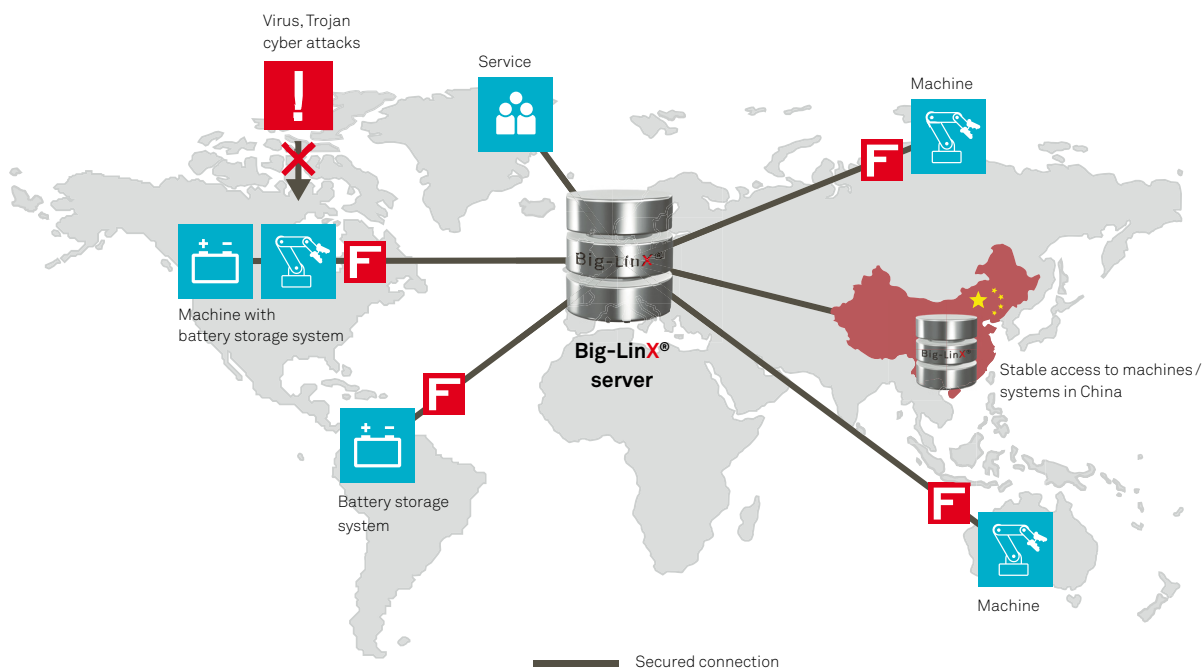


Big-LinX[®] IIoT Service Platform

The secure basis for Industry 4.0



Industrial IT



Big-LinX® IloT Service Platform **Basis for remote maintenance and much more**

Big-LinX is a versatile and scalable IloT Service Platform which provides high-performance modular solutions for a wide variety of different IoT applications. The secure connection of decentralised systems, the management of distributed gateways as well as comprehensive services for data collection, forwarding and monitoring make a major contribution to the implementation of complex Industry 4.0 architectures in local and global networks. A cost-free test phase in Big-LinX enables a extensive test of your IloT solution. Big-LinX uses Microsoft's Azure cloud computing platform, harnessing a growing collection of integrated infrastructure and platform services.

Big-LinX® Added values

- Integrated VPN rendezvous server for secure connections worldwide and access to corresponding terminals
- Big-LinX Explorer in the form of a common web portal
- Scalability – from stand-alone systems to internetworked systems and machines
- Simple connection to higher-level IT systems and databases
- Alarming, monitoring and administration of complex architectures and multiple clients
- Highest security based on software or hardware certificates
- Secure data and condition communication via the WWH service (World Wide Heartbeat)
- Simple integration of customer programs and apps based on the OSGI™/Java™ framework
- Individual administration of users, privileges and firewall
- Efficient deployment planning of service employees
- Fully integrated Remote Service Access
- Large number of operating modes, easy and intuitive to operate
- Free test phase for your IloT solution

Big-LinX® Areas of application

- Remote maintenance in machine, process and plant engineering
- Cloud platform for connecting distributed plants and systems
- Platform, e.g. for the smart grid of energy suppliers
- User and user group administration
- Data collection and remote access to plants
- Interfaces for condition monitoring and data analytics
- Device management for the distributed gateways
- IoT dashboards – monitoring and analysis of system and system states, customised visualisations and alarming

Firewalls and Routers of the IRF series

HIGHLIGHTS

- IRF series with LTE/4G option
- Configuration wizard for easy installation
- Smartcard-based security concept

Endpoint security solution for systems and machines **Excellent protection against attacks and unauthorised access with ADS-TEC firewall systems**

Simple and intuitive to operate, the firewall tackles complex security tasks and impresses when used as a remote maintenance centre or high-speed router in the switch cabinet.

By implementing IoT standards such as OPC UA and MQTT, IRF1000 series provide a variable basis for use in industry 4.0.



IRF2000 series **Product benefits**

- Flexible configuration with two integrated Gbit switches (2-port or 6-port IP router)
- Integrated 4G/LTE mobile communications option enables wireless Internet access worldwide
- Java/OSGi™ service platform specification allows you to put your own applications on the devices
- Quick and easy commissioning through intuitive setup



ADS-TEC Remote Service on all of the world's seas

Firewalls with DNV GL certificate

- Secure operation of communication networks on all maritime plants and systems
- Use in national and international shipping, shipbuilding, maritime constructions and offshore wind turbines
- IEC 60945 tested – suitable for applications on the bridge



Compact design **Tried-and-tested and robust**

- Sturdy aluminium die-cast case
- Slim housing design for minimum space requirement in the cabinet
- DIN rail or VESA75 installation



IRF1000 series **Product benefits**

- Slim housing – takes minimal space on the control cabinet DIN rail
- Integrated 4G/LTE mobile communications option enables wireless Internet access worldwide
- RS485 interface for ModbusRTU

Big-LinX[®] Features at a glance



Remote maintenance

- Central management of all connected remote-maintenance customers
- Overview of the currently pending service requests
- Worldwide accessibility to the remote-maintenance portal via Big-LinX
- Access via PC and installed web browser
- Maximum security by using certificates at least 2048 bit encryption



Secure authentication and connection

- Personalised authentication on the Big-LinX server
- Big-LinX smartcard cannot be copied or read
- Encryption of communication channels and signing of data
- PIN-protected crypto smartcard
- VPN server centrally accessible on the Internet



Device Management

- Universal firmware updates of the ADS-TEC firewalls
- Detailed inventory information for management of ADS-TEC devices
- Intuitive user interface for device inventory creation and to enable the update process to be performed centrally via Big-LinX



World Wide Heartbeat

- With World Wide Heartbeat (WWH), ADS-TEC offers a communication protocol which, without the need for a VPN tunnel and its overhead, sends data packets securely to the Big-LinX server and saves them in the database
- Wake up: The VPN tunnel can be activated by means of WWH centrally via Big-LinX



User, location and rights administration

- Creation of any number of users, groups and terminals
- Complex rights allocation and assignment
- Mapping of company structures and departments



Data Monitoring

- Detection of sensor and control conditions through direct communication with the cloud-based database of Big-LinX
- Evaluation and analysis of the transmitted data
- Alarm if the measurement upper limits or lower limits are exceeded
- IoT dashboards – monitoring and analysis of system and system states, customised visualisations and alarming
- Creation of customer-specific analyses and triggering of corresponding events



Site-2-site connection to company IT

- Simple connection of external IT infrastructures to Big-LinX
- Integration of customer-specific services and applications in the Big-LinX VPN network
- Implementation of Site-2-site connection via OpenVPN or IPSec connections



Scalability

- Big-LinX grows with your needs – from remote access of individual machines and systems to complex IIoT solutions with connectivity and service modules tailor-made to meet your needs

X-Remote[®]

Remote operation with X-Remote[®]

- Software for real-time operation of distributed plants, systems and processes
- If service work is required, access is possible via Big-LinX using X-Remote
- Distribution and multiplication of Windows-based PC screen interfaces including their operation via local grids or the Internet
- Bidirectional transmission of files of any data type between the master and slave(s) by using the Explorer functions or the clipboard
- Full integration in Big-LinX for secure remote operation in the event of service work

ADS-TEC Service – your all-around package

ADS-TEC service packages **Planning, integration and administration of your Industry 4.0 infrastructure**

On the road to success with minimal effort: the ADS-TEC »Managed Services« on the Internet of Things offer you a range of added values without administrative effort and provide you with the right service at the end customer. ADS-TEC accompanies you even during the planning phase, during the integration of industrial firewalls and routers in customers' networks as well as in running operation for user, rights and device administration. We create your service package, tailored to your needs. Please get in touch with us to learn more.



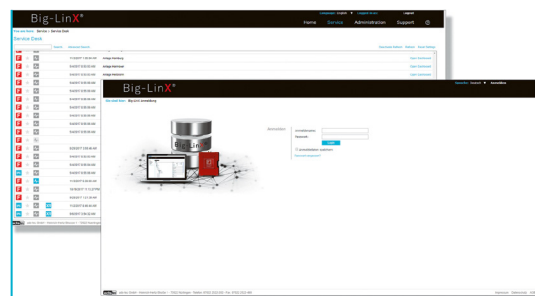
Big-LinX® Customer workshops

- Customised in-house workshops or workshops held on-site together with your customer /end customer during the planning phase of the Industry 4.0 infrastructure
- Tailored to the management, IT and service target groups
- Industrial Internet of Things (IIoT): understand not only what is possible, but rather how it can be implemented for you in concrete terms
- Speak with our technology specialists, who have practical experience in planning and integration from the perspective of a user



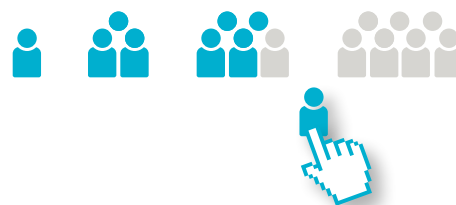
Big-LinX® Update and configuration of the Industrial Firewalls and Routers (IRFs) by ADS-TEC

- Security updates of connected industrial firewalls and routers of the IRF series
- Necessary configuration changes on customer devices are initiated directly by ADS-TEC
- Rollout configuration service: configuration of individual IRFs prior to delivery with customer-specific parameters – device startup at the customer directly via »Plug+Play«



Big-LinX® Initial configuration

- Initial setup of your portal in Big-LinX depending on customer specifications
- Delivery of the platform to the user with all desired settings for user, rights and device administration »turnkey ready« for immediate startup
- User training for technicians and administrators



Big-LinX® Managed Platform Services

- Management of the customer platform by ADS-TEC
- User, rights and device administration over the entire contract term
- Individual fixed-term contracts
- Enjoy all of the benefits of our ongoing further development of the Big-LinX IIoT Service Platform with new features and solutions



Company headquarters (above) in Nuertingen near Stuttgart, production site in Wilsdruff near Dresden

The ADS-TEC Group **Technology for Professionals**

For decades, we follow the latest technologies for the best benefit of our customers. Depth of development and process „Made in Germany“ distinguish us, so that we remain able of acting over long periods of time. On this basis we are a strong and reliable partner in the fields of “Industrial IT” and “Energy”.

Added values **For the success of our customers**

- Our products have been developed in-house for over 35 years
- 100% depth of development as basis for long-term and individual solutions
- Tailor-made solutions based on tried-and-tested standard products
- Cloud-based IIoT solution kit for Industry 4.0 applications
- Highest safety standards for worldwide data communication
- Roll-out, asset and solution management services
- References and applications in areas like automation, logistics, medical technology, food and beverage as well as agricultural and construction machinery
- Extensive range of service offerings
- Intel® Technology Provider Platinum Partner and member of the Intel® Internet of Things Solutions Alliance



Technology
Provider
Platinum 2019

ads-tec Industrial IT GmbH
Heinrich-Hertz-Strasse 1
D-72622 Nuertingen
Phone +49 70 22 25 22-200
Fax +49 70 22 25 22-402
sales@ads-tec.de
www.ads-tec.de



TECHNOLOGY
MADE IN GERMANY



Industrial IT

