



## PROTECT AND CONNECT INDUSTRIAL NETWORKS!

WALLIE – Industrial Ethernet Bridge and Firewall

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# WALLIE – INDUSTRIAL ETHERNET BRIDGE AND FIREWALL



Bridge and NAT functionality



SOON ALSO AVAILABLE WITH SECURE M12 CONNECTION!

- Integration of machine networks into the higher-level production network
- Bridge functionality for identical IP address ranges
- NAT (Basic NAT, NAPT and port forwarding)
- Access restriction through packet filters: IPv4 addresses, protocol (TCP/UDP), ports, MAC addresses
- Reduction of the network load through the filtering of broadcasts and multi-casts
- Quick and easy configuration, as well as firmware updates thanks to responsive web interface
- DHCP server/client
- Static routes to other networks
- Reporting of events to a Syslog server
- Export/import of configuration
- Industry-compatible design for installation on DIN rails

WALLIE, the Industrial Ethernet Bridge and Firewall, simply integrates machinery networks into the higher-level production network. A packet filter protects the networks from unauthorized access. If identical IP address ranges are to be realized, WALLIE functions as a bridge.

The NAT operating mode serves the forwarding of the data traffic between various IPv4 networks. It enables the address translation via NAT and uses packet filters for the limitation of access to the automation network located behind.

In the bridge operating mode, WALLIE acts as a layer 2 switch. In contrast with normal switches, however, packet filtering is also possible in this operating mode. This means that the restriction of access to individual areas of your network can be achieved without having to use different networks for this purpose.

## NAT operating mode

In the NAT operating mode, WALLIE forwards data traffic between various IPv4 networks (Layer 3).

Static routes are used for communication with other automation cells. To this purpose, the network and the address of the router responsible for this ("Next Hop") must be configured.

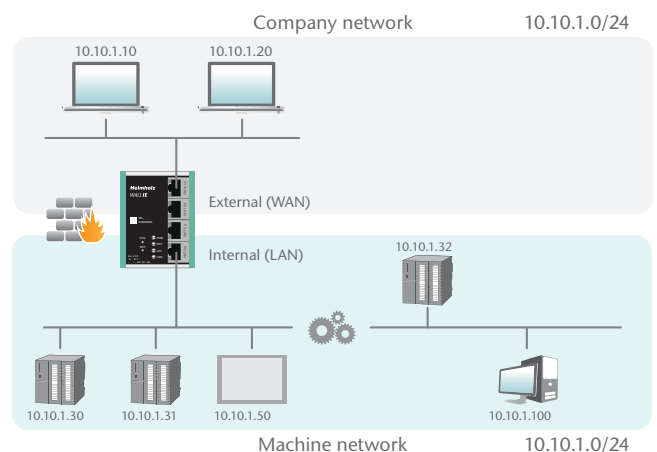
## Packet filter functionality

The packet filter enables the limitation of access between the production network and the automation cell. For example, it can be configured that only certain participants from the production network may exchange data with defined participants from the automation cell.

The following filter criteria on layers 3 and 4 are available: IPv4 addresses, protocol (TCP/UDP), ports, MAC addresses.

## Bridge operating mode

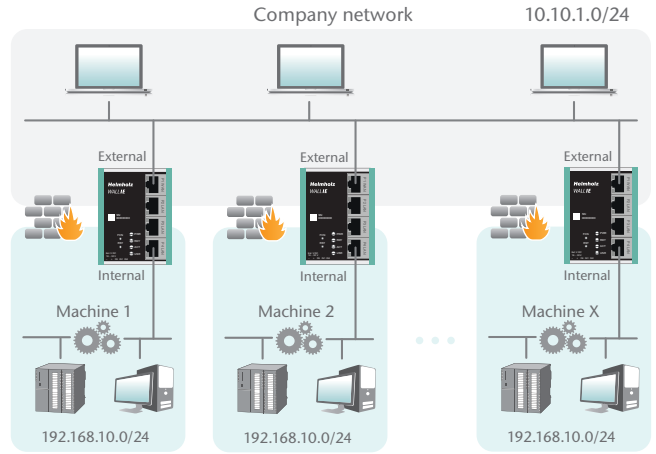
In the bridge operating mode, WALLIE behaves like a layer 2 switch between the automation cell and the production network. The packet filter can nonetheless be used to limit access between the two areas. This enables the separation of a part of the production network without using different networks.





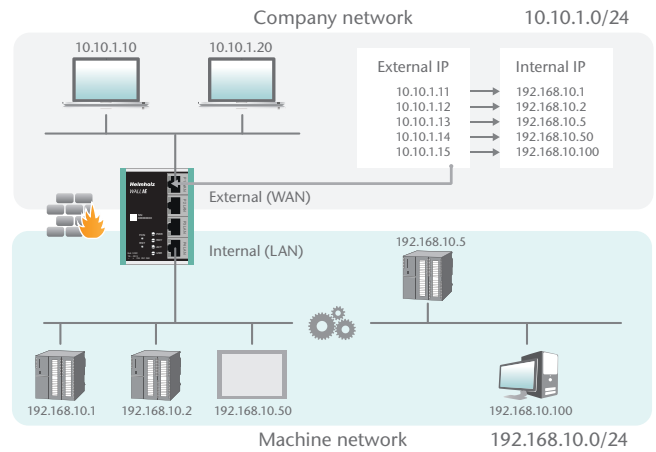
### NAT functionality

When several automation cells with the same address range are to be incorporated into a production network, this can result in collisions, as the addresses in the entire network are not unambiguous. Using Network Address Translation (NAT), WALLIE makes it possible to incorporate several automation cells of the same kind into the production network.



### Basic NAT

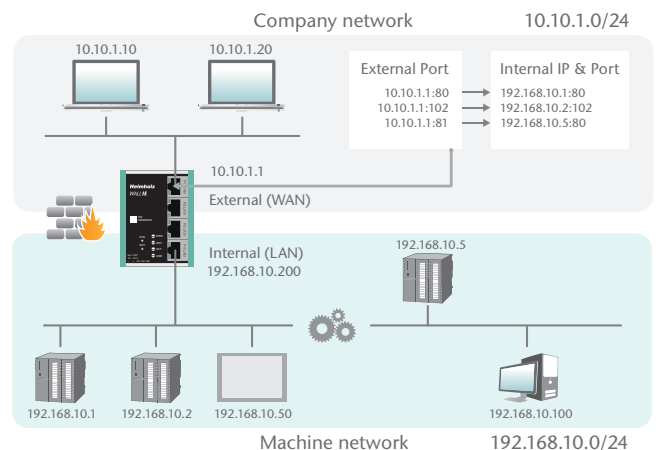
Basic NAT, also known as "1:1 NAT" or "Static NAT", is the translation of individual IP addresses or of complete address ranges. The translation takes place exclusively at the IP level, which means that all ports can be addressed without explicit forwarding.



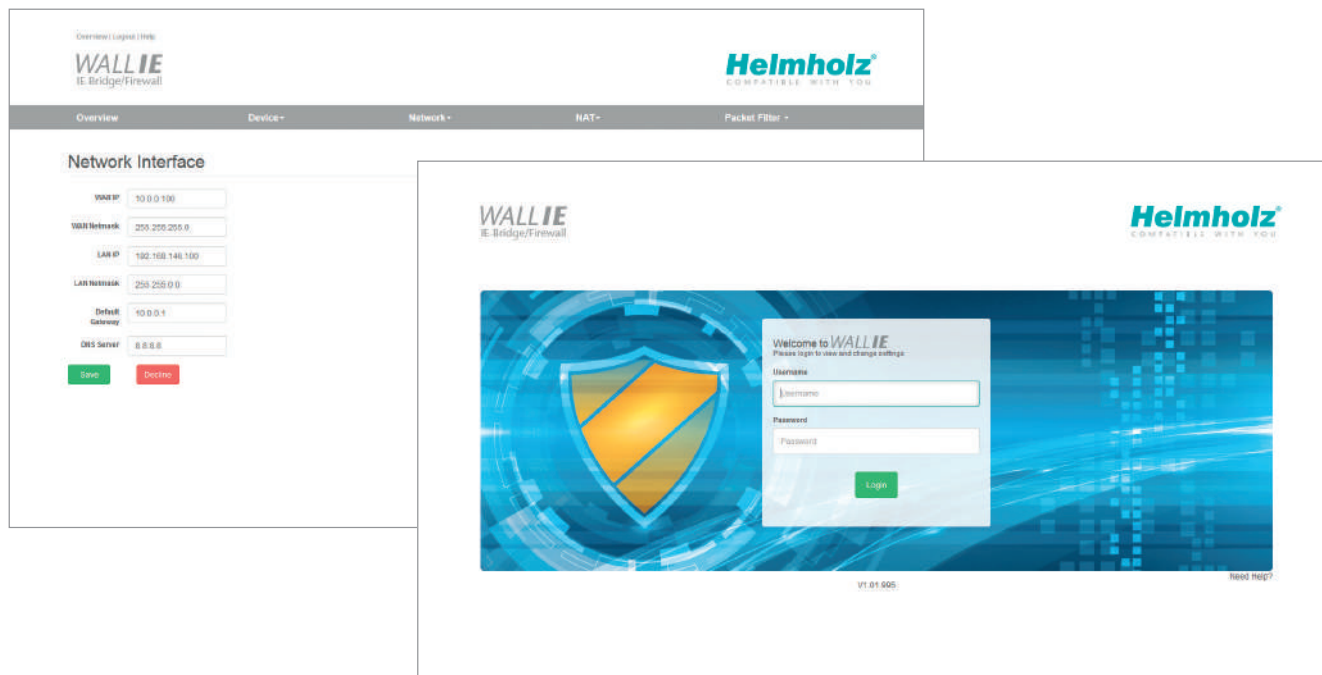
### NAPT: Network Address and Port Translation

NAPT, also known as "1:N NAT" or "Masquerading", is the translation of all addresses of the automation cell into a single address of the production network. The sender addresses of packages from the automation cell are replaced by these.

With the help of port forwarding, it can be configured that packets at a certain TCP/UDP port of this address can be forwarded to a participant in the automation cell (e.g. 10.10.1.1:81 to 192.168.10.5:80).



# WALLIE – WEB INTERFACE



## TECHNICAL SPECIFICATIONS / ORDERING INFORMATION

<b>WALLIE, Industrial Ethernet Bridge and Firewall</b> (incl. Quick Start Guide)	<b>700-860-WAL01</b>
Dimensions (D x W x H)	35 x 59 x 75 mm
Weight	Approx. 130 g
Interfaces	1x WAN 10/100 Mbps 3x LAN 10/100 Mbps, switch
Operating modes	Bridge, NAT (Basic NAT, NATPT)
Packet filter	IPV4 addresses Protocol (TCP/UDP) Ports: "WAN to LAN" and "LAN to WAN" separated MAC addresses (black & whitelisting)
Status indicator	4 LEDs
Voltage supply	DC 24 V (18 ... 30 V DC)
Current draw	Max. 250 mA with DC 24 V
Number of inputs switching point	2/DC 24 V as per DIN EN 61131-2 Type 2 (in progress)
Permissible ambient temperature	-40 °C ... +75 °C
Transport and storage temperature	-40 °C ... +80 °C
Protection rating	IP20
Certifications	CE
<b>UL</b>	UL 61010-1/ UL 61010-2-201
- Voltage supply	DC 24 V (18 ... 30 V DC, SELV and limited energy circuit)
- Pollution degree	2
- Altitude	Up to 2,000 m
- Temperature cable rating	87 °C
<b>WALLIE M12, Industrial Ethernet Bridge and Firewall</b> (incl. Quick Start Guide)	<b>700-860-WAL01</b> (available upon request)