

a4GATE

PRODUCT OVERVIEW

a4GATE is a unique and secure solution for controlling LAN Ethernet traffic at ISO / OSI Layers 1. The technology allows network designers and architects to build super-secure networks by providing total hardware isolation and segmentation.



HOW IT WORKS

The system is connected to the machine network as standard and, via the IoT edge software, collects data from the smart machine components. The collected data is transmitted in real time to the part connected to the external network without physical connections, through a patented technology. a4GATE is defined a unidirectional gateway, allowing only a one-way flow. It is not physically possible to go back up the data flow, working at L1 of the ISO/OSI stack. From the outside it is not possible to access the machine network. Bidirectionality: there may be situations where you are required to enter the system from outside, for authorized assistance or to transmit new configurations to the PLC. The solution has a switch that opens a network path from external to internal, to be activated physically and with monitoring of what happens. The opening is however timed, with configurable interval.

MAIN BENEFITS

- Protected data
- Protected systems
- Protected people

PRODUCT FEATURES

- Air-Gap level of one-way data traffic
- Total Traffic Control at ISO OSI Layers-1
- ZERO induced latency
- Hardware (chip) based Data Flow Control
- Complete LAN Traffic Direction Flow Control
- Low power consumption
- LED indication panel

OTHER SPECIFICATIONS

- IoT data collector**
Collect data from PLC, HMI or sensors
- IoT edge**
Send data to external server
- Remote access control**
Manage accesses during maintenance
- 24/7 digital room**
Monitor accesses and alerts 24/7

IN PARTNERSHIP WITH



Terafence Ltd provides information technology services. The company is based in Israel and it offers Internet of things, communication, cyber security, technology infrastructure, and other services. Terafence is the main partner for a4GATE developing.



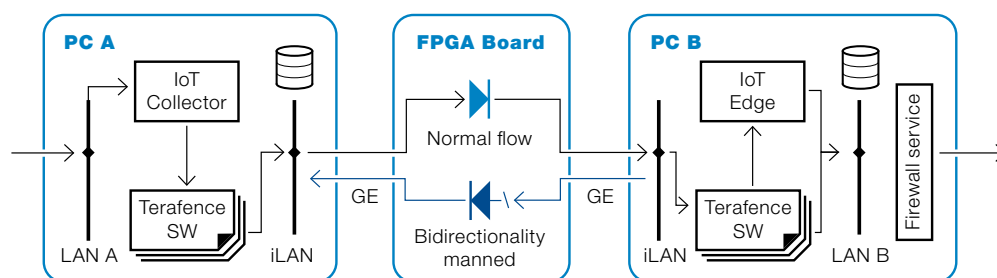
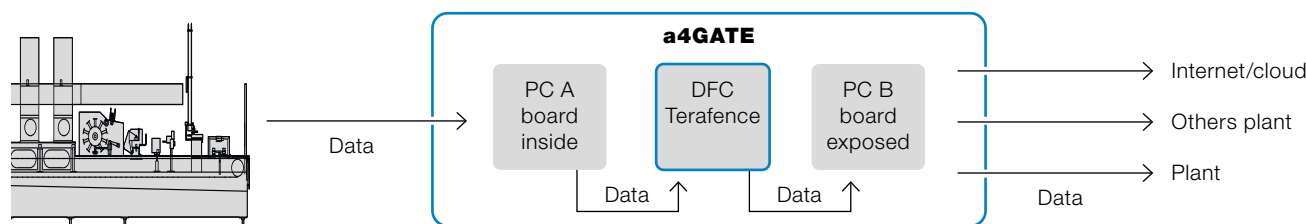
Atop technologies Ltd is a leading designer and manufacturer based in Taiwan. The company provides industrial automation solutions for industries. Atop provided a4GATE Industrial quality architecture.

PENETRATION TEST

a4GATE guarantees the highest possible degree of security. Penetration tests carried out by three independent agencies, experts in cyber-security attacks, certify this.



INNER SCHEME



The software preinstalled on PC boards are the management systems for data transfer and security protocols. The use of the system will also pass through the software required by the lot applications that will be installed.

HARDWARE SPECIFICATION

Board A/B

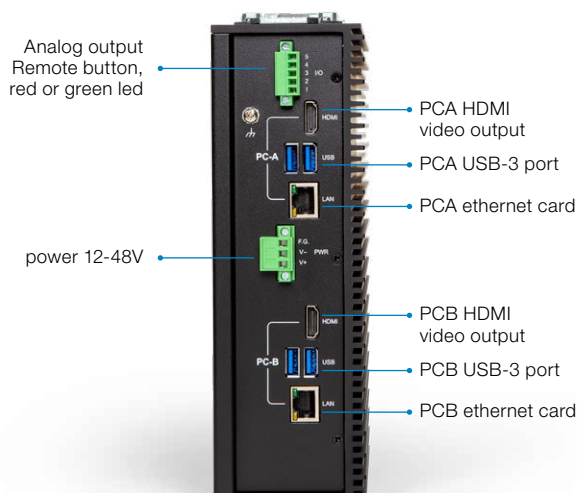
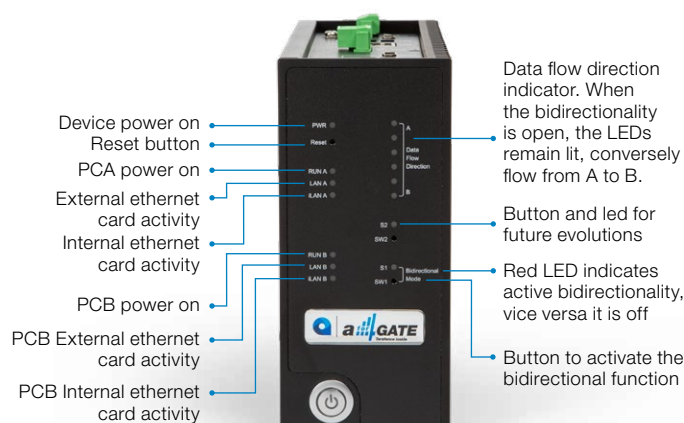
CPU	Intel Atom E3940 1.6GHz 4*core
RAM	8GB
Flash	56GB eMMC
Ethernet	2* 1Gbps
HDMI	1
USB	4*V2.0 (2 internal)
SD	Optional
OS Board A	MS-Windows 10 IoT Enterprise
OS Board B	Ubuntu 18.04 lts
Dimension	85mm*130mm
Power Input	DC 5V

Hardware Box (Din-Rail)

Power Input	DC 12-48V
Ethernet	2* 1Gbps
HDMI	2
USB	4*V3.0 (V2.0 is supported))
SD	2 (Optional)
LED indication	Terafence
Dimension	215mm*159mm*71mm
Battery	Yes
Shutdown sw	Yes

Hardware Terafence

Data transfer rates	1000/100/10Mbps auto negotiate
Physical ports	2xRJ-45 LAN ports
Core board	Wx135 Hx80 Tx13 (max) (mm)
LED panel	Wx202 Hx25 Tx11 (max) (mm)
Weight	75gr
Power	5.5VDC/2.5Amp external supply
Power consumption	max-20W



Terafence's Partner Details:



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TERAFENCE COMPRISES
PROFESSIONALS TO MAKE IoT & NoT
SECURE FROM MALICIOUS ATTACKS

Terafence Ltd. specialises in the development of advanced firmware/microchip solution for cyber security connectivity and additional mechanical waves based solution to control medical implants and wearable devices. Established in 2015, Their patent pending TFence™ technology uniquely offers total protection from tampering or hacking IoT devices by completely blocking data entry – while maintaining data outflow and control. And relevant patent describing secure way to control implants and wearable based on ultra sound waves. Their pioneering company comprises seasoned professionals sharing a common goal – to make IoT and NoT safe and secure from malicious attacks.

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