

AALTO CONTROL WIRELESS CENTRAL MONITORING FOR SELF-CONTAINED LUMINAIRES

AALTO[®] PC SYSTEM CONTROL

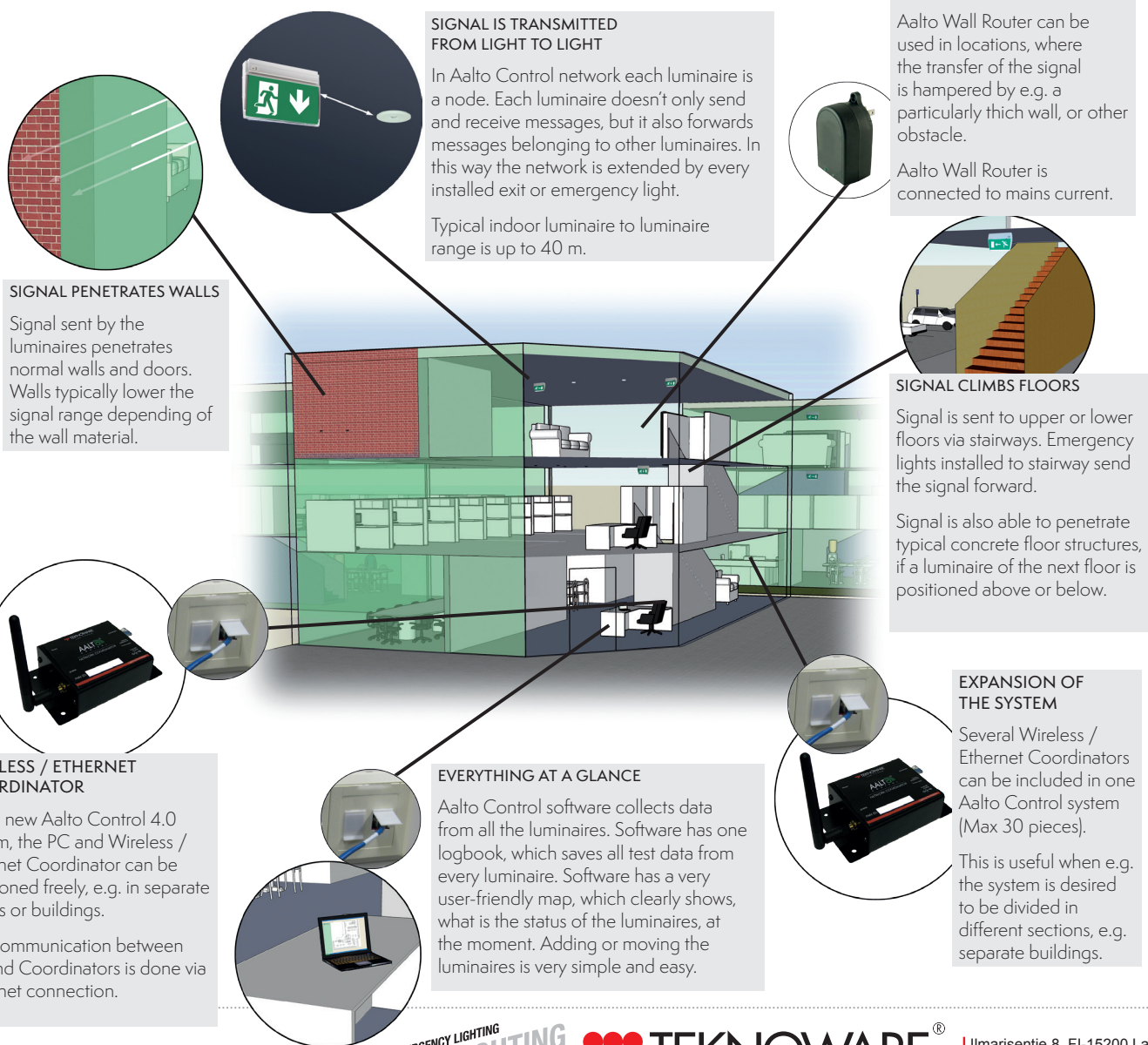
WIRELESS CENTRAL MONITORING FOR SELF-CONTAINED EMERGENCY AND EXIT LIGHTS

Aalto Control provides a wireless central monitoring for self-contained lights. There is no need to connect the luminaires with data cables. The only requirement is that each individual luminaire has a local power supply, like any standard self-contained light. All the benefits of the self-contained lights are preserved, and each luminaire functions independently.

Installation is simple, and the luminaires can be easily positioned, even during renovations. Each luminaire is a node, receiving and transmitting the signal to other luminaires. The signal penetrates normal walls, doors and floors easily, and climbs stairways. The network is used only for collecting information and does not affect the operation of the luminaires. For this reason, Aalto Control is as robust

and resistant to failures as any other self-contained light system. Aalto Control lights always include Lumi Test. Product codes of Aalto Control lights end in letter A.

The new Aalto Control 4.0 enables Central remote monitoring through several Aalto Wireless / Ethernet Coordinators (Max 30 pcs), from one location.



SIGNAL PENETRATES WALLS
Signal sent by the luminaires penetrates normal walls and doors. Walls typically lower the signal range depending of the wall material.

SIGNAL IS TRANSMITTED FROM LIGHT TO LIGHT
In Aalto Control network each luminaire is a node. Each luminaire doesn't only send and receive messages, but it also forwards messages belonging to other luminaires. In this way the network is extended by every installed exit or emergency light. Typical indoor luminaire to luminaire range is up to 40 m.

AALTO WALL ROUTER
Aalto Wall Router can be used in locations, where the transfer of the signal is hampered by e.g. a particularly thick wall, or other obstacle. Aalto Wall Router is connected to mains current.

SIGNAL CLIMBS FLOORS
Signal is sent to upper or lower floors via stairways. Emergency lights installed to stairway send the signal forward. Signal is also able to penetrate typical concrete floor structures, if a luminaire of the next floor is positioned above or below.

EXPANSION OF THE SYSTEM
Several Wireless / Ethernet Coordinators can be included in one Aalto Control system (Max 30 pieces). This is useful when e.g. the system is desired to be divided in different sections, e.g. separate buildings.

WIRELESS / ETHERNET COORDINATOR
In the new Aalto Control 4.0 system, the PC and Wireless / Ethernet Coordinator can be positioned freely, e.g. in separate rooms or buildings. The communication between PC and Coordinators is done via Ethernet connection.

EVERYTHING AT A GLANCE
Aalto Control software collects data from all the luminaires. Software has one logbook, which saves all test data from every luminaire. Software has a very user-friendly map, which clearly shows, what is the status of the luminaires, at the moment. Adding or moving the luminaires is very simple and easy.

EMERGENCY LIGHTING
HIGHLIGHTING
SAFETY

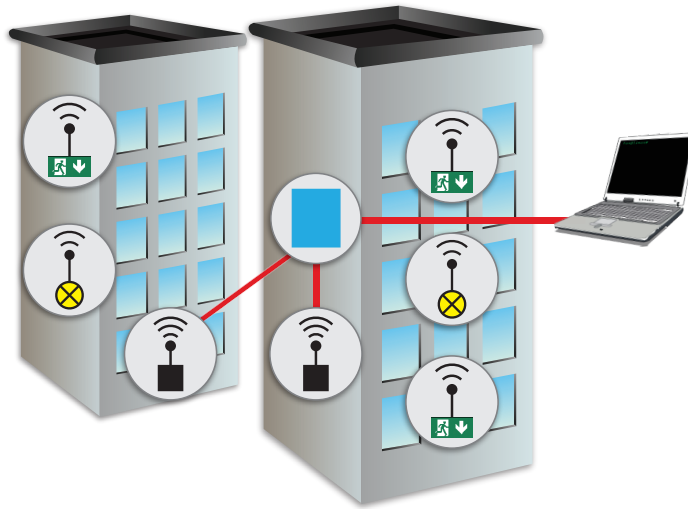
TEKNOWARE[®]
Lahti | Finland

Ilmarisentie 8, FI-15200 Lahti
Tel. +358 3 883 020
emexit@teknoware.com
www.teknoware.com

AALTO CONTROL PC SYSTEM LAYOUT

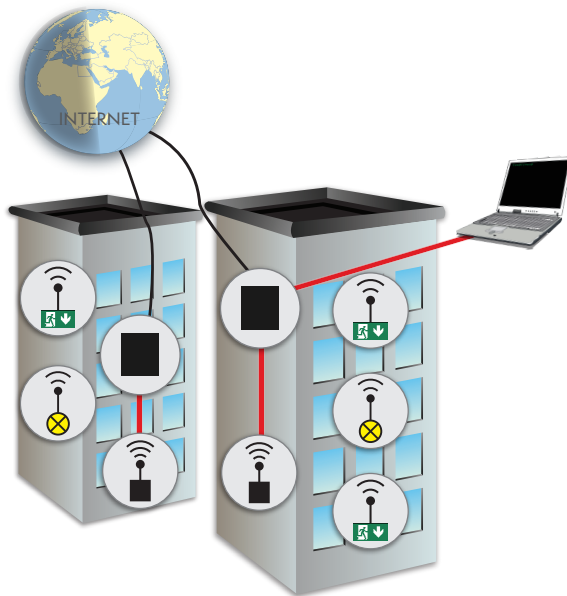
TYPICAL AALTO CONTROL PC SYSTEM

1



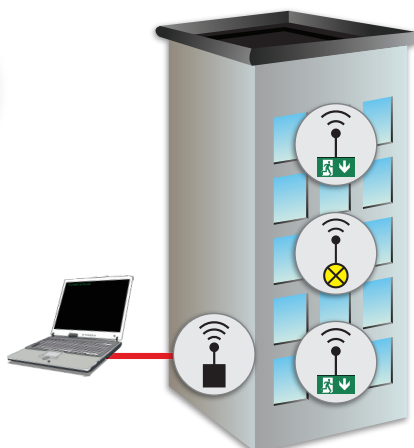
VIA INTERNET TO THE AALTO CONTROL PC SYSTEM









2



COORDINATOR DIRECTLY TO THE PC

3



-  Exit light
-  Emergency light
-  Aalto Control External Coordinator
-  PC
-  TCP/IP Connection (Existing Local Area Network can be used)
-  TCP/IP Connection (via Internet)
-  Internet node (modem, router, switch etc.)
-  Switch / Router

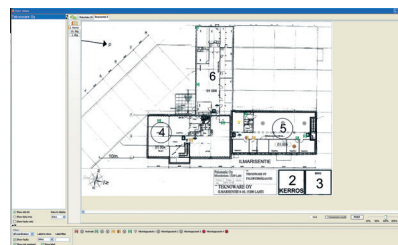
AALTO CONTROL PC SYSTEM FEATURES

Features in Aalto Control 4.x PC system

- Up to 5 000 luminaires in one Aalto Control PC system
- Central remote monitoring through several Aalto Wireless / Ethernet Coordinators, from one location
- Distribution of the system into different sections, e.g. buildings
- Free positioning of the system components in Ethernet network
- An expanded operation area by using Aalto Wall Routers in challenging locations
- Renewed graphic look
- Renewed user interface
- Luminaire information is shown with an RF ID code, the type of the luminaire, the location of the luminaire, or optional text fields
- Details of the luminaire are shown with a mouse-over function, in the floor plan
- During commissioning, the luminaire data can be fed with a CSV file, manually, with a bar code reader, or with the automatic search function



Aalto Control 4.0 PC Software



As a minimum, the system requires the following equipment:

- PC with Aalto Control Software (TST5104C)
- Wireless/Ethernet Coordinator (TST5103(B))
- Aalto Control compatible luminaires



AALTO CONTROL PC SYSTEM

TECHNICAL DATA

Frequency	2,4 GHz
Transmitter power output	3,1 mW
Receiver sensitivity	-100 dBm
Indoor range	up to 40 m
Outdoor range	up to 80 m

CERTIFICATION OF WIRELESS TECHNOLOGY

USA [FCC Part 15.247]

Industry Canada (IC)

Europe (CE) ETSI

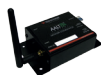
RoHS Compatible

EMERGENCY LIGHTING
HIGHLIGHTING
SAFETY

TEKNOWARE
Lahti | Finland

Ilmarisentie 8, FI-15200 Lahti
Tel. +358 3 883 020
emexit@teknoware.com
www.teknoware.com

Product code	Product description
TST5103(B)	Aalto Wireless / Ethernet Coordinator (2-pin "Europlug"), (TST5103B=3-pin "UK-plug")
TST5104C	Aalto Control PC Software, up to 5000 luminaires
TST5105(B)	Aalto Wall Router (2-pin "Europlug"), (TST5105B=3-pin "UK-plug")
TST5107	Aalto Control Relay Output Module, a module which enables the Aalto system to control a relay-based device, such as an alarm device, or an indicator light



Aalto Wireless / Ethernet Coordinator



Aalto Control Exit Light



Aalto Control
Emergency Light



Aalto Wall Router



Aalto Control luminaires always include Lumi Test self-testing feature

Lumi Test self-diagnosis, which is available for self-contained lights, automatically tracks and tests the reliable operation of the luminaires. LED indicators (one green and one red) display the status of the luminaires. Red LED indicates fault. The luminaire's functionality and light source are tested daily. Full emergency mode duration is tested every 6 months. Product codes of the self-contained lights with self-testing end in letter M or A.

LUMI TEST INDICATION LEDS

		No supply
		Normal mode
		Low energy storage
		Light source fault
		Battery/capacitor fault
		Battery/capacitor disconnected
		Battery/capacitor fault and light source fault
		Test in progress

Symbols

		Slow blinking (1 Hz, once / second)
		Fast blinking (2 Hz, twice / second)
		OFF
		ON

PAN ID Code

(= Aalto Control network ID)

Aalto Control lights can be defined to work with a certain Aalto Wireless / Ethernet Coordinator, with the help of PAN ID Code (Network Identification Code). This is useful, for example, if an Aalto Control system of a big site, with several Aalto Wireless / Ethernet Coordinators, needs to be divided in separate networks.

If there already is an Aalto Control

system in a building, and new Aalto Control lights are added afterwards, PAN ID Code of the existing Aalto Control network needs to be communicated to Teknoware. This way, PAN ID Codes can be set in the new Aalto Control lights already at Teknoware's factory.

The customer also has the possibility to specify PAN ID Code for Aalto Control network. PAN ID Code can include maximum four (4) digits and contain letters (a-f) and/or numbers. The

code can be, for example, 123F. If the customer doesn't specify any code, the code is automatically set to zero (0), at Teknoware's factory.



PAN ID / RFID stickers, which will be delivered with Aalto Control luminaires