application sheet

RAKO CONTROLS

WIRED RAK OVERVIEW

Introduction

When installing a wired system dimmers are typically housed in RAK boxes with either 8 modular cards (RAK8) or 4 fixed type controls (RAK4).

These are typically mounted to form "stacks" of up to 32 channels. Each stack is connected to a RAK-Link which acts as the main connection point of the wired system.

RAK8

Utilising plug in cards the RAK8 has 8 slots each of which can be filled with one of the following control modules:

WMT-400 - Trailing edge mains dimmable

WMS-600 - Switching only

WDA-600 - Digital broadcast: 0-10V, DLI, DSI

WM-CUB - Curtain and blind controller (dual relay)

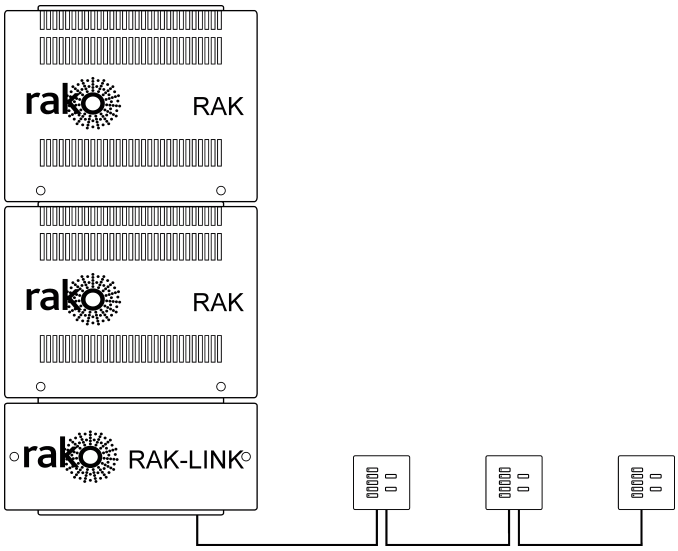
RAK4

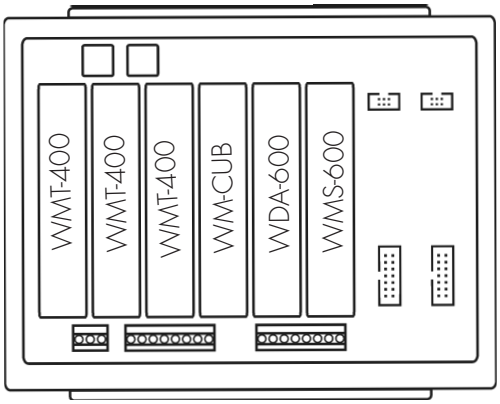
4 control outputs per RAK offering larger loading than RAK8 equivalents.

RAK4-T - Trailing edge mains dimmable

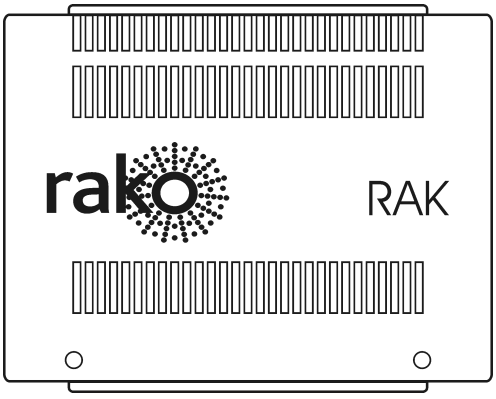
RAK4-F - Digital broadcast: 0-10V, DLI, DSI

RAK4-R - Curtain and blind controller (dual relay)





RAK8 with 6 modules fitted



RAK4 with 4 fixed outputs

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RAKO CONTROLS

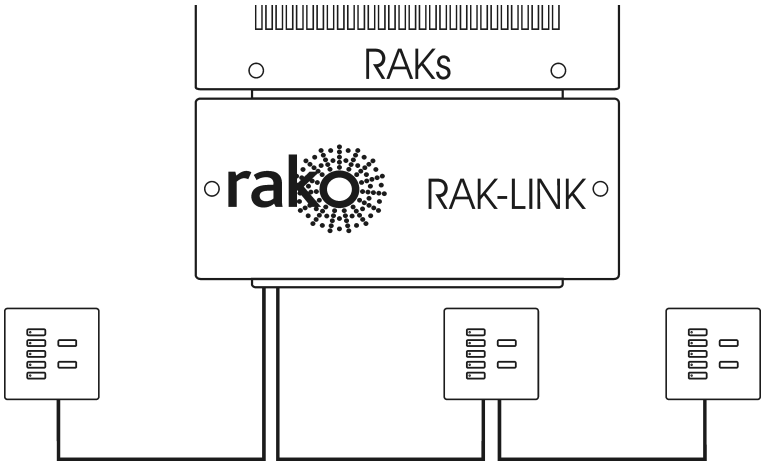
WIRED RAK OVERVIEW

RAKLINK

The core of the of the wired system is the RAK-Link.

Each stack of RAKs is connected by RJ45 patch cables with the RAK-Link also connected by a patch cable at one end.

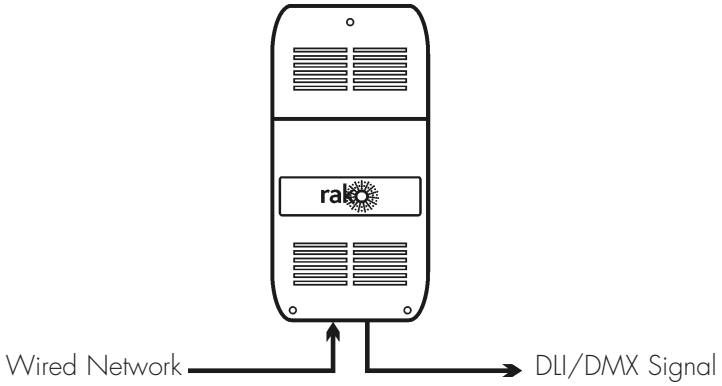
The RAK-Link not only provides the link between wall-plates and RAK dimmers but also contains the power supply for the wired network.



Addressable digital dimming

The Rako wired system also supports addressable digital ballasts with the WSR-DMX for DMX and WSR-DLI for digitally addressable drivers.

Both can be used to control up to 16 channels in a single room.

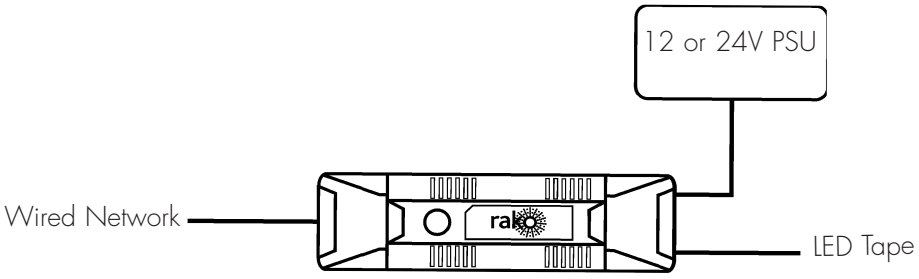


LED control

The WLEDCV range of modules allow constant voltage (CV) tape to be controlled directly from the wired network.

The WLED75CV1 and WLED150CV1 modules allow single colour control and the WLED30CV4 control of 3 or 4 colour tape.

The WLEDs also need to be fed by with either a 12V or 24V power supply (depending on the type used).



application sheet

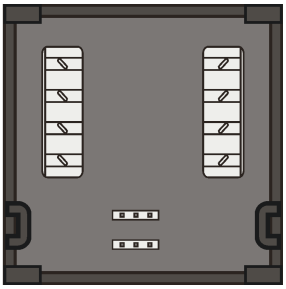
RAKO CONTROLS

WIRED RAK OVERVIEW

WCM MODULES

WCM keypads are fully programmable: each button can communicate with any room and channel within the Rako system. A button can also be programmed to talk to multiple rooms and channels with a single press.

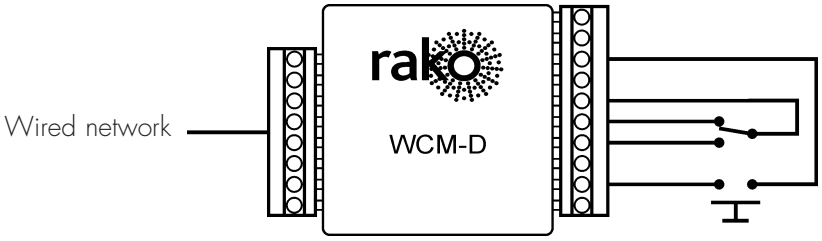
WCM buttons are backlit by LEDs with configurable LED tellback.



Integrating with 3rd party switches

The WCM-D allows Custom & Third Party Switch Plates to be used in place of a standard Rako wired wall panels (WCM).

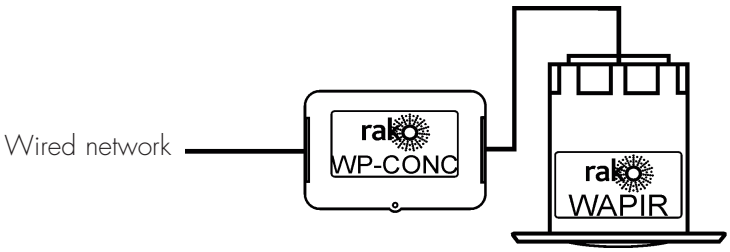
Up to nine switch inputs can be taken per WCM-D. The switch plate can be formed of Latching or Momentary Action



PIRs

Presence sensing can be achieved using the WAPIR which directly communicates on the Rako wired network.

Extra features of the WAPIR include light dependent triggering and time delayed auto off.

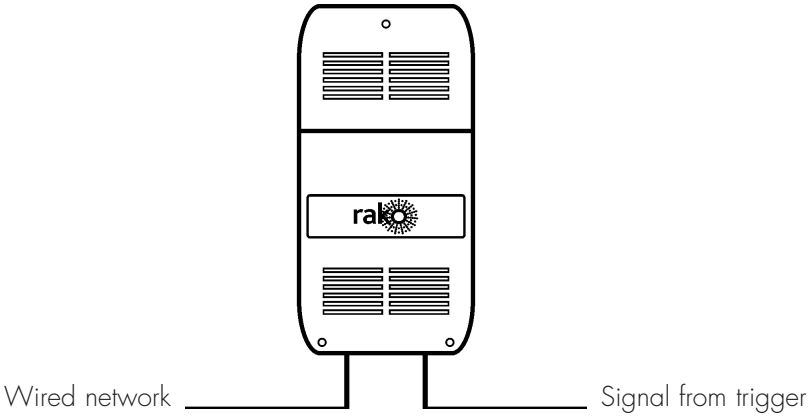


WPCONC/WPCON

The WPCON-C (ceiling mount) and WPCON (wall mount) provide easy connection to the Rako CAN network for devices with RJ11 connections when not mounted close to a RAK-Link/RAK-Star e.g. WAPIRs

Volt free input logic unit

The WAVFR/WAVMI allows switches and logic levels to add additional control of a Rako Wireless system. This could include inputs from Alarm sensors and PIR modules.



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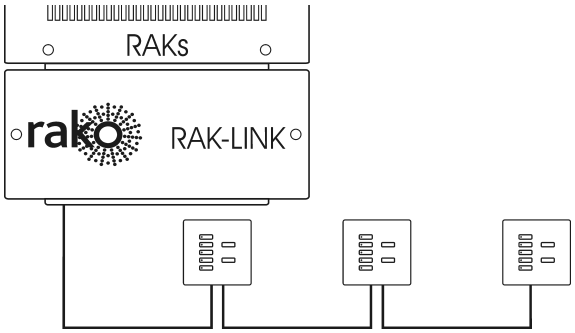
RAKO CONTROLS

WIRED RAK OVERVIEW

Installation Method 1: Daisy Chain

The basis of the network is a single run or 'daisy chain' network connected with CAT5 data cable. WCM control panels, RAK-Link connection units and Bridge interface units are all devices connected in a single run.

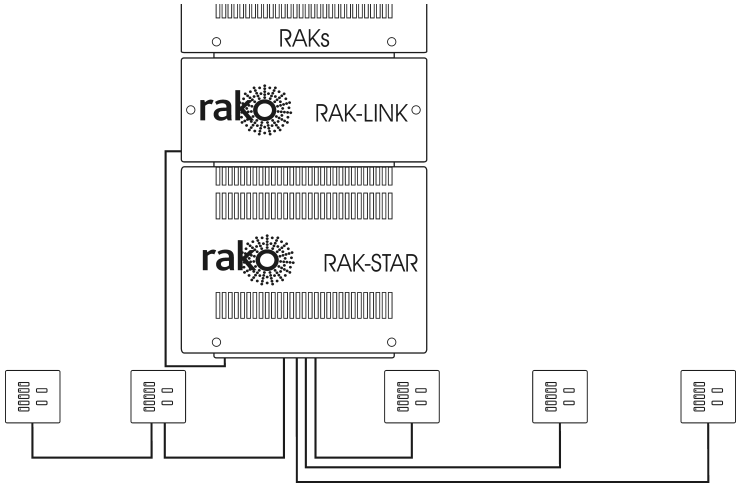
There is no set order in which the units need to be connected and RAK-Links can be at the end or middle of the network.



Installation Method 2: Star Wiring

Home run or 'star' wiring can be accommodated using the RAK-STAR giving up to 18 'star' runs. Multiple RAK-STARs can be connected for larger systems.

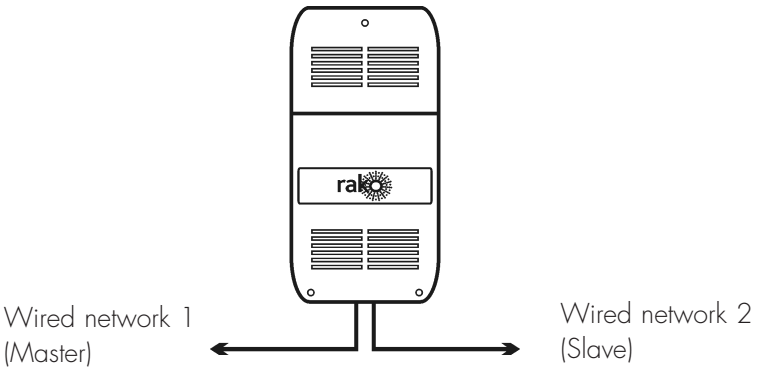
Each leg can have more than one device, creating a 'mini daisy chain'.



WA-NEX

The WA-NEX is typically used to partition RAKO systems that have exceeded the maximum cable distance of the RAKO wired network.

Once partitioned by a WA-NEX the two partitioned halves will behave exactly as a single network.



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RAKO CONTROLS

WIRED RAK OVERVIEW

Bridge

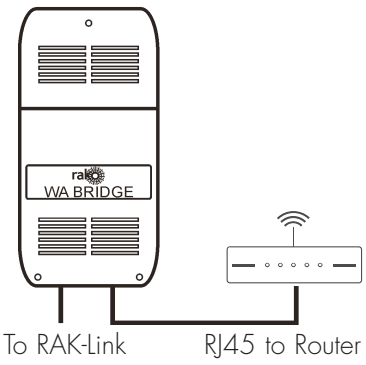
When used with a wired system the WA-Bridge operates as a network interface, allowing system control from the Rako App and other IP based control systems. It also stores the Rasoft project file.

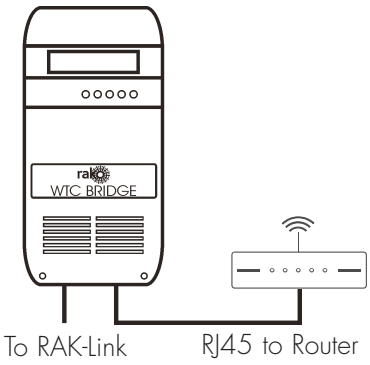
The WTC-Bridge performs all the roles of an WA-Bridge in addition to: events, holiday mode, wireless mappings and macros.

All types of Bridge can be used to program systems via the Rasoft Pro software.

See Bridge application sheet for more information on Bridge functionality and usage.

Bridge application sheet

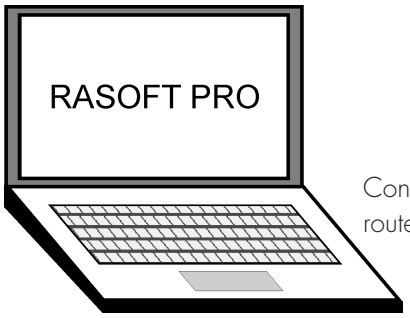




Programming

The wired system is always commissioned using the Rasoft Pro programming software interfacing via a wired Bridge. Either a WA or WTC Bridge must be used to program a wired system. A computer can be connected to the Bridge via a router or point to point using an ethernet cable of any kind.

Wired programming guide



Connect to Bridge via router or ethernet cable