



Introduction

Combined, or hybrid systems can be created using both wired and wireless elements of a Rako system, with them communicating seamlessly as one overall system.

The ability to create combined systems is a powerful tool when dealing with challenging installation parameters or when problems occur due to unforeseen circumstances.

Examples may be;

Where a wired system is installed in a new extension but only wireless can be retro-fitted to the existing building.

Where new switch positions or circuits are added after cabling is complete.

Overcoming problems caused by missing or damaged cables.

Using a single cable to act as a communication 'spine' for wireless systems where complete re-cabling is impractical.

Communicating between wired and wireless

Creating a combined system requires either a WA/WTC-Bridge or WRB100, these products being capable of both wired and wireless communication.

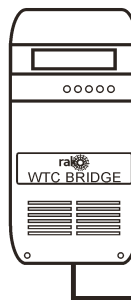
[Bridge application sheet](#)



Wireless modules



Wired commands transmitted as wireless



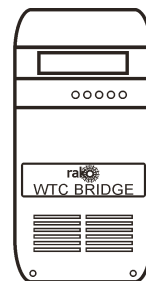
Wireless commands received & re-transmitted as wired



Wireless keypads



Wired keypads



Wired network

Wireless - Wired
Wired - Wireless



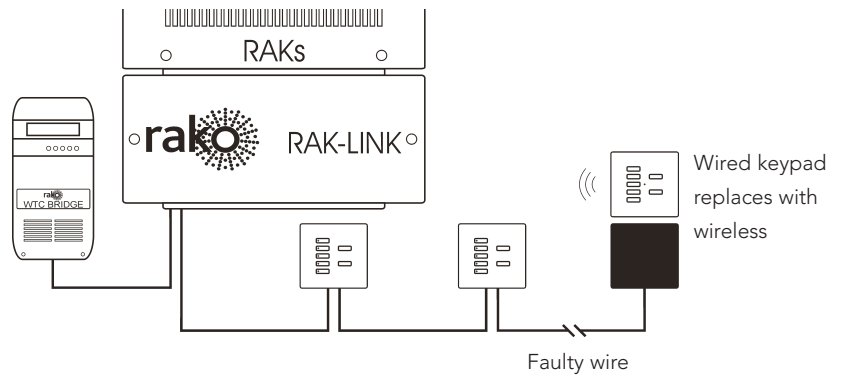
Wired network



Wireless additions to wired systems

Despite careful planning site problems or last minute changes sometimes cause difficulties where the ability to retro-fit wireless keypads can avoid difficult and costly re-cabling.

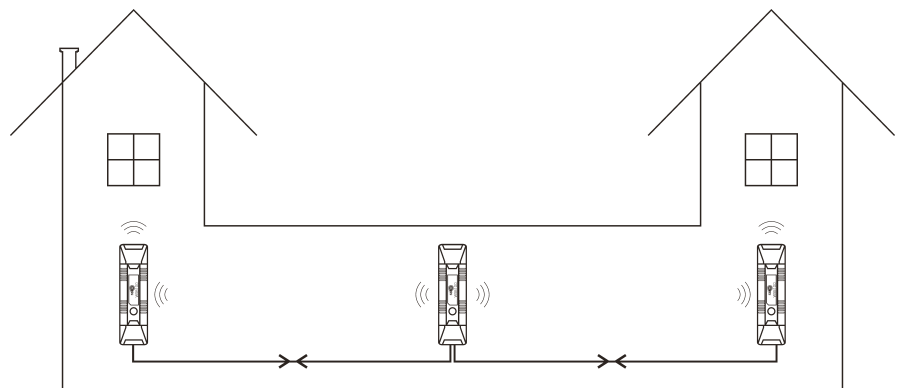
Equally wireless dimmers can be added to a wired project if more circuits are required at an advanced stage of installation.



Wired spine

A very large wireless system, possibly spread over multiple buildings can use a CAT5 cabled spine. WRB/Bridge units are then connected at accessible locations acting as 'wireless hubs' with wired messaging along the cable taking care of any possible range issues.

N.B. The spine requires power, provided by a RAK-Link.



Wired control panels with wireless dimmer modules

In some projects it is possible to wire data cables to switch positions but a full re-wire is not desirable, for example where a multi-room audio system is being installed, or simply where features of a wired keypad such as LED tellback are required.

In these instances wireless dimmers can be retro-fitted and used with wired keypads.

