Application Sheet

RAK System Overview

2026

Version 2.0.0

1 Introduction

The RAK system provides a versatile, self-contained control solution for mood lighting, curtains and blinds, as well as switching non-dimmable loads through contactors or interfaces. This flexibility is built into the RAK8 motherboard's modular output design and its interchangeable cards, allowing you to configure the system to meet project requirements.

Each RAK stack supports up to 32 circuits; capacity can be increased by simply adding more RAK-LINKs as your project grows. The system is compatible with Rako's wide range of accessories and keypads, detailed in this document.

The following sections will explore the RAK system's core components along with compatible keypads and accessories.

2 RAK-LINK

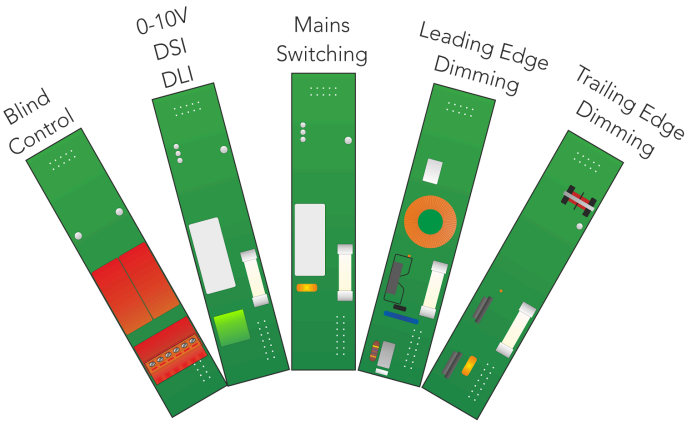
The RAK-LINK is an essential component of a wired RAK system. It is responsible for communication between the Rako Wired Network and the connected RAK modules, as well as a power supply for the Rako Wired Network Keypads and Accessories.

> When it is not possible to use a RAK-LINK due to wiring restrictions, an Rx-Link may be used to wirelessly control up to 16 channels of RAK circuits.

3 RAK8-MB

The RAK8-MB is a modular eight-slot motherboard designed to house dimming and switching cards. The modular design enables the RAK8-MB to have fully customisable outputs via the interchangeable RAK8-MB cards.

4 RAK8-MB Cards

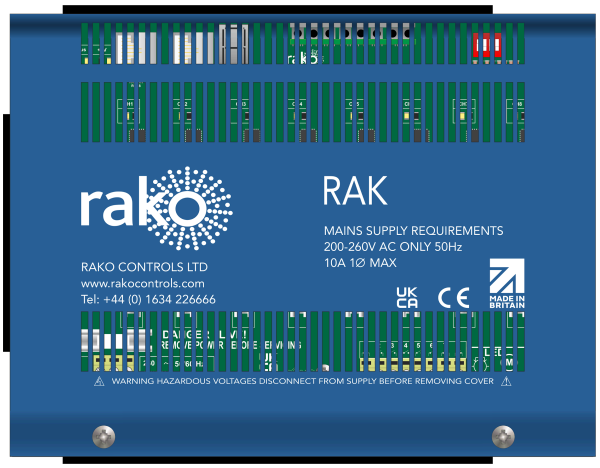


The RAK8-MB features eight interchangeable slots for housing RAK8-MB cards, creating a highly customisable motherboard that can control multiple load types:

- ✓ Blind Control
- ✓ Digital Dimming
- ✓ Mains Switching
- ✓ Leading Edge Dimming
- ✓ Trailing Edge Dimming

5 RAK8-S

A simplified version of the RAK8-MB features eight switched outputs for non-dimmable loads such as pumps, contactors and switched third-party interfaces.



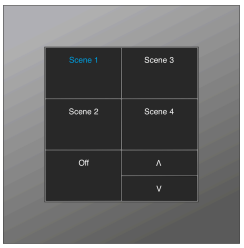
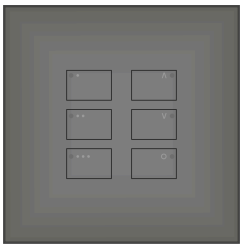
6 RAK-STAR

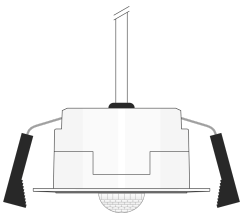
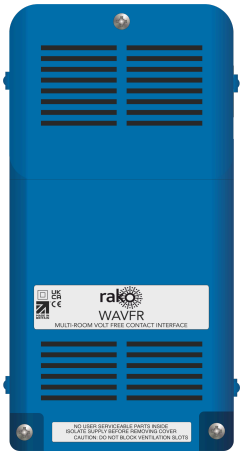
The RAK-STAR is a distribution system for the Rako Wired Network. It has 16 connection points for a data cable to run to Wired Accessories.

7 Keypads and Accessories

The Rako RAK system is controlled by Keypads and Accessories installed and connected outside of the RAK enclosures, communicating solely via the Rako Wired Network.

It is also possible to control Rako RAK systems using Rako wireless products via a WK-HUB or WRB100. If a RAK cannot be connected to a RAK-LINK due to wiring restrictions, an Rx-Link may be used.

Device	Description	Diagram
WCM	The WCM has up to 10 programmable buttons which can be configured using Rasoft Pro to perform actions such as scenes, toggles, fades and levels. The commands can be programmed to control individual channels or whole rooms.	
WK-MOD	The WK-MOD has 12 programmable buttons for scenes, toggles, fades and levels. The buttons can be programmed to control individual channels or whole rooms.	
WK-EOS	The WK-EOS has up to 6 programmable buttons which can be configured using Rasoft Pro to perform actions such as scenes, toggles, fades and levels. The commands can be programmed to control individual channels or whole rooms.	
WCM-D	The WCM-D is used to interface between third-party switches and the Rako Wired Network; both units are installed locally at the switching location. Switch inputs can be mapped to perform actions such as scenes, toggles, fades and levels using Rasoft Pro.	
WK-PIR	The WK-PIR is a presence detector that communicates via the Rako Wired Network.	

	It allows the RAK system to be controlled based on occupancy, features three modes of conditional triggering, as well as an extensive and highly customisable programming interface.	
WAVMI	The WAVMI is a mains switching interface used in a Rako Wired network. It has five mains switching inputs. The purpose of the WAVMI is to interface with third-party switching controllers, such as a PIR, Fire Alarm or Gate Control.	
WAVFR	The WAVFR is a 10-way volt-free interface. Each input can be assigned to its own Room and Channel. Each input has two states, ‘on make’ and ‘on break’, which can be configured to trigger a command for each state that the switch is in.	
WK-HUB	The WK-HUB enables programming of the RAK system and has a built-in wireless receiver, which enables Rako wireless keypads and input devices to control the RAK system. Additional features include app control, holiday mode, macros, and mappings.	

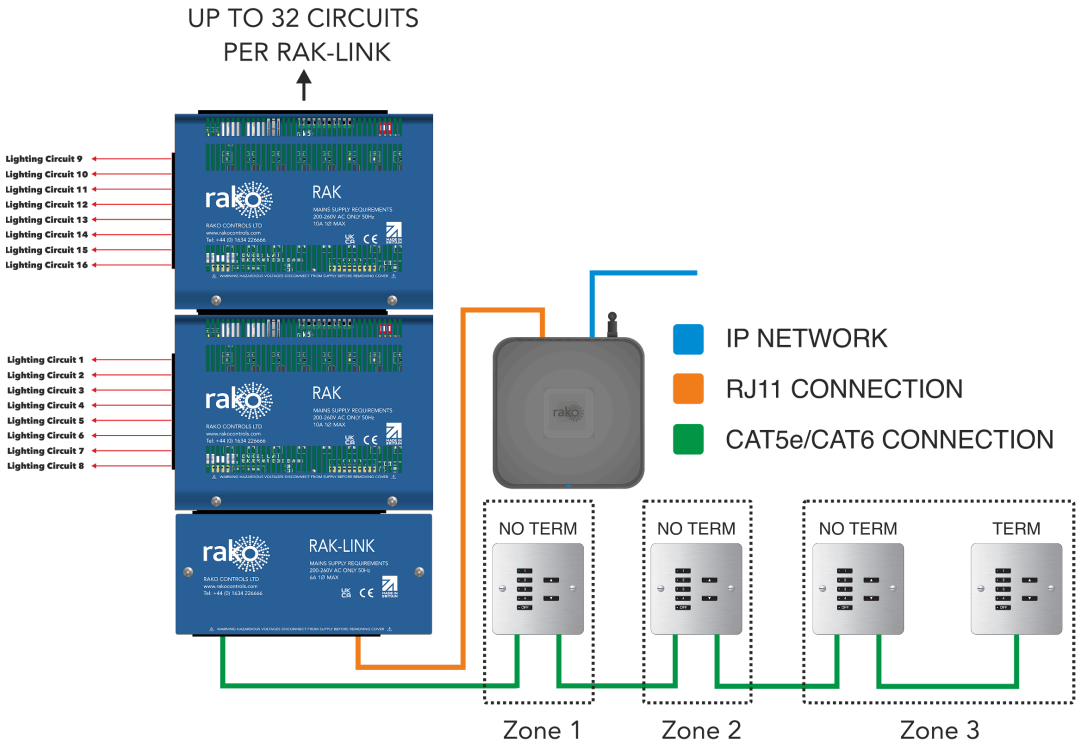
WRB100	The WRB100 is a command repeater that can be used as a wireless receiver for the Rako Wired system. It features a punch-down connector and an RJ11 connector for two methods of joining the Rako Wired Network. When connected to a RAK-LINK, the WRB100 can receive commands from wireless keypads to control the RAK modules.	
Rx-Link	When it is not possible to connect a RAK to a RAK-LINK to be controlled on the Rako Wired Network, the Rx-Link can be used as a Rako Wireless receiver for up to 2 RAK8 modules.	

To view the full range of products Rako offers, refer to the Products section of the Rako Website.

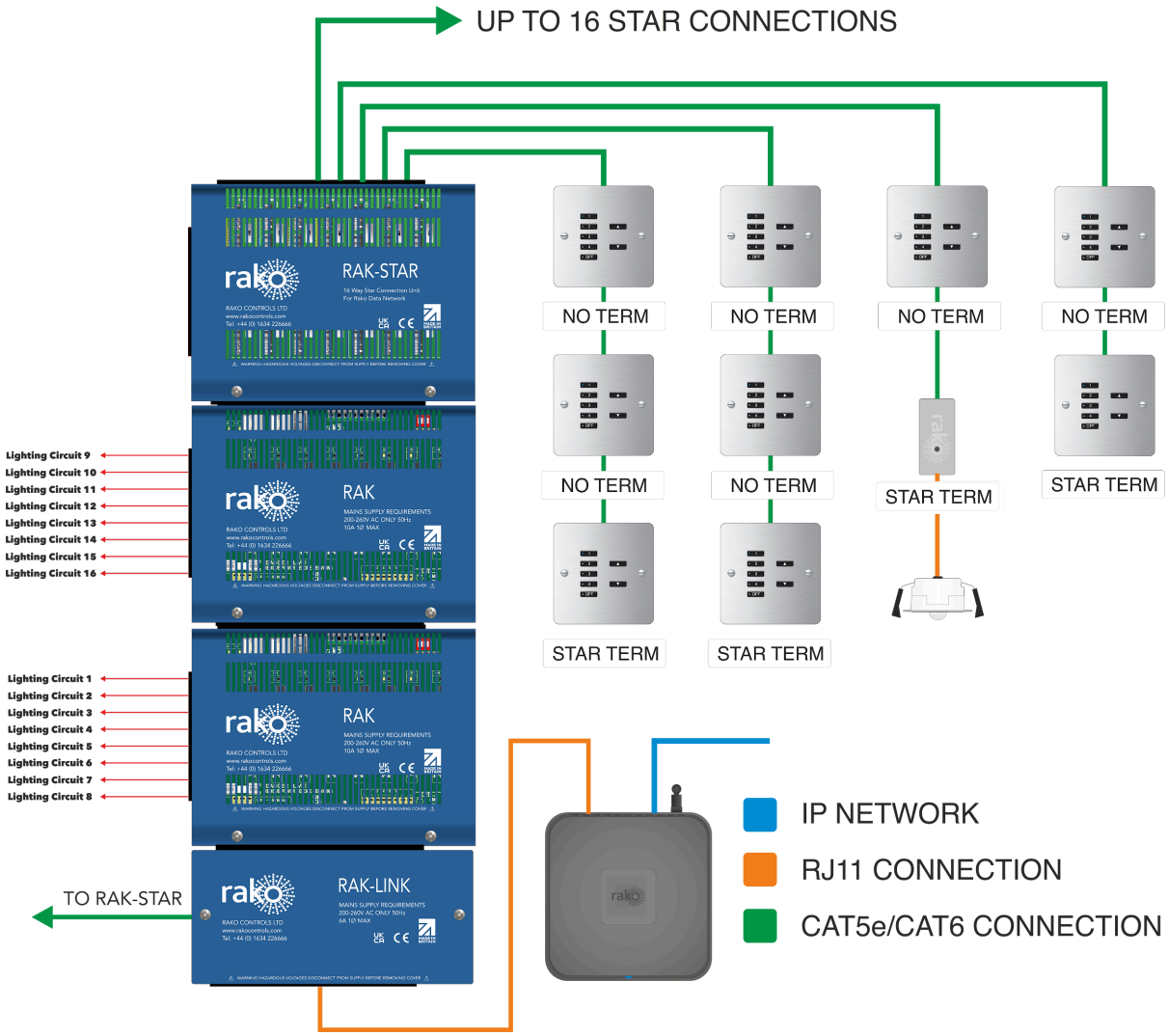
8 Example Systems

The Rako Wired Network is typically wired using CAT5 or CAT6 in the following configurations:

8.1 Radial System

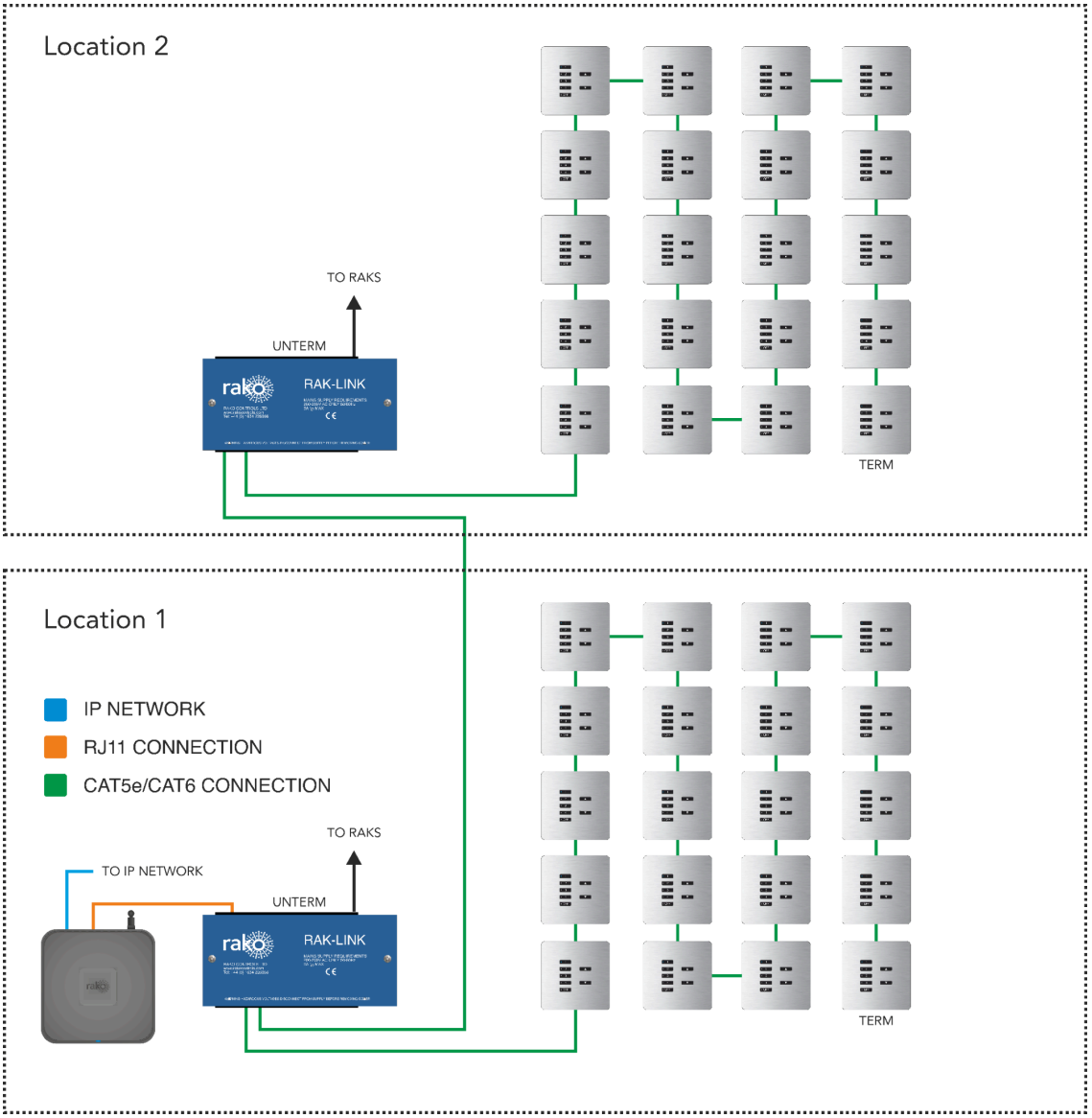


8.2 STAR System



8.3 Systems with Multiple RAK-LINKs

If the RAK system requires more than one RAK-LINK, they must be connected via the Rako Wired Network.



For further examples of Rako Systems, see the Wired System Overview.