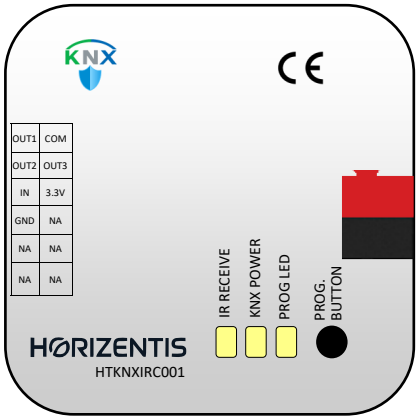
Description

The Universal Infrared/KNX Gateway (HTKNXIRC001) is designed to provide seamless and powerful control integration between any electronic device using standard Infrared (IR) communication (such as TVs, music systems, or standard AC units) and a KNX-based building management network.

Acting as a sophisticated control bridge, the gateway translates incoming KNX control telegrams into learned IR signals, which are transmitted via external IR emitters to operate the target devices. This enables full KNX control over core functions like power status, mode selection, volume adjustment, and other device-specific commands.



Key Differentiator: Bidirectional Synchronization

The HTKNXIRC001 provides a critical advantage through its advanced bidirectional functionality. Utilizing its external IR receiver, the gateway actively monitors and decodes control signals originating from the device's original wireless remote control (e.g., the TV or AC handheld remote). These manually executed commands are instantly translated into KNX status feedback (FB) telegrams and published to the bus. This ensures the entire KNX system remains fully synchronized and accurately reflects the current operational state of the controlled device, regardless of the control source.

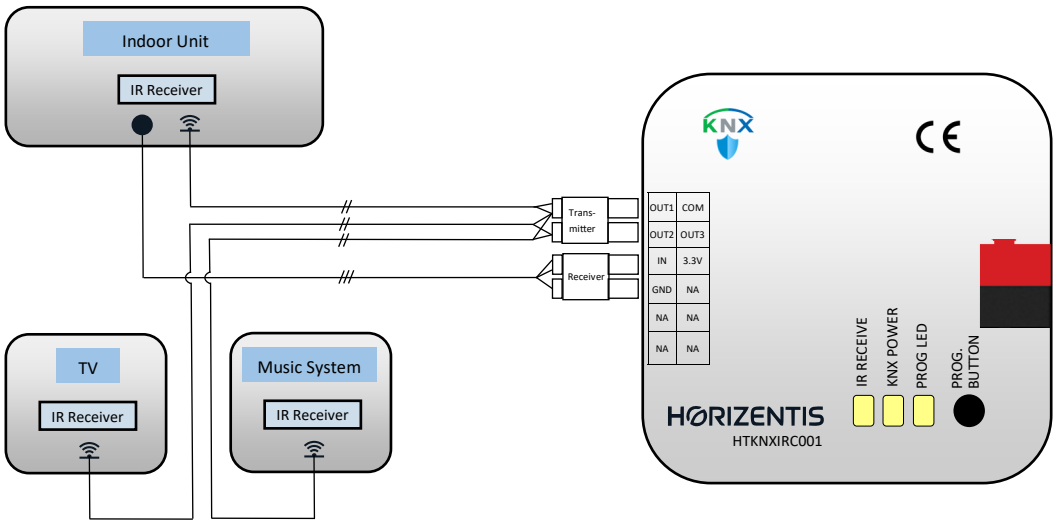
In addition, the gateway supports advanced internal KNX logic modules such as input, scene, math, and timer functions, allowing for the creation of custom logic, scheduling, and sophisticated multi-scene automation directly within the device.

Features

- **KNX Data Secure** certified for high integrity communication.
- **Bidirectional Communication** providing not only IR control but also status feedback (FB) to the KNX bus by decoding signals from the device's original wireless remote control.
- **3 Infrared Outputs** for controlling up to three independent external IR devices simultaneously.
- **4 Scene Functions** allowing complex, multi-command sequences to be executed with a single KNX telegram.
- **8 Math Functions** for advanced data processing and logical operations within the KNX framework.
- **Timer Module** supporting 4 conditions and 4 actions for flexible scheduling and automation tasks.
- **Easy Addressing** via serial number, eliminating the need to physically press the programming button during device setup.

Product Code	HTKNXIRC001		
Supply	Voltage	Typical	30 VDC
		Range	21-31 VDC
	Current consumption (30VDC)	Typical	5mA
		Max	40mA
Temperature	Operation	-10 … 55 °C	
	Storage	-20 … 70 °C	
Humidity	Operation	5 … 95%	
	Storage	5 … 95%	
Dimensions	67 x 67 x 26 mm (W x H x D)		
Weight	71 g		
Protection	IP 20		
Configuration	Via ETS		
Commissioning	S-Mode		

Device Connection



HORIZENTIS HTKNXIRC001: Technical Specifications & Installation Guidelines

1. Accessory and Cable Specifications

Parameter	Specification	Note
IR Transmitter Max Cable Length	15 meters (49.21 feet)	Ensure reliable signal transmission.
IR Receiver Max Cable Length	15 meters (49.21 feet)	Ensure reliable signal reception.

2. Package Contents and Expansion Capabilities

Standard Delivery Contents

The standard product package includes the following external IR accessories:

- One (1) Infrared (IR) Receiver.
- One (1) Infrared (IR) Transmitter.

System Expansion

The HTKNXIRC001 device supports multiple IR control outputs. Additional IR Transmitter units may be required for expanded control functionalities (e.g., controlling a TV, Music System, and Indoor Unit simultaneously).

Availability: Up to two (2) additional IR Transmitters can be seamlessly integrated with the device. These expansion units must be sourced and purchased directly from Horizentis to ensure full compatibility and optimal performance.

3. Installation and Wiring Precautions

Electromagnetic Interference (EMI) Shielding

To guarantee optimal signal integrity and prevent potential degradation of the infrared communication signals, installers must adhere to best practices regarding cable routing:

Critical Warning: The signal cables connected to the IR Receiver and IR Transmitter should be routed as far as physically possible from 220V (or other high-voltage AC) power lines. Proximity to high-voltage conductors can induce electromagnetic interference, leading to intermittent or unreliable device control. Separate routing channels are highly recommended.

SAFETY GUIDELINES AND IMPORTANT INFORMATION

- The installation process must be carried out by certified personnel and in full compliance with the applicable national and local regulations.
- Mains voltage or any external voltage source must never be connected directly to any point of the KNX bus. Doing so may cause serious damage to the entire KNX system. Adequate insulation must be ensured between the mains (or auxiliary) voltage and the KNX bus, as well as any connected components or cables.
- After installation in a distribution board or electrical box, the device must not be directly accessible.
- The device should be kept dry at all times, including protection from condensation. During operation, it must not be covered with fabric, paper, or any other material.