

## A.IR Shield Rx for AnalysIR, IRremote & IRLib

### Features

A.IR Shield Rx, the Advanced Infrared shield for AnalysIR includes:

- Default Configuration:
  - AnalysIR source device support with IR Rx support
  - Dual IR Receiver/Learner
  - Red PCB
- Noise suppression Rx circuit
- Uses 3V3 or 5V Power
- High quality IR Receiver
- High quality IR Learner
- Typical Range: <45m(rx)
- Plugs directly into 'Arduino' header or similar
- Bonus Features:
  - Wide 20kHz to 60kHz carrier frequency Rx bandwidth
  - Customisation options
  - Works with Arduinos and most other MCU platforms.
  - A selection of header layout options to suit most needs
  - PCB Size: 25x10x15mm(LxWxH)

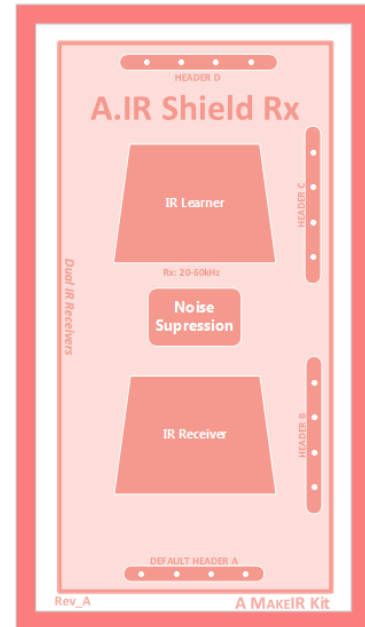
### Applications

A.IR Shield rx - the Advanced Infrared receiver module for AnalysIR can be used in the following:

- Use with AnalysIR for Rx
- High quality receiver modules for IR remote control
- Testing & monitoring
- Integration into 3<sup>rd</sup> party IR & non-IR projects
- Your own custom IR sketches
- Can be powered from GPIO pins on Arduino and most MCU platforms

### A.IR Shield Rx Overview

A.IR Shield Rx (A.IR) is a high-spec 'micro' shield which operates seamlessly with AnalysIR or your own custom sketches - supporting IR receive, decode and carrier frequency measurement via AnalysIR, IRremote, IRLib or a custom IR sketch. Carrier frequency measurement and reporting is supported by AnalysIR & IRLib. By default, A.IR is supplied with male headers soldered and the AnalysIR firmware is available for download after purchase. Users can load any custom sketch for A.IR using the Arduino IDE by reusing the supplied firmware. Similarly IRremote & IRLib sketches can be loaded to take advantage of the shield.



A.IR allows makers, hobbyists and professionals record a large range of IR signals using quality Vishay IR components and excellent design features. A.IR provides excellent reception range and signal quality. It is powered directly from the GPIO pins of the chosen MCU platform.

### What is the A.IR Shield Rx

A.IR is made up of the following key components:

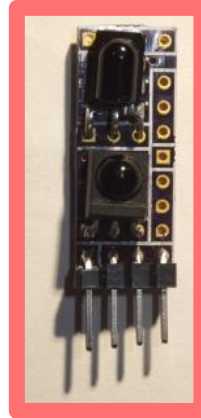
- The A.IR shield Rx with integrated high quality IR receivers, which can provide a range of functionality from IR decoding, remote control or measurement of IR carrier frequency.
- An Arduino or similar (*not included*), into which the shield plugs and which makes use of the associated IDE. (*not included*)
- A sketch with AnalysIR firmware for connection to a copy of AnalysIR running on a PC. Alternatively, you can use your own IRremote, IRLib or custom IR sketch to record signals

A.IR is an excellent companion device for any project and is specifically designed to work as a plug and play solution with AnalysIR. It will also operate with IRremote, IRLib and most other IR projects.

A.IR uses the best design and IR components for modern Infrared remote control ensuring optimum performance in all environments.

### What's Included

Each A.IR shield is configured with high quality IR components to ensure the best performance. You can opt to have the receivers, emitters and headers soldered or not (*subject to availability*). They come pre-soldered by default. A.IR comes with firmware for operation with AnalysIR, which provides the best performance. Users can easily leverage any other compatible sketch. A getting started guide is also provided. The A.IR Shield Rx also works with IRremote & IRLib via the Arduino IDE and almost any other MCU platform.



### Compact & Versatile Module

Although the shield was designed for use with AnalysIR you can create many interesting projects using the shield by extending the supplied firmware.

- Is very compact measuring 20x25mm, without compromising on quality or performance.
- Includes noise suppression circuitry for the most demanding environments.
- 4 different header/pin layouts are available on PCB.
- Records difficult AC signals along with TV signals.
- Easy to integrate with almost any project.
- Customisation with different IR receivers (*subject to availability*)

In order to get the maximum benefit from the shield we recommend picking up a copy of AnalysIR, which will save many hours in trying to understand & troubleshoot your IR signals.

### Licensing Model & Purchase

The A.IR shield Rx, is supplied under a single licence which covers both non-commercial and commercial use of supplied hardware & software with an original A.IR Shield Rx. You can purchase your own A.IR module via: <https://www.ANALYSIR.com/> and other outlets. The A.IR Shield Rx design & hardware is also available for integration into 3<sup>rd</sup> party systems or bundling with kits. Custom designs are possible with bulk orders.

Any trade-marks referenced in this document are the property of their respective owners. *In particular, there is no commercial relationship or endorsements between AnalysIR and Vishay, any Arduino entity, IRremote, IRLib or other manufacturers.*

### Service and Support

Support is provided for the A.IR shield via email or our on-line [IRforum](#). Contact details for support are provided at time of purchase. Support is available only using your registered email address

### A MAKEIR Kit

A.IR Shield Rx is part of the MAKEIR series which comprises a range of innovative infrared remote control modules for makers, hobbyists & professionals. (*Available now – visit [www.ANALYSIR.com](http://www.ANALYSIR.com) for details*)



### Minimum Requirements

- An A.IR Shield Rx
- A Arduino or similar platform with headers (*not included*)
- Power Supply, usually via GPIO pins. (2.5-5.5V)
- Arduino IDE or similar.
- PC running AnalysIR (*optional*).

### Quality IR Components

A.IR Shield Rx uses the highest quality infrared components available from Vishay.

### Carrier Frequencies

A.IR Shield Rx supports all of the common IR receiver carrier frequencies: 30kHz, 33kHz, 36kHz, 38kHz, 40kHz, 56kHz at the Infrared 940nm wavelength (i.e. 20-60kHz).

### IR formats

A.IR works with all common modulated remote control signals and formats, including very long Air Conditioner signals, which covers the vast majority of systems in the market. It performs very well with difficult signals.

### Customisation

- A large selection of Vishay IR receivers are available.
- Female Headers
- Single Receiver
- Alternate Header position / pinouts

### What is Included

- 1 x A.IR Shield Rx
- 1 x IR Receiver
- 1 x IR Learner
- Getting started instructions.
- Online Support.

### About ANALYSIR

ANALYSIR is committed to providing leading edge Infrared solutions & technology to our Maker, Hobbyist, EDU and Professional users globally.