ANALYSIR

DETECTIR Advanced IR Receiver/Tester Module

Features
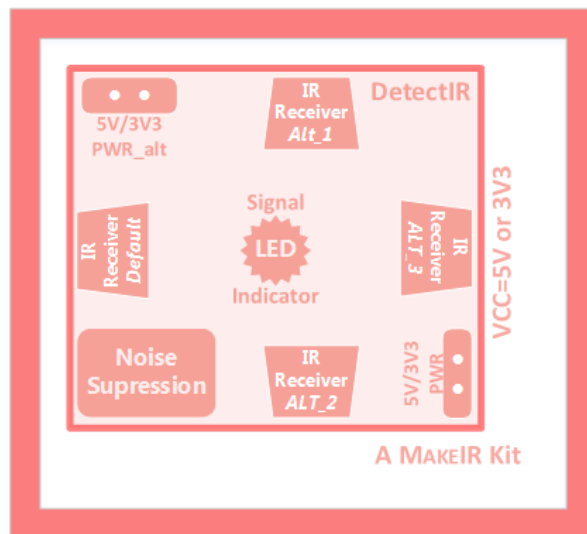
DETECTIR, the Advanced Infrared receiver/tester device includes:

- Configuration Options as:
  - o IR Detector / tester
  - o IR Receiver
  - o Serial IR Receiver
- Noise suppression circuit
- Visual Led indicator when configured as detector.
- 5V or 3V3 DC supply voltage
- High quality IR receiver
- Typical Range: <45m(rx)
- Bonus Features:
  - o Support 3 different TH pin-outs for quality IR receivers
  - o Supports popular SMD footprint for IR receivers
  - o Choice of TH or SMD components for noise suppression and signal indicator sub-circuits.
- 30kHz to 60kHz modulation frequencies available.
- 455kHz modulation frequency *(subject to availability)*
- PCB Size: 25x25x11mm*(LxWxH)*

Applications

DETECTIR, the Advanced Infrared receiver/tester module can be used in the following:

- Visual IR signal detection
- High quality receiver module for IR remote control
- Serial Data receiver, up to 9600 bps *(non-continuous)*
- Testing & monitoring
- Visual IR coverage testing
- Integration into 3rd party projects

DETECTIR Overview

DETECTIR is an advanced module for receiving and detecting modulated Infrared signals for interfacing to a microcontroller or operating stand-alone as a visual detector/tester.

DETECTIR allows makers, hobbyists and professionals to incorporate infrared receiver & detection functionality into their projects using quality IR components and excellent design features. DETECTIR can operate standalone or integrated into existing projects and provides excellent reception range and signal quality for both 3V3 and 5V systems. It can be powered directly from a microcontroller, USB ports, batteries or via stand-alone power supplies connected to the PCB headers.

What is DETECTIR

DETECTIR is made up of 3 components:

- The DETECTIR board module with integrated high quality IR receiver, which can provide a range of functionality from Visual detection, remote control and serial data transfer (rx only).
- A power supply provided via the microcontroller or via an independent DC power source or battery. *(Not Included.)*
- The included high quality IR receiver *(Included.)* can be mounted on-board or located remotely via cabling *(Not Included.)*.

DETECTIR is an excellent companion device for any 5V or 3V3 project and can operate from 3V3 to 5.5V supplies (Max 6V). When operating as a visual detector/tester it is configured with a visual indicator and can operate from 2 AA batteries for 2-3 months, drawing just under 0.8mA of idle current (1 year+ when used with on/off switch).

DETECTIR provides the leading operating range and when configured as a serial data receiver the highest baud rate in its class *(details over)*.

What's Included

Each DETECTIR module is configured with a choice of high quality IR receivers or detectors to match the intended function.

You can opt to have the receivers and header pins soldered or not. Test points and spare positions are not populated, by default.

Configuration Options include one of the following per module:
- IR Receiver: 30,33,36,38,40 or 56kHz and subject to availability 455kHz
- IR Detector/Tester: optimised for 30-60kHz modulated IR signals
- Serial over IR: 4,800 *(continuous)*, 9600 *(non-continuous)* when fed directly to UART and up to 7,800bps *(continuous)* using custom encoding/firmware.

Customisation

DETECTIR comes in multiple configurations which are selected when ordering. The noise suppression option is available for the IR receiver & Serial over IR configurations and is not required for the IR Detector option. Custom IR receivers can be configured for a small additional fee.

Licensing Model & Purchase

DETECTIR, is supplied under a single licence which covers both non-commercial and commercial use. You can purchase your own DETECTIR module via: https://www.ANALYSIR.com/ and other outlets. The DETECTIR design & hardware is also available for integration into 3rd party systems. Custom designs are possible with bulk orders.

Service and Support

Support is provided for DETECTIR 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 MAKE**IR** Kit

DETECTIR is part of the MAKEIR series which comprises a range of innovative infrared remote control kits for makers, hobbyists and professionals.
(For launch in Q4 2014 – visit www.ANALYSIR.com for details)

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Additional Information

For more information visit http://www.ANALYSIR.com/ or contact us directly using the contact information below.

Minimum Requirements

- An infrared emitter or source to generate the IR signal.
- Power Supply providing 5v or 3V3 (6V maximum).
- Power can be supplied directly by a microcontroller, battery or an independent DC source.
- A microcontroller for IR receiver & Serial over IR configuration.

Quality IR Components

DETECTIR uses the highest quality infrared components available.

Modulation Frequencies

DETECTIR supports all of the common IR receiver modulation frequencies: 30kHz, 33kHz, 36kHz, 38kHz, 40kHz, 56kHz and any other custom frequency between 30kHz and 60kHz for IR detection at the Infrared 940nm wavelength. Special 455kHz IR receivers can be configured *(subject to availability)*. Serial over IR is optimised for 38.4kHz & 57.6kHz operation.

IR formats

DETECTIR can be configured to work with all common modulated remote control signals and formats, including the longest Air Conditioner signals.

Serial over IR option

Max sustained data rate of 4,800bps when connected directly to UART and 7,800bps when using custom encoding/firmware. Overall max 9600bps *(non-continuous)*. Range 35m *(max)*.

About ANALYSIR

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

ANALYSIR,
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