



## SparkFun Human Presence Sensor Breakout - AK9753 (Qwiic)

SEN-14349 ROHS

This is not your normal Passive Infrared (PIR) sensor! The SparkFun AK9753 Human Presence Sensor Breakout is a Qwiic-enabled, 4-channel Nondispersive Infrared (NDIR) sensor. Each channel has a different field of view, so not only can the AK9753 detect a human, but it can also tell which direction the person is moving. To make it even easier to use this breakout, all communication is enacted exclusively via I<sup>2</sup>C, utilizing our handy Qwiic system. However, we still have broken out 0.1" spaced pins in case you prefer to use a breadboard.

The onboard AK9753 is a digital sensor giving you a 16-bit digital value over I<sup>2</sup>C. Each of the four sensors outputs the IR current in pico-amps. A PIR reading can vary from roughly -200 (no human present) to 1500 when a human is detected standing in front of a given channel, but it varies due to environmental factors and other heat sources in view. We've written a full library to control the sensor and included examples showing how to output the sensor readings you need, making this breakout even easier to handle!

The SparkFun Qwiic connect system is an ecosystem of I<sup>2</sup>C sensors, actuators, shields and cables that make prototyping faster and less prone to error. All Qwiic-enabled boards use a common 1mm pitch, 4-pin JST connector. This reduces the amount of required PCB space, and polarized connections mean you can't hook it up wrong.

## Features

- Qwiic-Connector Enabled
- Quad infrared sensor module
- 16-bit reading on all four channels
- Digital I<sup>2</sup>C Interface
- Voltage: 1.7V to 3.3V
- Extremely low current: 100μA

