

The ICS receiver module (FCC ID:2ADWTASD02) is a radio front-end with embedded PCB patch antenna and a software control card.

1. Each radio on the receiver module has dedicated, cold rolled steel, shielding installed on the PCB to mitigate interference and harmful emissions.
2. The receiver module data is double buffered and rate limited through hardware and software. The first buffer stage is software in the software module Tiva processor that limits the transmission frequency through a crystal based timer and PLL. The second buffer, rate limitation, and modulation occurs in the Atmel AT86RF233 radio transceiver that buffers incoming data in a FIFO and modulates using DSSS at 2Mchip/s with effective transmission at 250kbps max .
3. The receiver module front-end accepts a 1.8V to 3.6Vdc input from the software control module. The receiver module transceiver chip has an internal regulator for the internal RF circuitry which is decoupled locally outside the chip. The software control module regulates an incoming 12V supply through a buck regulator to 4V and an LDO to 3.3V.
4. The receiver module antenna is permanently attached by being incorporated into the PCB and cannot be changed by the user even with soldering.
5. *The receiver module includes an 18 inch ribbon cable and was tested without any additional filtering.*
6. *The receiver module includes a permanently affixed sticker with the FCC identification number. Any product shipped containing the receiver module will also have a permanently affixed sticker with the corresponding FCC identification number displaying "Containing. FCC ID:2ADWTASD02". The module is not intended for individual sale, thus internal sales will be provided a sticker to affix to the final product.*
7. The receiver module software and hardware is provided in such a way as to disallow modification outside the rules of FCC part 15.
8. The transmitter power was measured as -4dB, thus any RF exposure limits are well above the available power.

Signed by: Dan Stephens 4/8/16

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