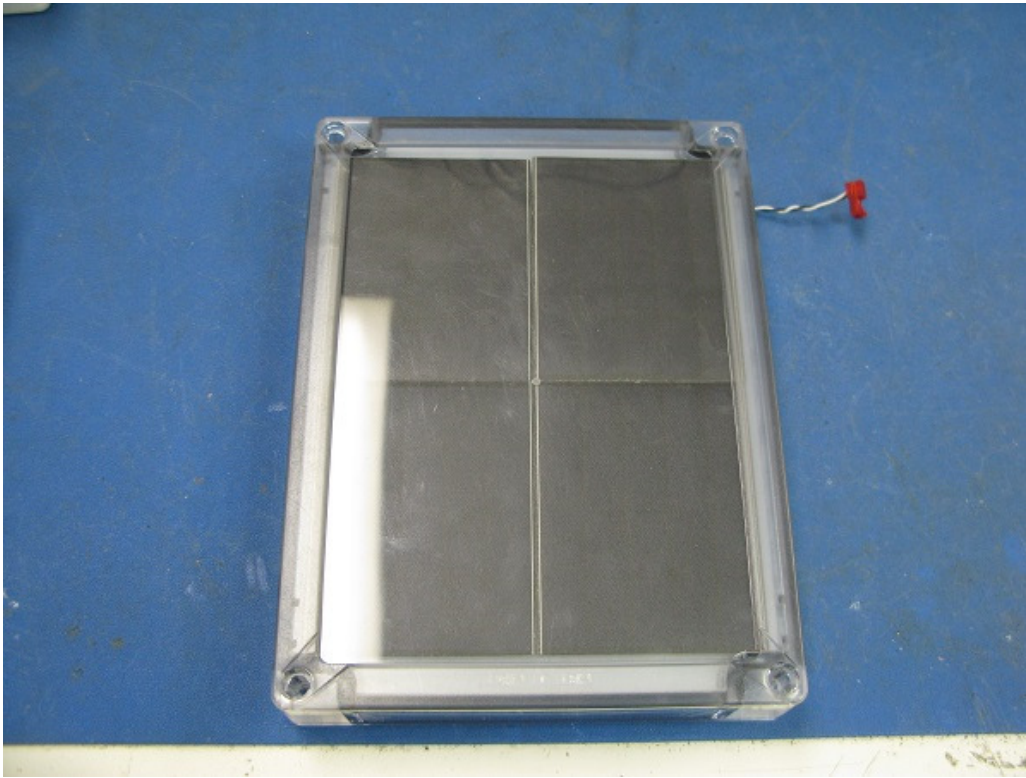
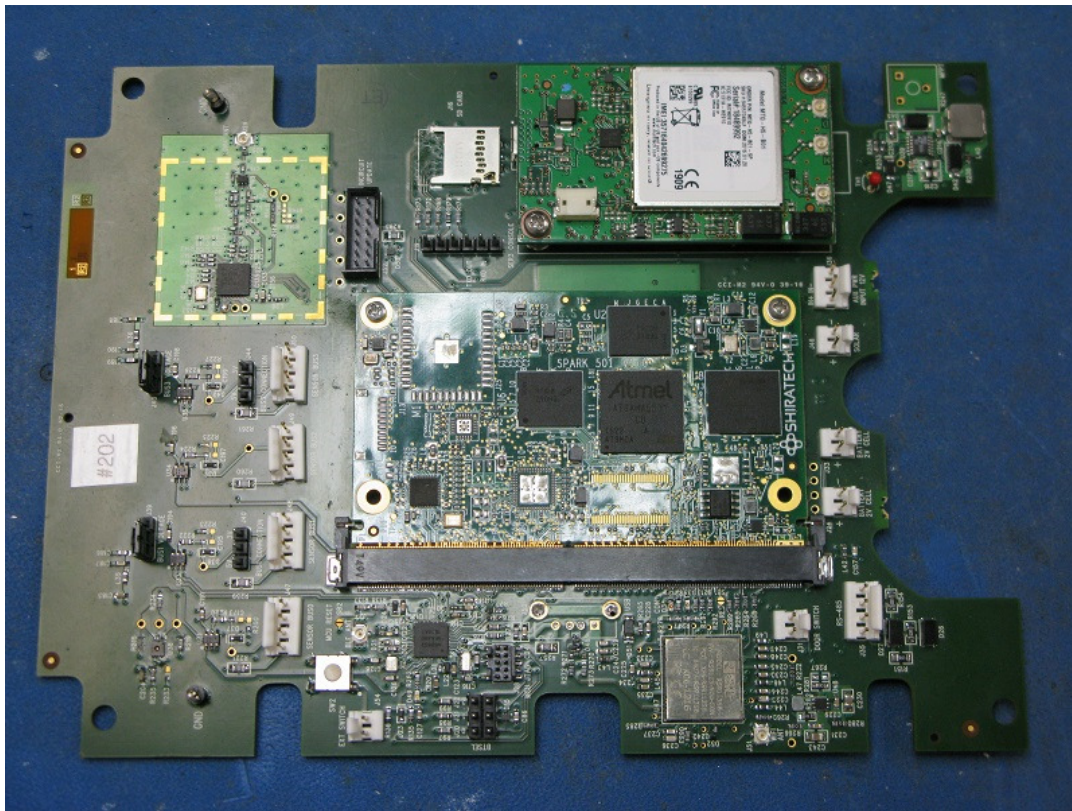




Major Components of the Hub: Green PCB containing all digital circuitry, Cellular module, WiFi module, 2.4GHz BLE radio and 900MHz LoRa radio, two lead-acid batteries (cylindrical parts); note that each radio and each module is connected to external antenna through an U.FL-RPSMA(F) transition RF cable

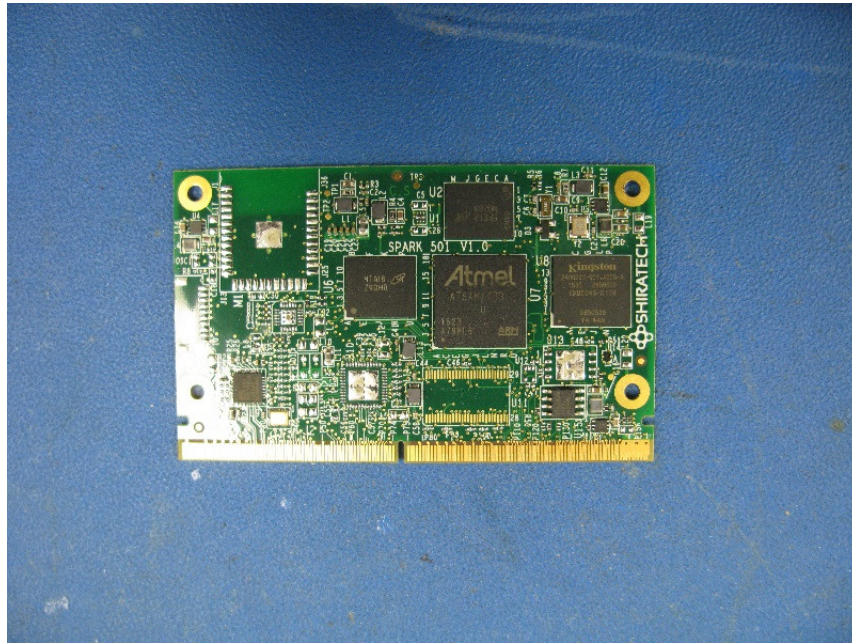


Solar panel embedded into the clear plastic cover of the enclosure; the solar panel plugs onto the Hub PCB using a 2-pin header connector

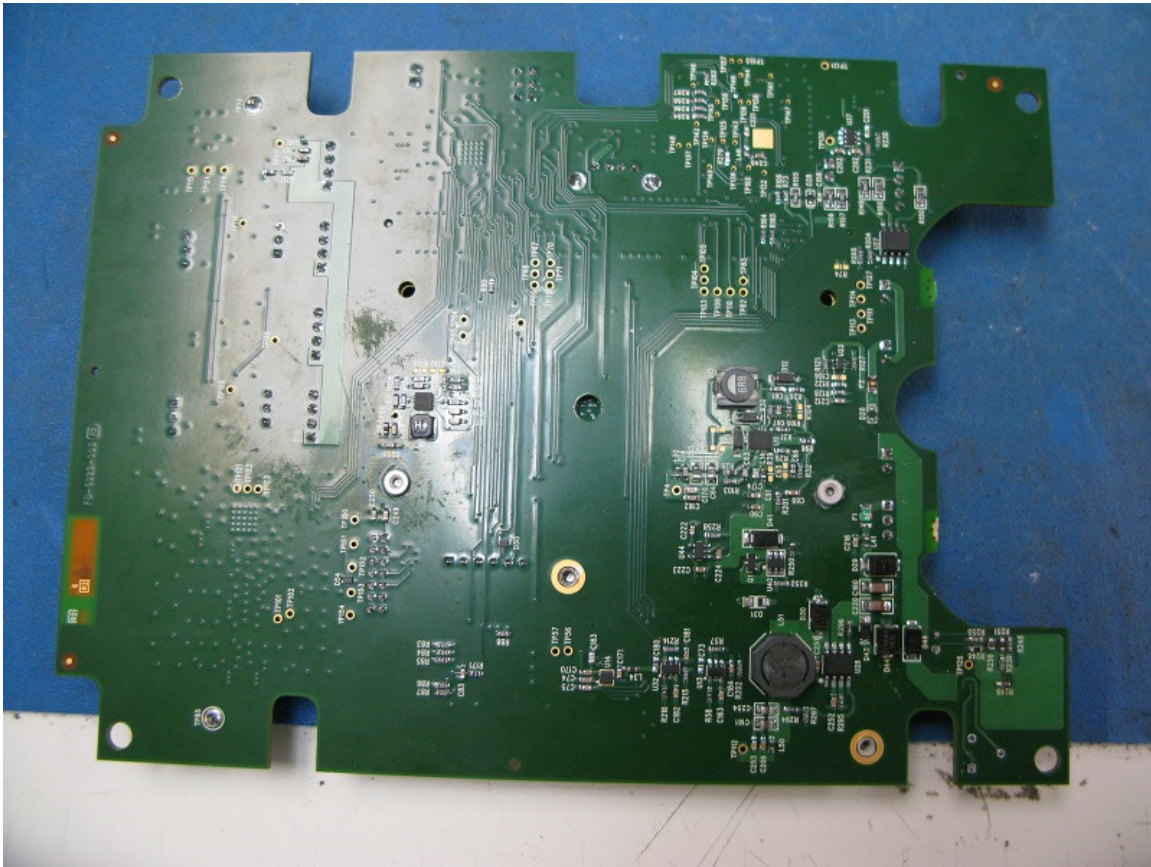


Populated Hub PCB (top side); Cellular module, WiFi module, 2.4GHz BLE radio & 900MHz LoRa radio shown; 900MHz LoRa radio on the Hub has a RF shield footprint, but is NOT required to be installed (on the top-left corner of this picture)

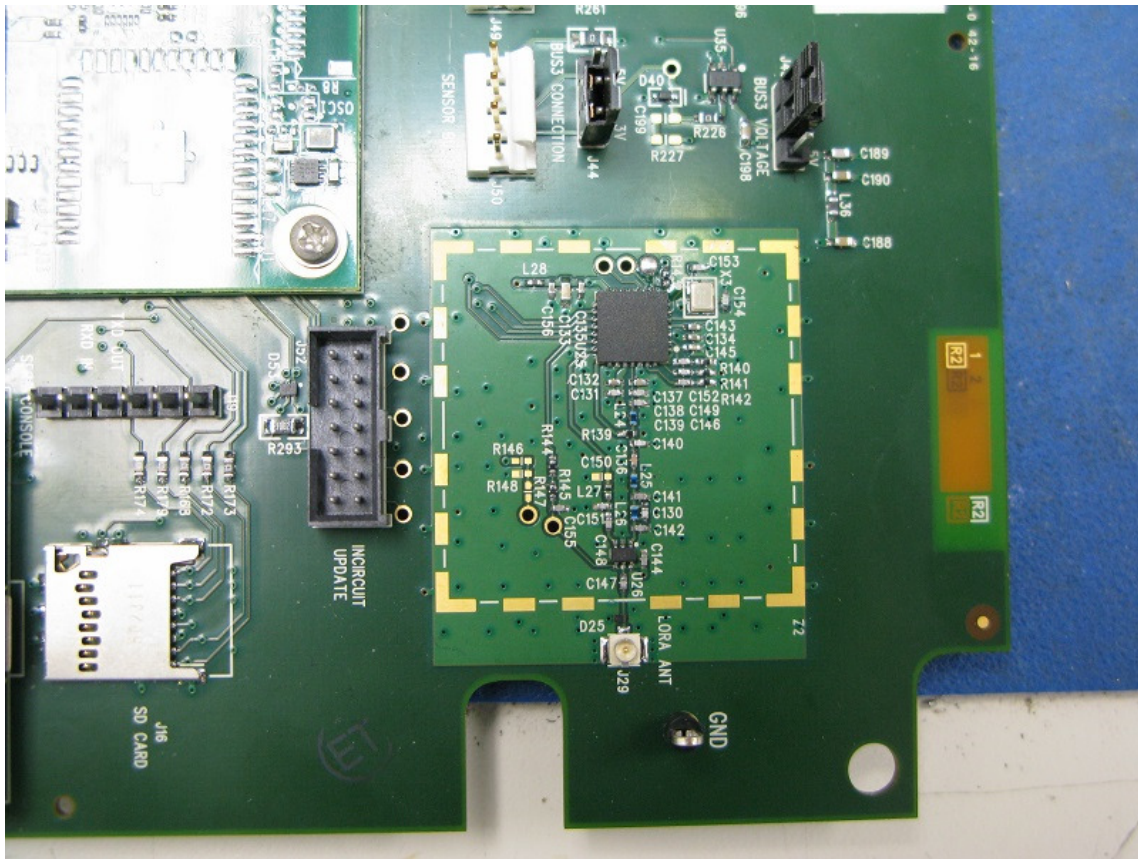
Note: the Shiratec card/plug-in PCB (at the center of this picture) contains the microprocessor controlling all functionalities of the Hub, and does NOT contain any radio circuitry



Top & bottom sides of the Shiratec card/plug-in PCB

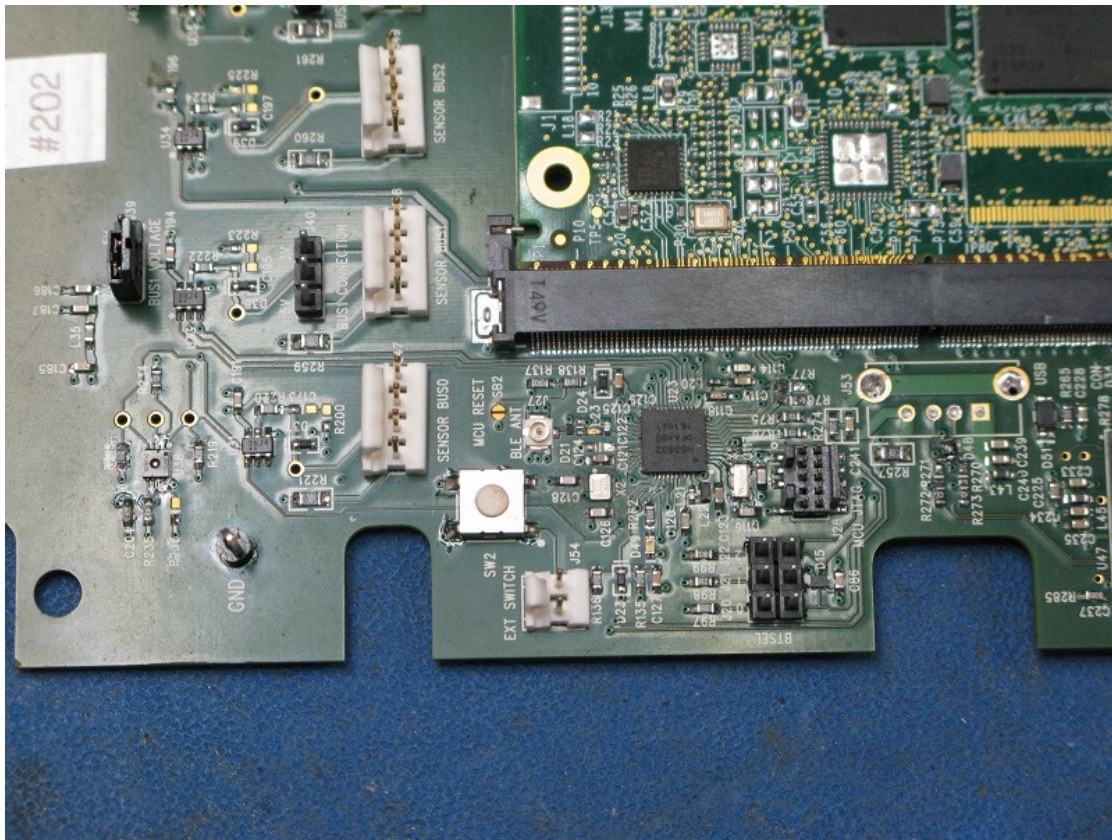


Populated Hub PCB (bottom side)

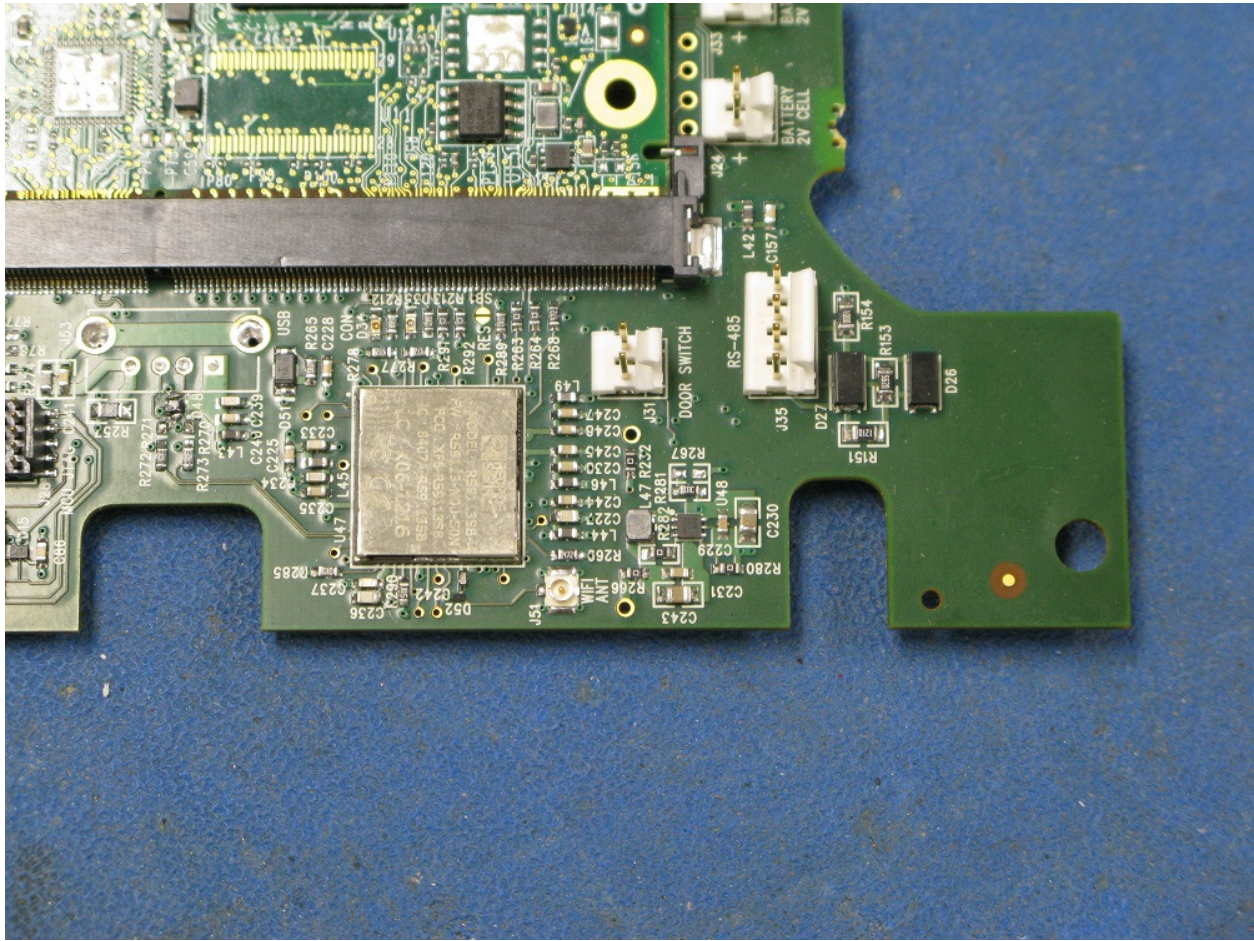


Close-up view of the 900MHz LoRa radio; note that the 900MHz LoRa radio on the Hub has a RF shield footprint provision, but the RF shield is NOT required to be installed

Note the antenna connector (J29) connects to external antenna through an U.FL-RPSMA(F) transition RF cable



Close-up view of the 2.4GHz BLE radio (U23); note the antenna connector (J27) connects to external antenna through an U.FL-RPSMA(F) transition RF cable



Close-up view of the WiFi module (the part with square RF shield); note the antenna connector (J51) connects to external antenna through an U.FL-RPSMA(F) transition RF cable



Close-up view of the Cellular module; note the antenna connector (middle of the 3 U.FL connectors on the left) connects to external antenna through an U.FL-RPSMA(F) transition RF cable; the other 2 U.FL connectors are not used and are left unterminated