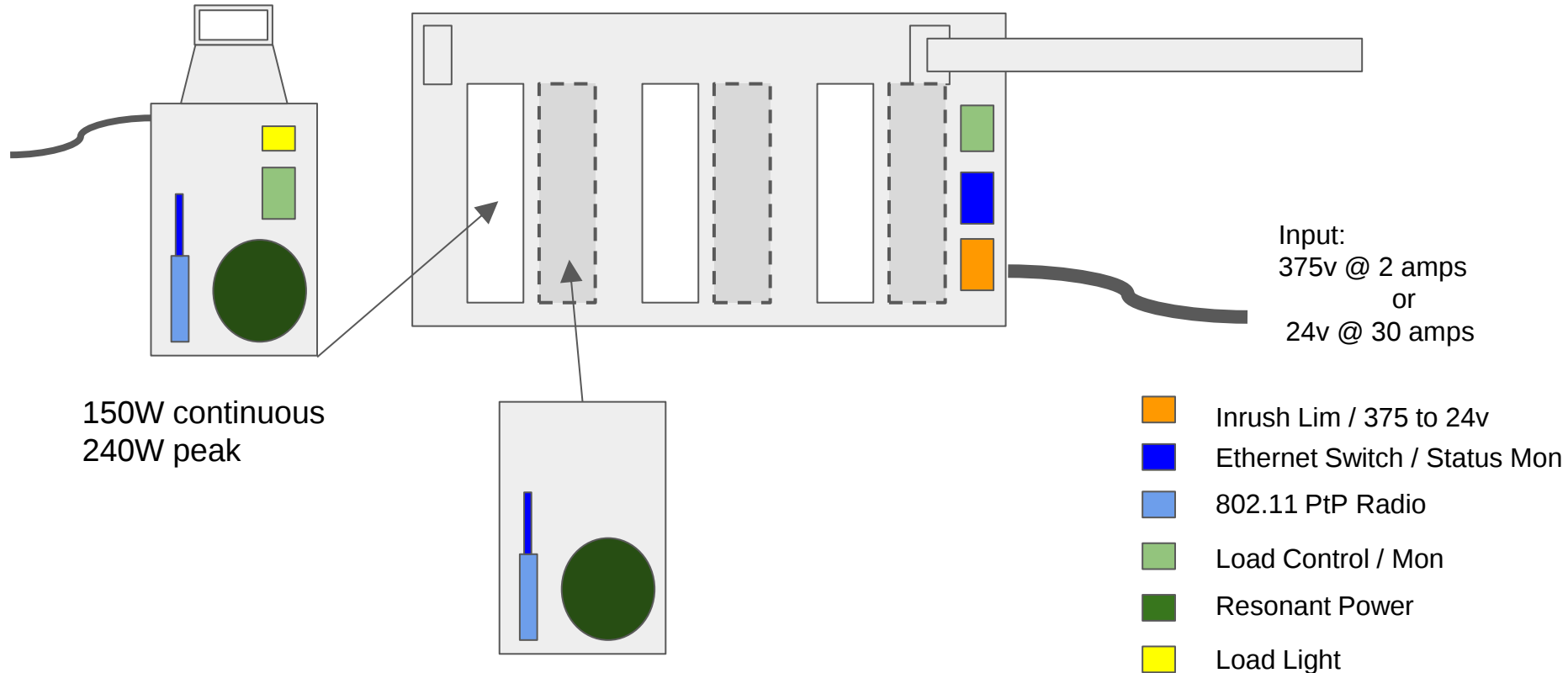


WPDX Medium Power Easy Swap For MARS 2016 v3a

Thom Maughan
20 Mat 2016

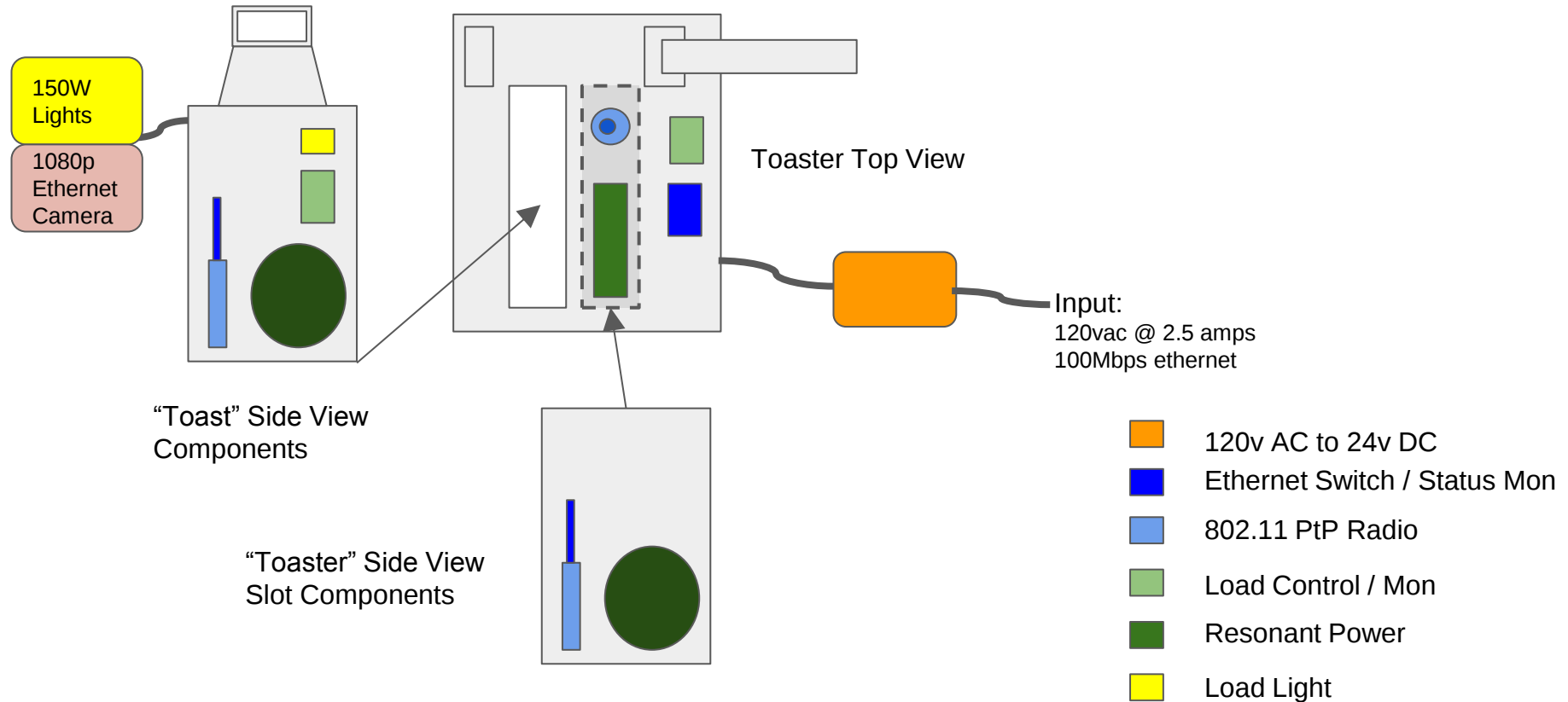
Block Diagram of What we want to build for MARS

Toast goes in the Toaster



First, Demonstrate 150 Watt Power and 100Mbps data transfer

“Single slot toaster with a piece of toast” on ROV at 1000 meters



Status 17 May 2016

Power transmit and receiver sub-assembly
potted and tested for 150W continuous,
200W peak power

100 Mbps wifi radios tuned and potted
antennas tested on: 1) bench in air, 2)
double salinity saltwater, 3) test tank.

Load controller PCB designed, fabricated and
firmware is written and tested.

Electrical loads and LED lights for connection
status and load test at insert are designed,
fabricated and tested. Two are built, ten
more are in progress for ROV test

Electrical review by Paul McGill

In progress:

120vac to 24v DC 10 amp converter is
designed thermally characterized and
tested, not yet potted.

Wire harness for ROV connection is in
progress planned for testing last week in
May.

PoE IP Camera (substitute for PHOBOS) has
been purchased and tested. Potting and
pressure testing in progress.

Final assembly potting is planned for end of
May after wire harness and converter sub-
assembly