

PSAS

Portland State Aerospace Society Launch Vehicle No. 2

AVIONICS MODULE

- 133MHz 586 PC104 flight computer running Debian Linux 2.4.27
- ARRL 802.11b telemetry (2.412GHz 1W spread spectrum)
- 1.27, 1.57, and 2.4 GHz custom Cylindrical Patch Antennas
- 1Mbps Controller Area Network (CAN) bus with:
 - Custom 6 degree-of-freedom Inertial Measurement Unit
 - 12-channel GPS receiver
 - 1.254GHz 3W color amateur service TV broadcast with data overlay
 - Custom power system with 16.8V 4Ah Lithium Ion battery pack
 - Independent recovery system with redundant pyrotechnic firing circuits and 146MHz emergency uplink radio

AIRFRAME

- 5.25 OD x 18.0 in. Aluminum modules
- Oval cutouts remove weight, increases accessibility

FIN CANISTER

- For minimum diameter airframe
- Ease of replacement

AEROSHELL

- 8 layer vacuum formed Eglass/epoxy

NOSECONE

- 7:1 Parker Eglass nosecone
- Minimizes drag at Mach 3

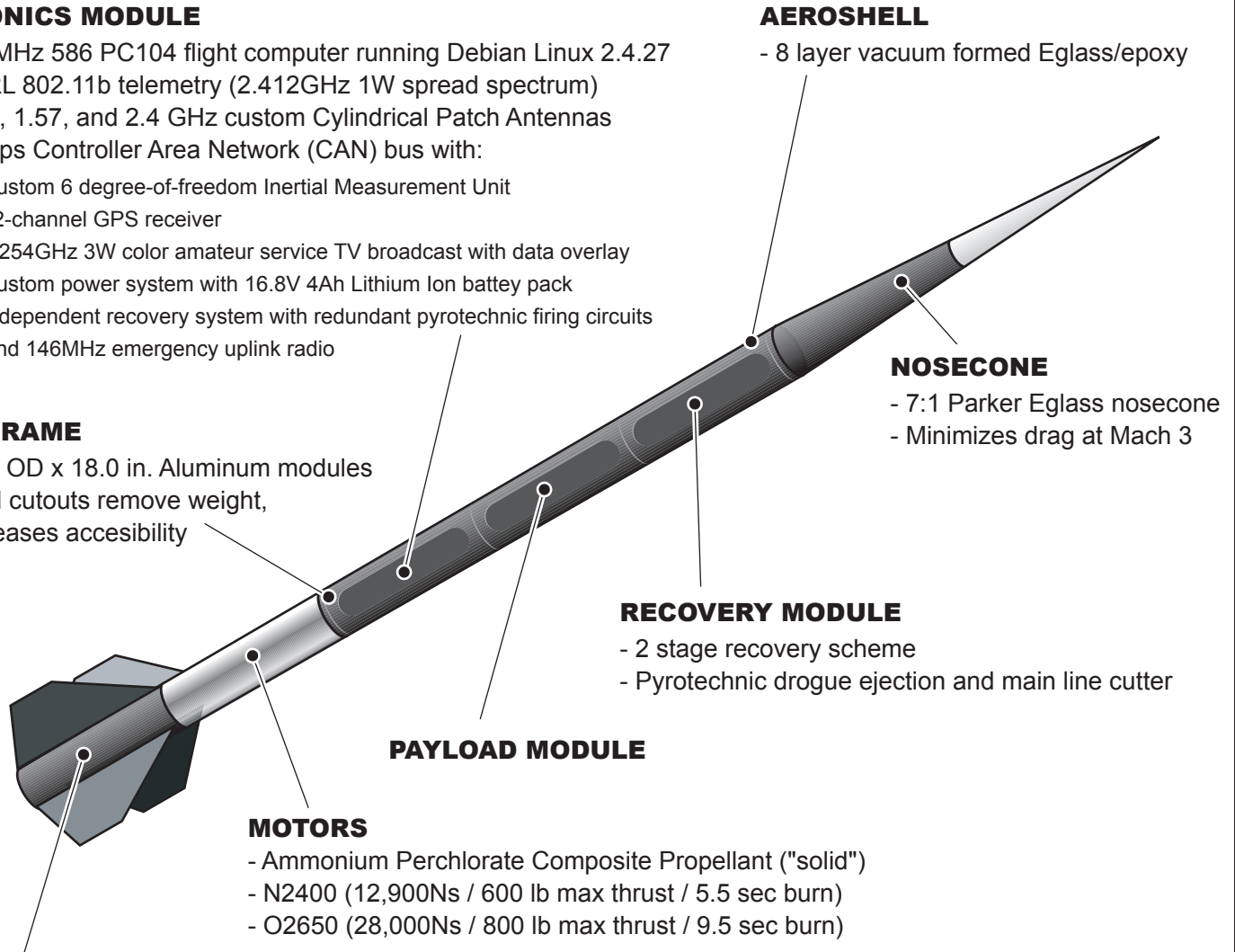
RECOVERY MODULE

- 2 stage recovery scheme
- Pyrotechnic drogue ejection and main line cutter

PAYLOAD MODULE

MOTORS

- Ammonium Perchlorate Composite Propellant ("solid")
- N2400 (12,900Ns / 600 lb max thrust / 5.5 sec burn)
- O2650 (28,000Ns / 800 lb max thrust / 9.5 sec burn)



<http://psas.pdx.edu/>

Interested in rocket science?

Come help us design, build, and launch some of the most sophisticated amateur rockets in the world.

***Introductory meeting: Wednesday, November 3rd
6:00pm in Fourth Avenue Building (FAB) room 155***