

# PixelSat I Bill Of Materials

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## Contents

- Aluminum Frame (details TBD, either 6061 or 7075, partially anodized) consisting of rings, rails, and plates.
  - 4x aluminum rail
  - 4x side paneling
  - 1x top panel
  - 300mm ring
  - 200mm ring
  - 100mm ring
  - 0mm ring
  - TBD, pending structural finalization
- Main PCB
  - STMicroelectronics STM32H753 microcontroller
  - SemTech SX1262 transceiver
  - PNI RM3100-CB Magnetometer
  - Adafruit ISM330DHCX IMU
  - (6x) photodiodes for coarse sun sensing (exact part TBD)
  - Arducam OV2640 Camera (exact attachment and form factor TBD, might be unattached to main board).
  - Texas Instruments TMP100NA/3KG4 Board Mounted Temperature Sensor (still TBD)
  - potential amplifier for transceiver (unknown if we will have one)
  - TBD radiation sensor (maybe)
  - TBD non-mission-critical sensors
  - TBD resistors, inductors and capacitors
- Power System PCB
  - Battery (model TBD)
  - Solar panels (details TBD)
  - TBD LDO, likely MAX8869
  - TBD MPPT, likely SPV1040
  - TBD Schottky Barrier Diode, likely CUS10S30,H3F
  - (6x) TBD measurers, likely INA260AIPW
  - TBD resistors, inductors and capacitors
- Air-wound Magnetorquers (material TBD)
- Active heating system (TBD)
- TBD antenna
  - antenna deployment system TBD (likely similar to a burn wire however)
- TBD interface with deployer etc.