



PocketQube Shop (Alba Orbital Ltd)
Designing COTS Parts for PocketQube

Team

Tom Walkinshaw, Founder/CEO
HP Project Management,



Conor Forde, Technical
Worked at Nanosatisfi/Spire Global,
Worked on 4 satellites that
got launched



£150k



£20k

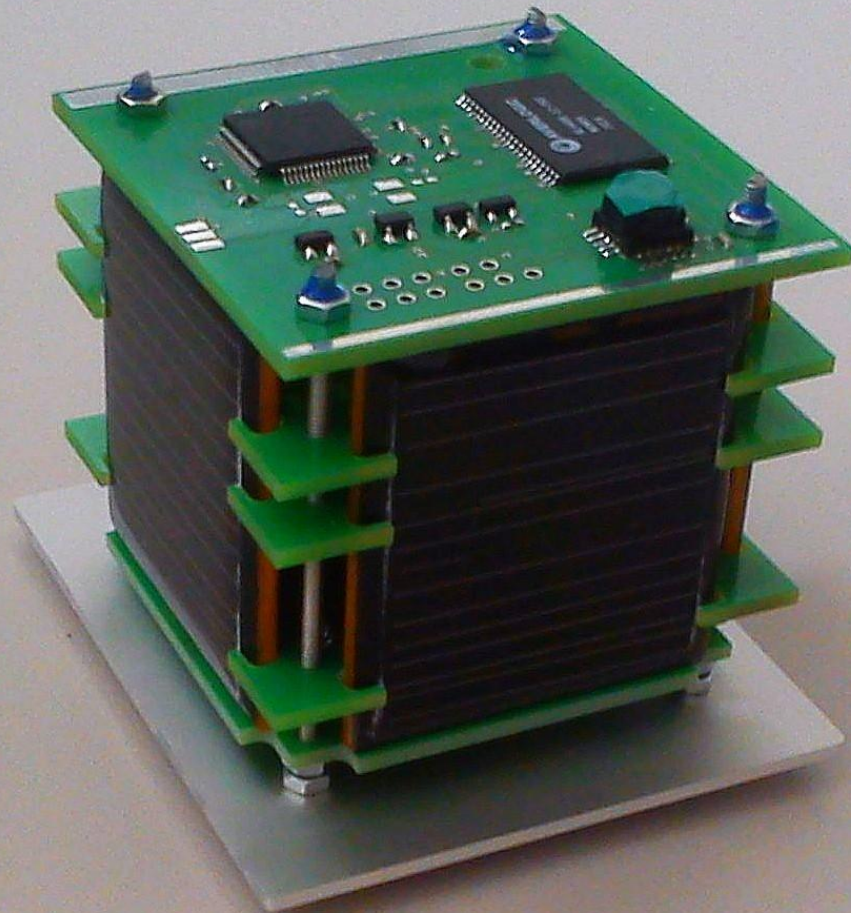
- Nearly Order of Magnitude drop from Cubesat Platform
- Minimum Viable Satellite, low power and data, but gets to orbit
- Off the shelf boards and subsystems

PocketQube Standard

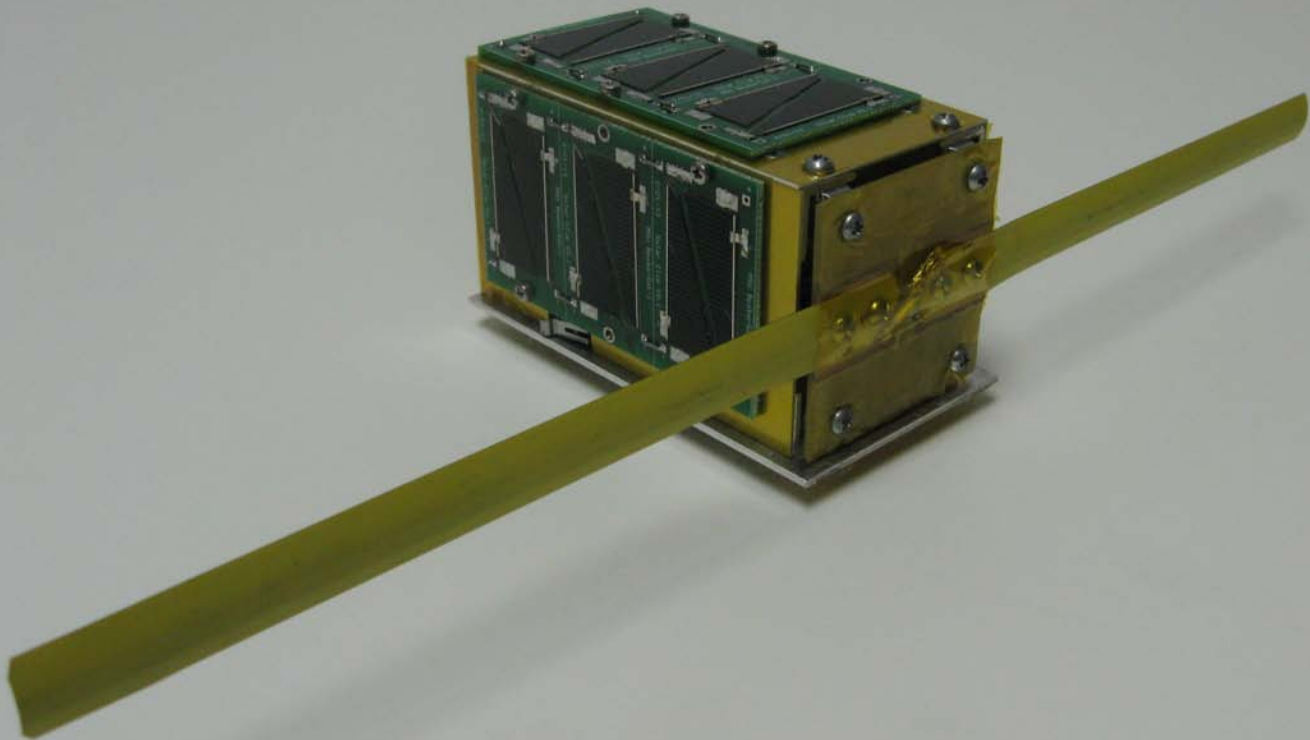
- 5cm standard cube
- Deploys from a pod
- Pod uses Tabs over rails for more mass per unit = spacecraft are more dense
- Envelope allows more ambitious deployable solar panels, potentially Quads or Quintuple deployables i.e. more power

First Generation PocketQube's

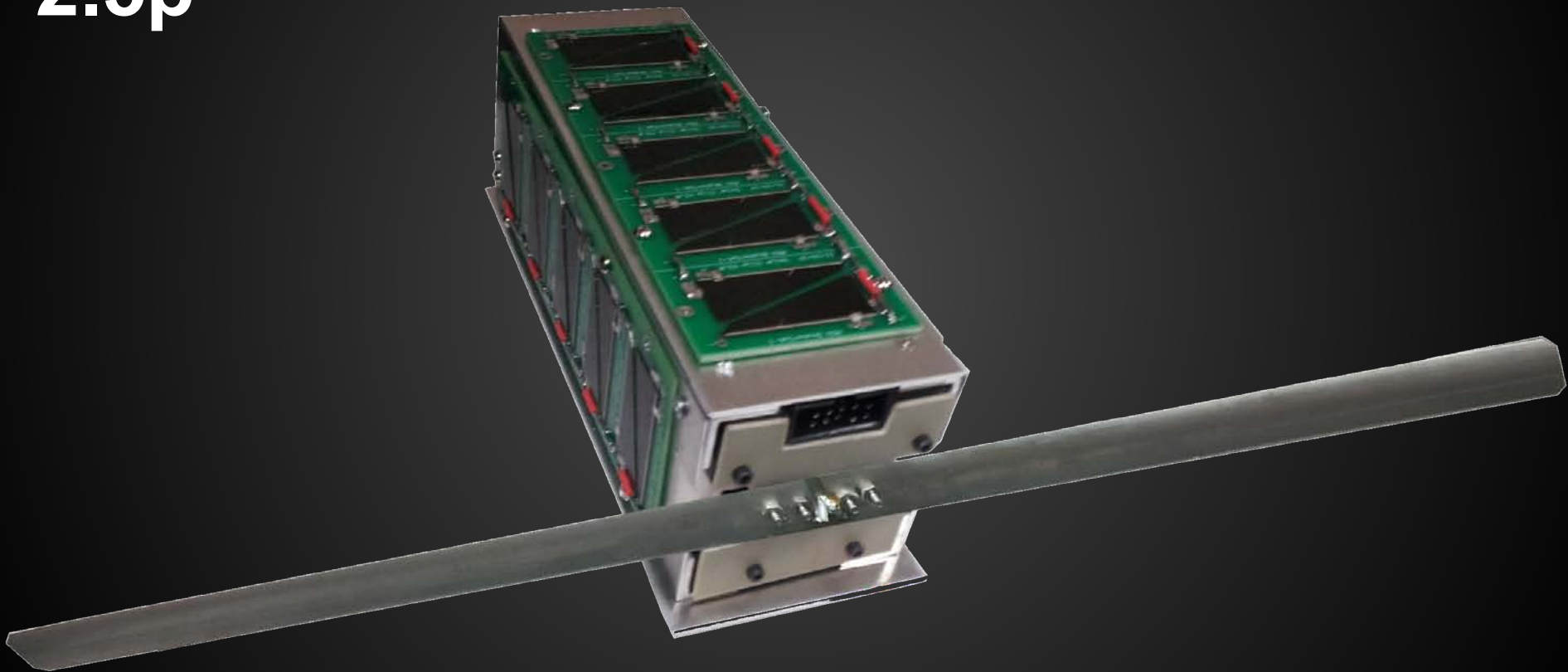
WREN
1p



\$50sat
1.5p



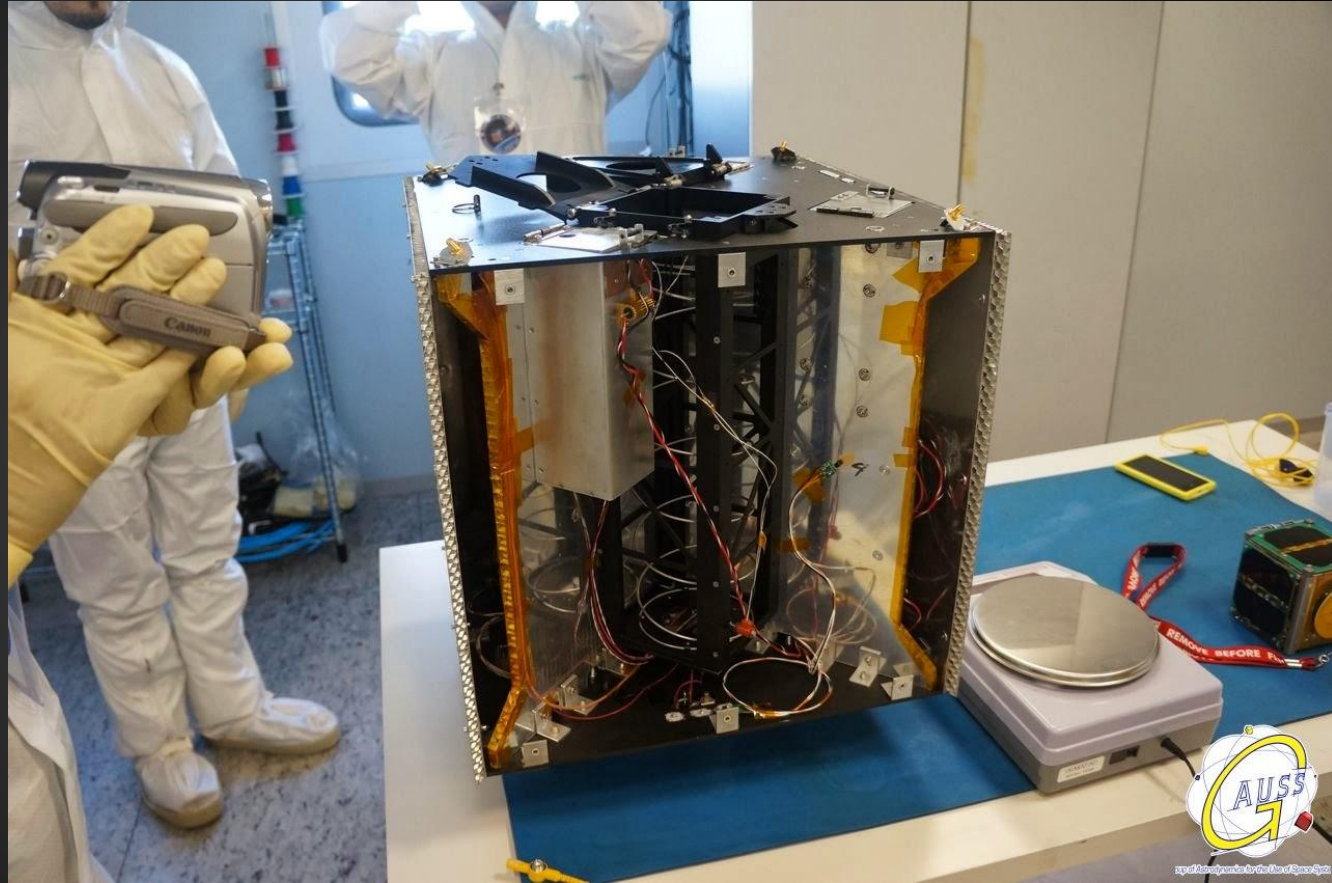
T-LogoQube 2.5p



QubeScout 2.5p



Mothership



Supporting the development of the next generation of space explorers

LAUNCH
VEHICLE



DNEPR-1





Tech flown on PocketQube to date

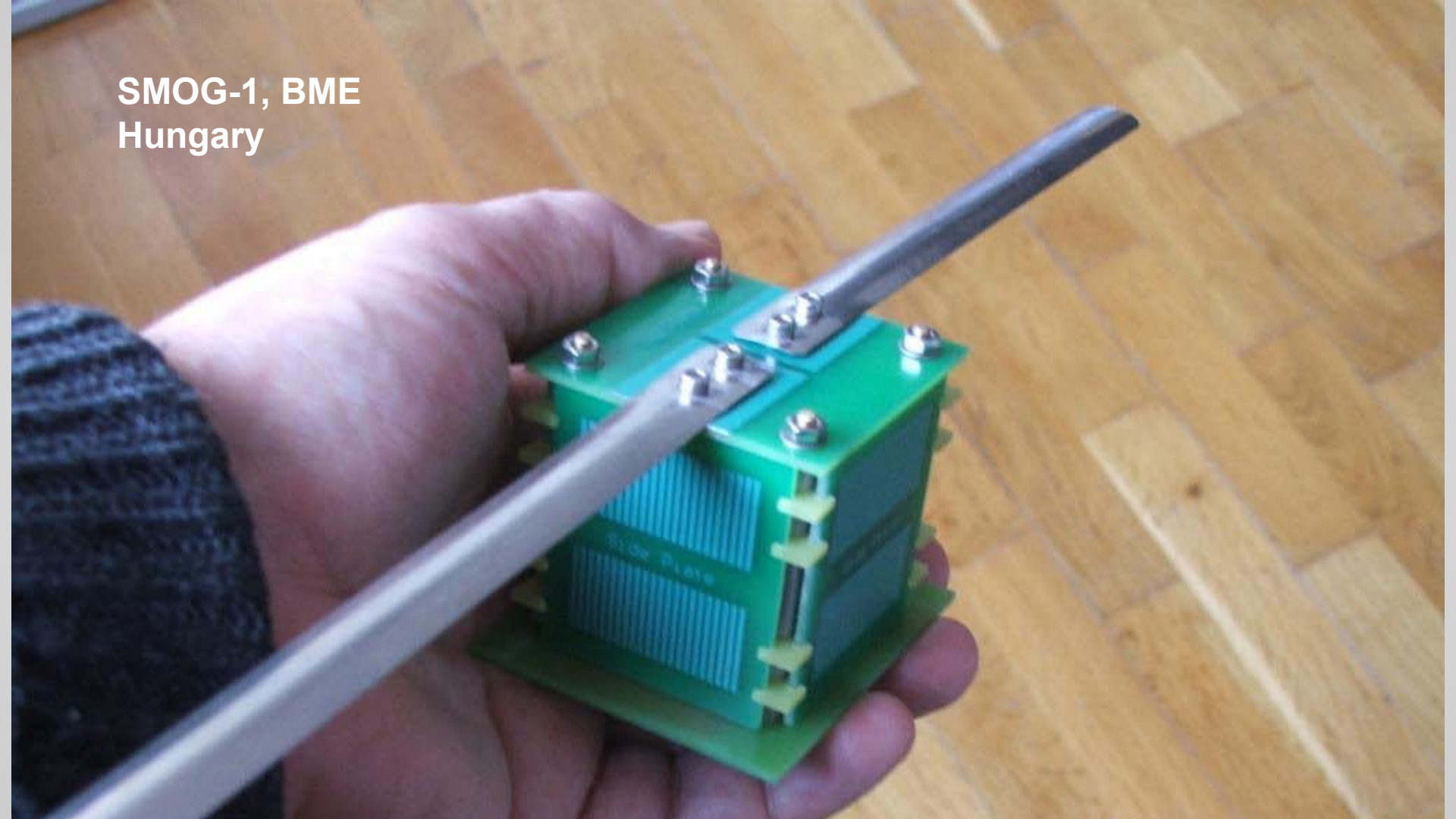
- Camera (SSTV)
- CZT Array (X-rays)
- 3 Axis reaction wheels for ACDS
- 4 Pulsed Plasma Thrusters (ppt)
- Fine Sun sensors

Second Generation PocketQube's

Payload Tech in Development

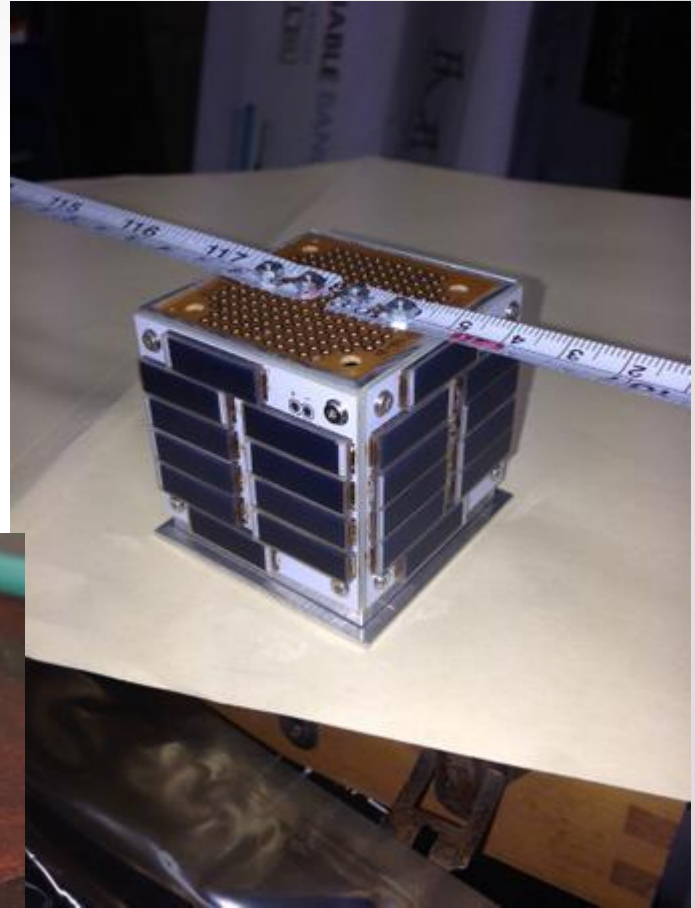
- Electromog detector (SMOG-1)
- LED Beacon (Arduiqube)
- Chipsat deployment platform
- More optical payloads

SMOG-1, BME
Hungary



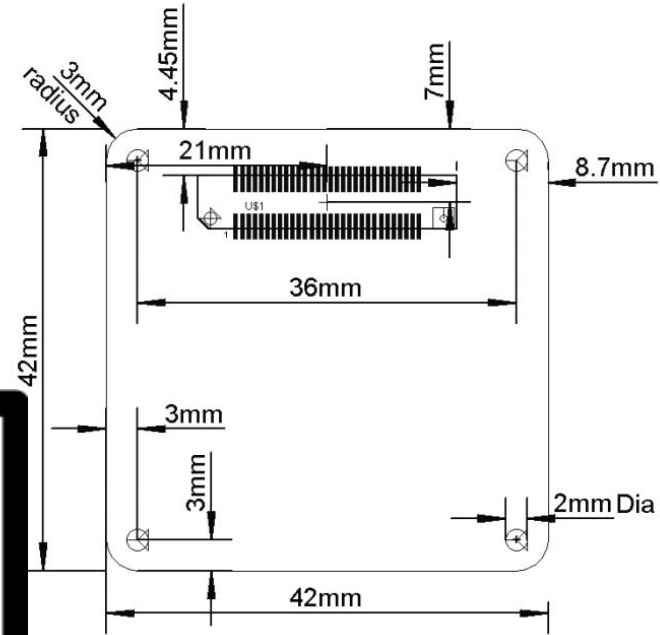
OzQube-1

- Camera
- First Australian PQ
- 1p



PQ60 Electrical Standard

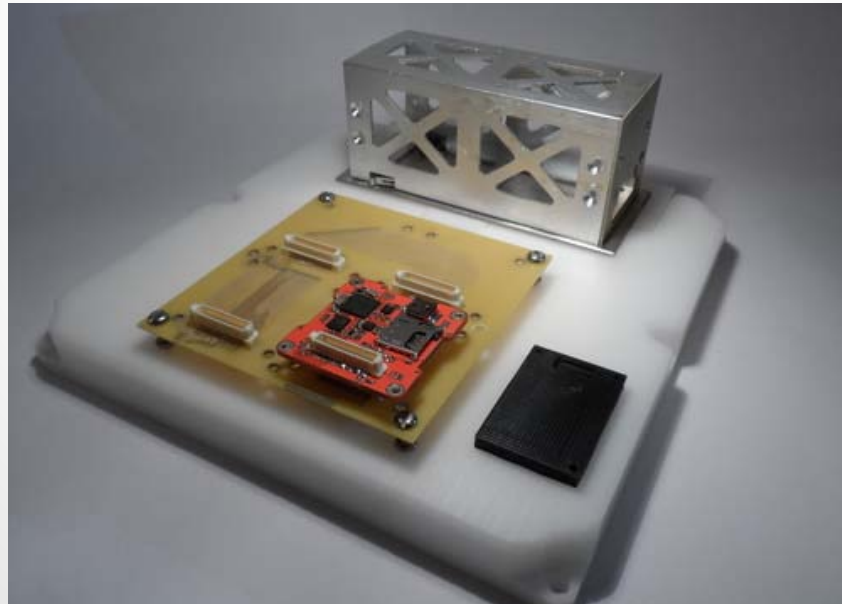
- PQ Community led standard
- 60 header connector
- Mech fits in any PQ
- www.pq60.info



PocketQube COTS

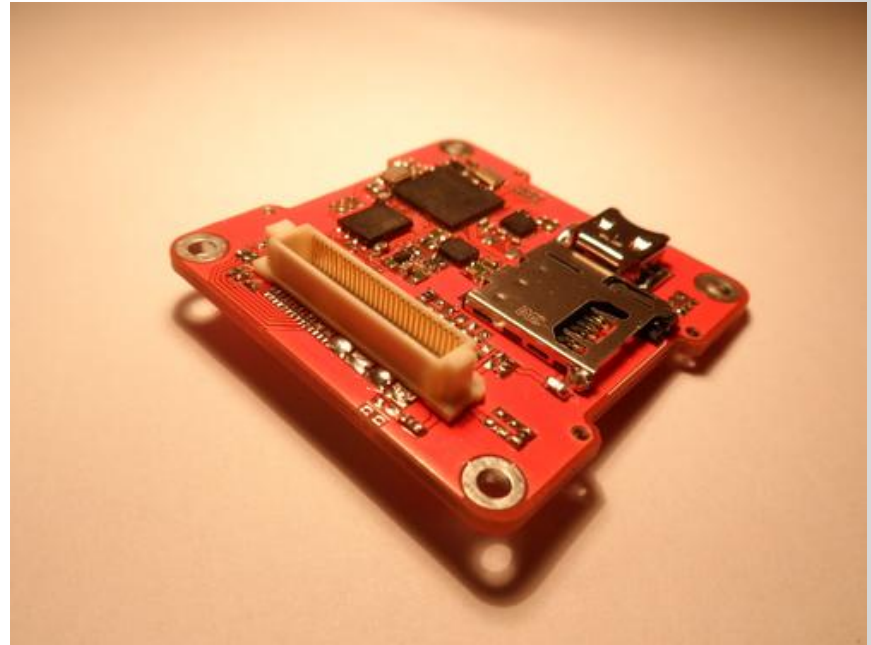
PocketQube Kit

- Starter satellite Kit, Low cost
- Structure, OBC, Radio, Dev board



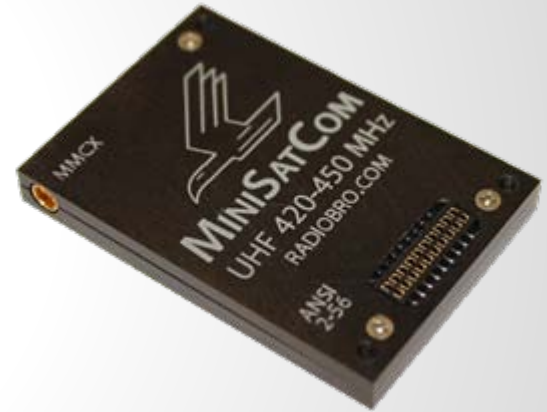
Parts - Onboard Computer

- MSP430
- Memory card slot
- PQ60 Standard
- Shipping first to Asian Customer soon



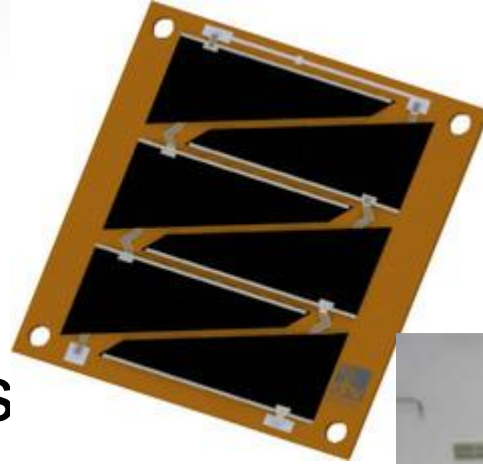
Radio

- Minisatcom
- Partner with US firm
- UHF/VHF
- 44mm x 22mm x 5mm
- Smallest commercial radio
- 10 grams



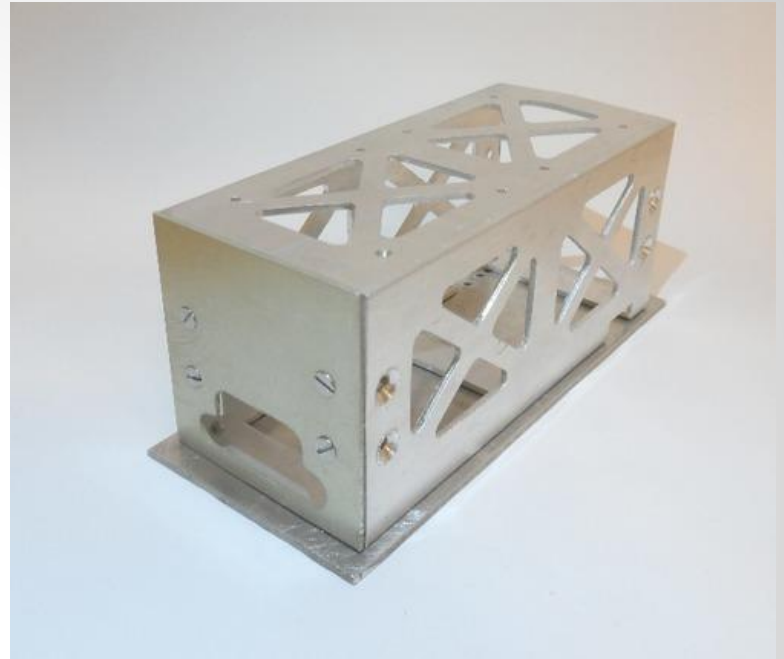
Solar panels

- 1p/2p/3p
- Set of 5
- Custom mountings
- Fulfilled by DHV
- Heritage of production line



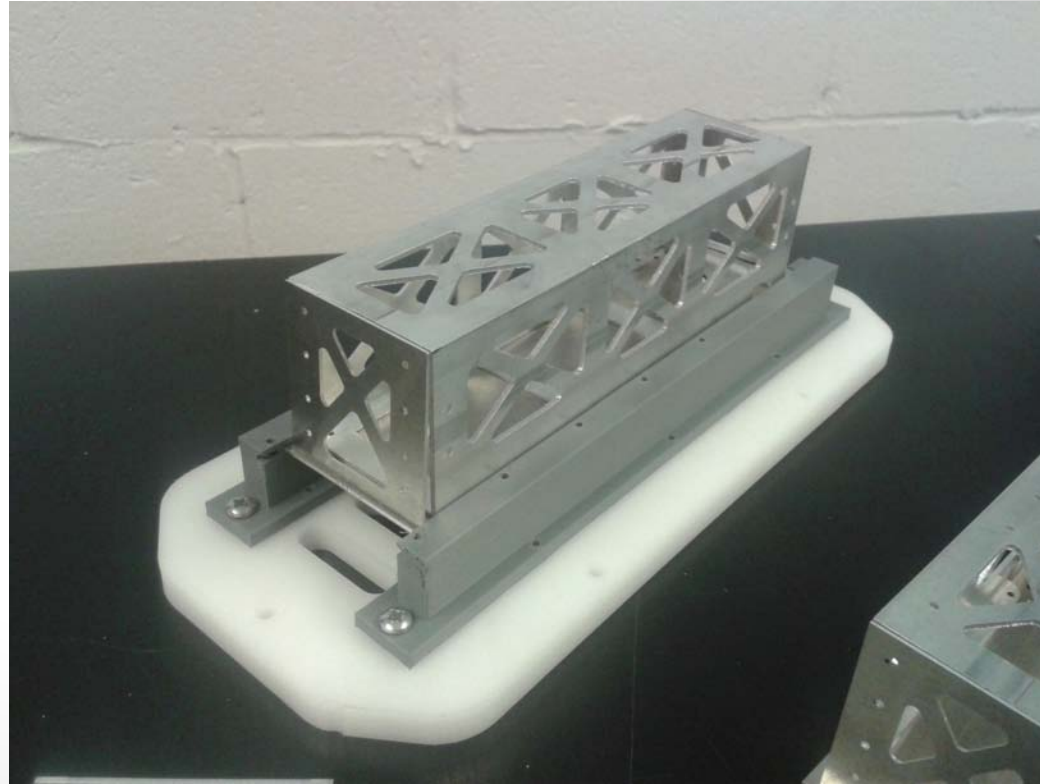
Structures

- 1p, 1.5p, 2p, 3p,
- EM/FM
- MR-Fod compatible
- Double killswitch
- Lightweight/skeletonized

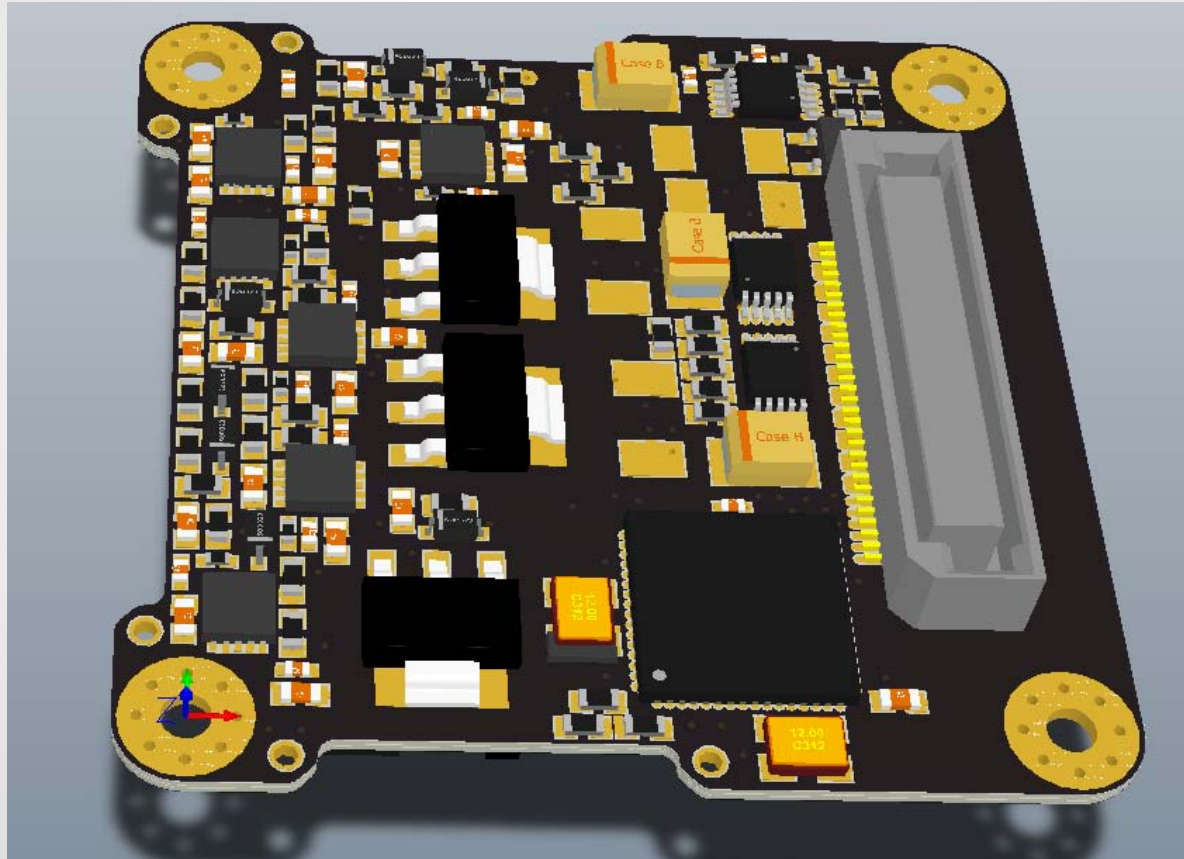


Mechanical Ground Support Equipment

- Holds satellite
- 1p upto 3p
- Test deployables
- Easy to transport



In Development - EPS



Customer base

Sold Structures, Radios and OBC
Asia/North America



Fluid & Reason LLC



NSPO

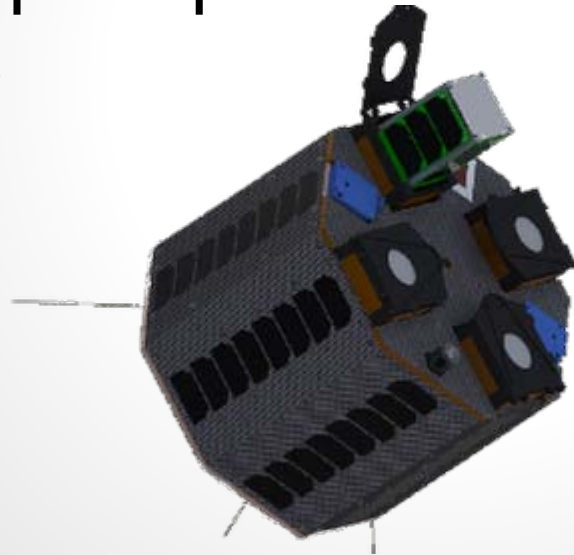
National Space Organisation (Taiwan)



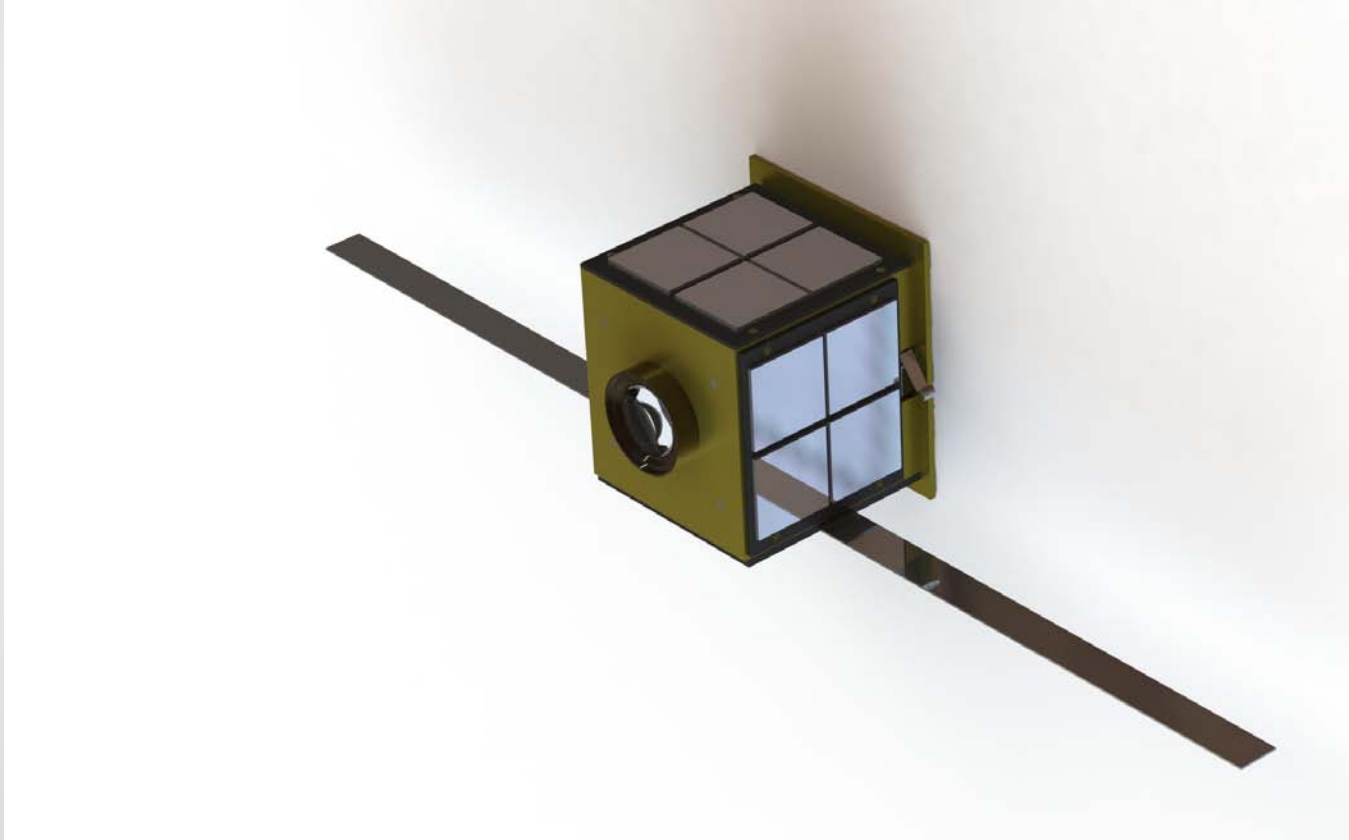
Sistema Universitario
(Puerto Rico University)

Next Launch - Unisat-7

- SSO 620km
- 15keuro per 1p
- Q2 2016
- GAUSS



Questions?



Thanks

tom@pocketqubeshop.com

@pocketqubeshop

www.pocketqubeshop.com