

Figure 1. VAMP Air Vehicle Features and Benefits

Equipment Bay

- ~30 m³ of volume for instruments and avionics
- 50 kg of instrument capacity
- Houses avionics and instruments

Electrical Power Subsystem

- Solar array (> 8 kW capability)
- Li-Ion ABSL cells
- Powers propellers, avionics and instruments

Propulsion Subsystem

- 2-blade, 96 inch diameter propellers
- Total of 90-100 lbf thrust
- Max speed ~30 m/s
- Max climb rate ~1.5 km/hr
- Provides altitude control and lift capability

Thermal Protection System

- Nextel Fabric/Pyrogel laminate
- Max temperature 1,478K
- Protects AV during entry



Control Surfaces

- Deployable elevons and rudders
- Provides pitch control and steering capabilities

AV Skin

- Teflon PFA-Al-Vectran laminate
- Protects from sulfuric acid and solar heating

