KU-Hawk

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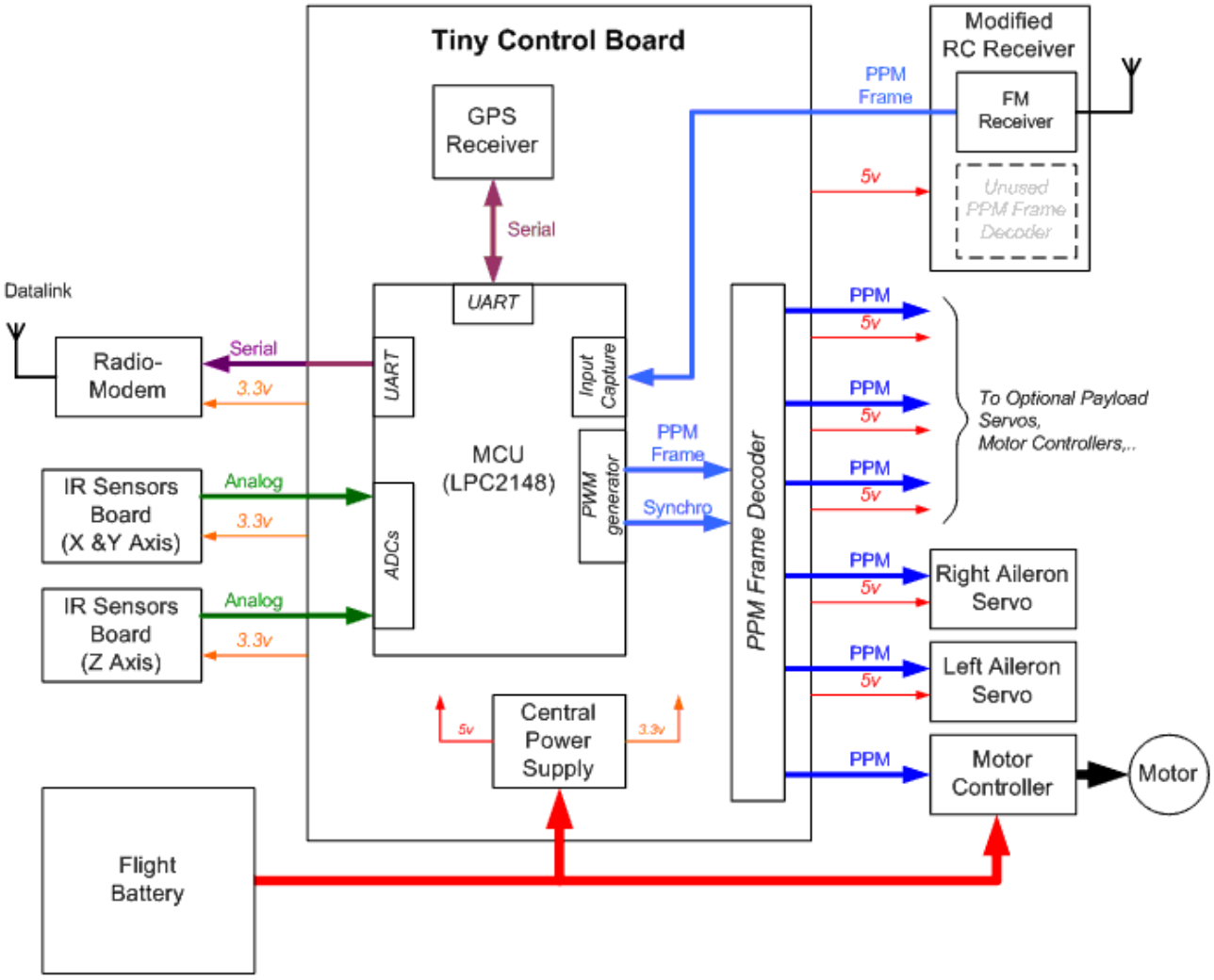
System Introduction

- **The Vehicle**
  - Name : KU-Hawk
  - Weight : 350g
  - Wingspan : 495mm
  - Endurance : 20 minutes
  - Propulsion : Brushless Motor

- **Transmission system**
  - 2.4GHz analog transmitter for the video downlink.(80mW)
  - Digital modem 868MHz for uplink and downlink telemetry and data (250mW)
  - 72MHz RC transmitter for safety RC Link. (100mW)

Autopilot System 1

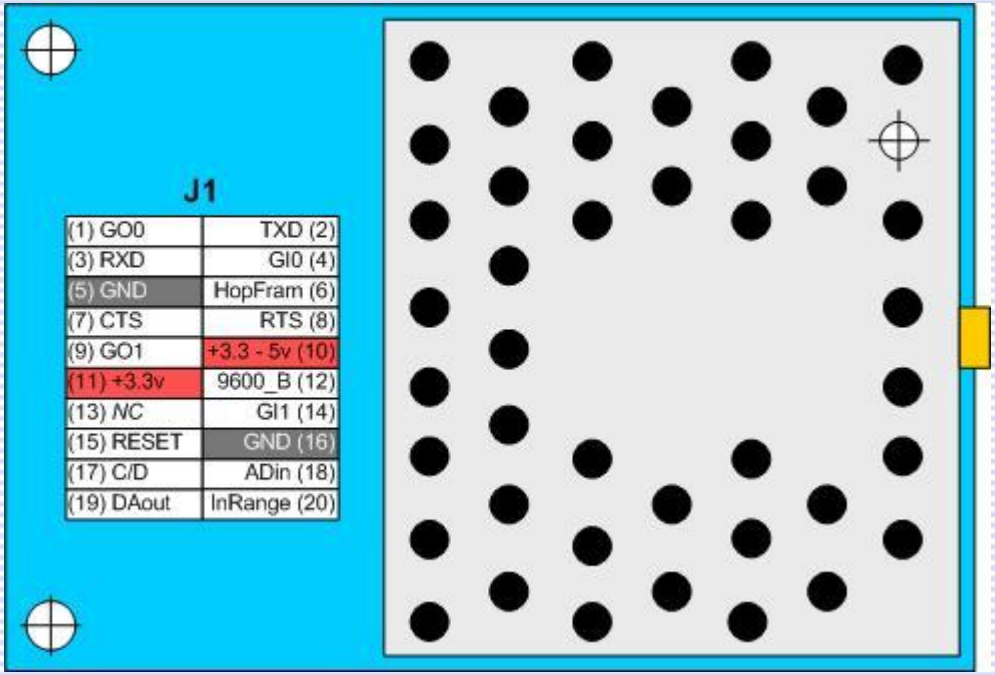


Autopilot System 2

- GPS
  - 20channels GPS receiver.
  - 1 sec position update rate
  - Protocol: NMEA 0813, 9600bps default
  - SiRF3F/LP[Low power single chip solution]
  - Battery supply pin for internal backup memory and real time clock
  - Industrial operating temperature range -30 to 85°C
  - Operating voltage 3.6 ~ 5.0V
  - Size 30.3mm x 25.9mm, Height 7.0mm, Weight 9.8grams

Autopilot System 3

RF Modem



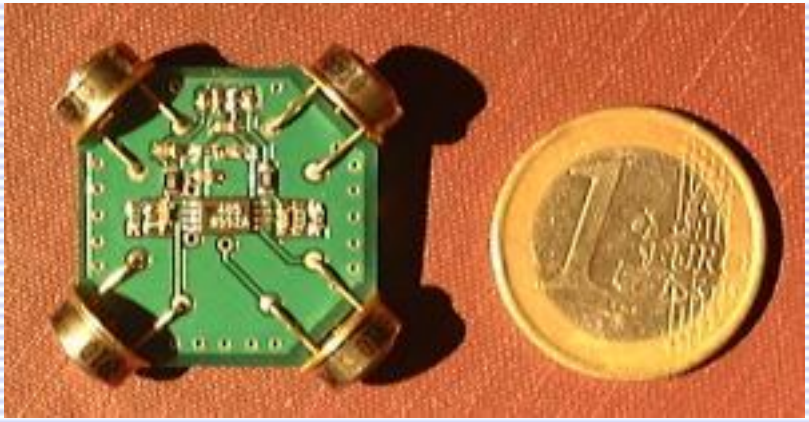
Wiring the Aerocomm AC4868 to the Tiny

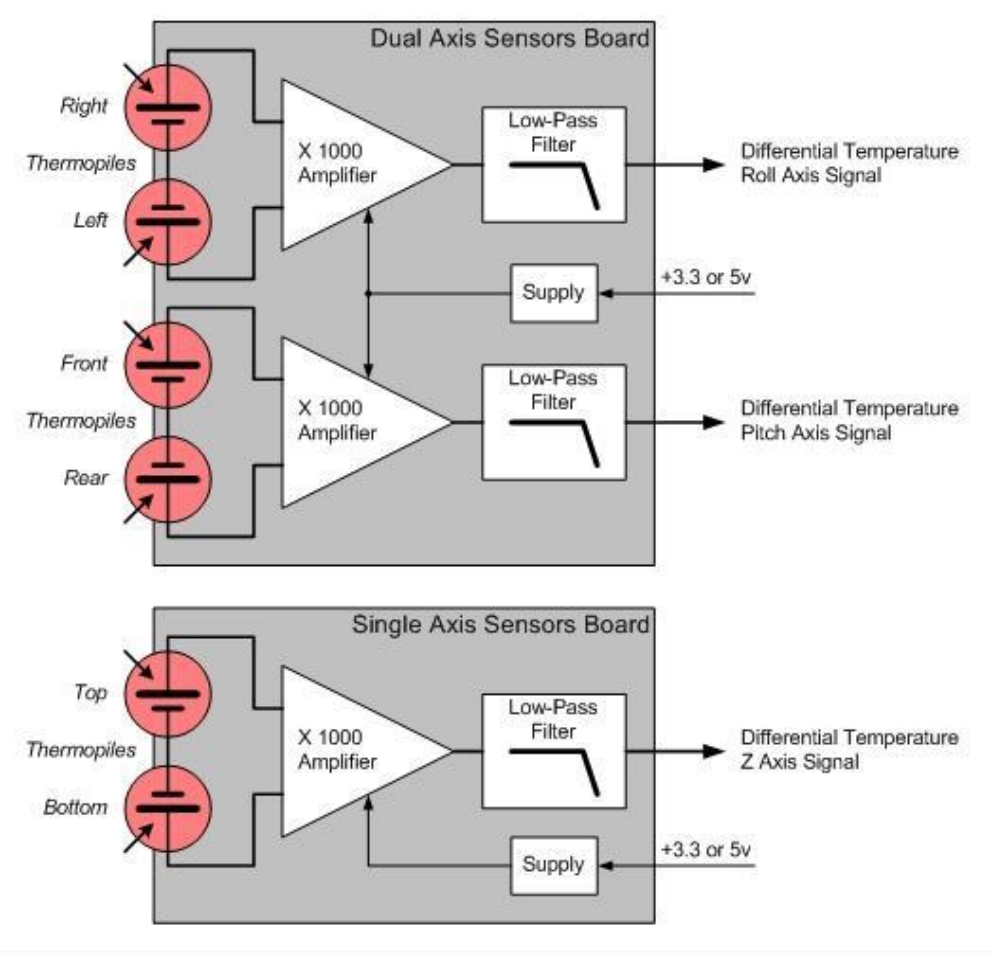
AC4868 20-pin Header	*Name*	*Color*	*Tiny Serial-1*	*Notes*
2	Tx	green	7	*(Note 1)*
3	Rx	blue	8	*(Note 1)*
5	GND	black	1	-
10+11	VCC	red	2	+3.3v
17	C/D	white	3	Low = Command High = Data

Note 1 : names are specified with respect to the AEROCOMM module

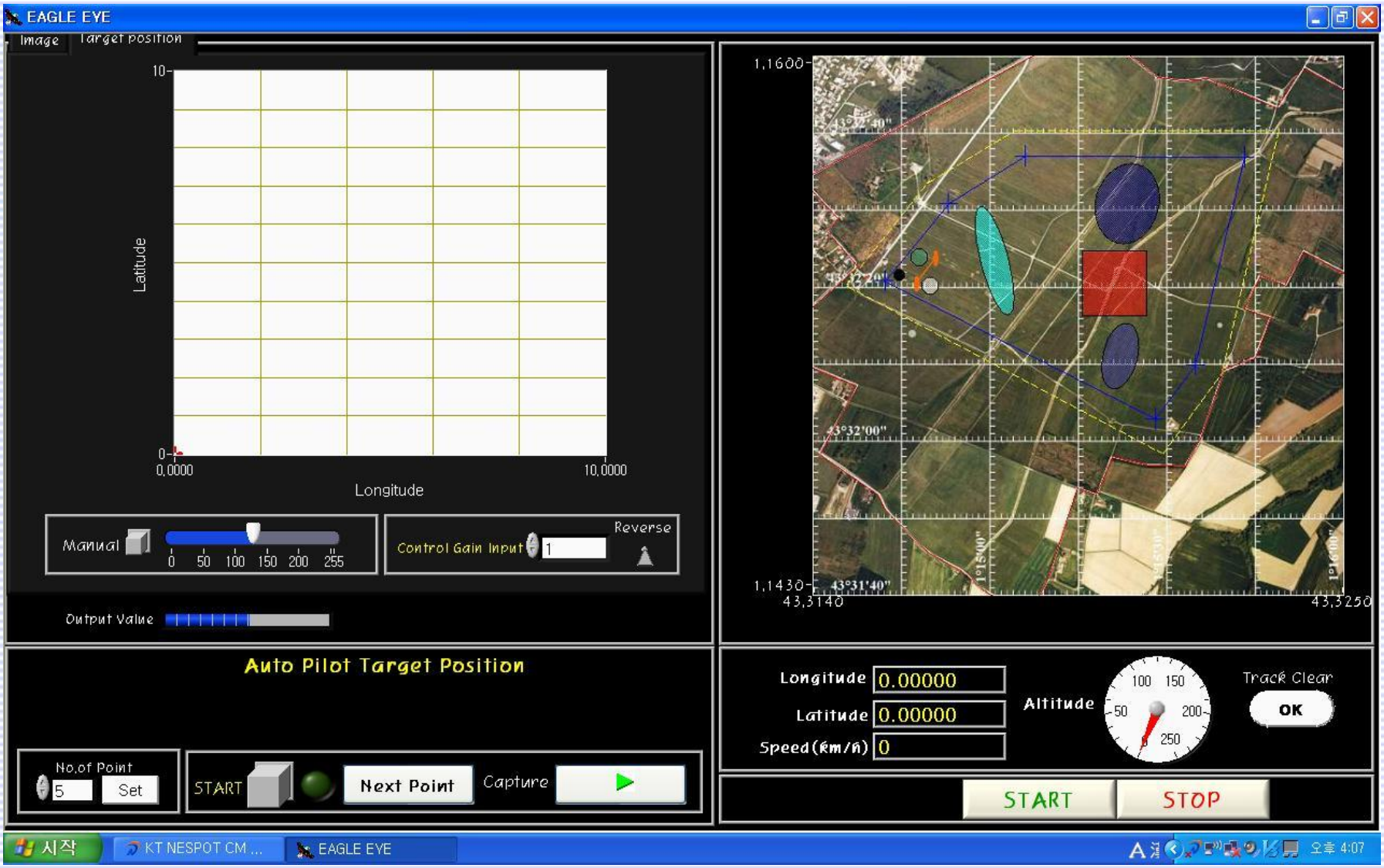
Autopilot System 4

IR Gyro





Autopilot System-GUI



Safety Treatments

- **In case of GPS downlink & autopilot uplink failure**
  - Switch to RC manual control
- **In case of video downlink failure**
  - Automatic return to the launching point
- **In case of main motor power failure**
  - Gliding within 150m from the failure point
- **In case of autopilot and manual control failure**
  - Turn off main motor power and glide within 150m

KU-Hawk Video Clip

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