

YAT-FCS201

Flight Control System

The YAT-FCS201 is the flight control system which is applied the various state-of-the-art technologies such as bus controller, fault detection, redundancy and etc.. It passes the several strict environment tests about temperature, rainfall, EMC. and is fully proven through several flight tests. Also it can be used to any unmanned vehicles and easily customizable for the various missions.

Features

- High reliable flight control system
- Environment test certification based on the MIL-STD
- Capability of dual redundancy system
- Each subsystems connected using data bus
- Controls up to 8 servo-motors
- Two separate modes for autonomous and manual
- Light weight and low power consumption
- Flight test proven
- Wide Operating Environment : -20°C ~ 50°C
- System Power : +12 to +20Vdc

Applications

- Navigation, guidance and control system for unmanned vehicles
- Control of walking robot
- Ultra-light and General Aviation Airplane
- Flight testing and vehicle testing
- General instrumentation with storage

Hardware Architecture

YAT-FCS201 consists of internal modules in ATR(Air Tracking Rack), external modules and ground equipments.

Components of the YAT-FCS201

Internal Modules	
System Case	Customized Air Tracking Rack
Digital Flight Control Computer	YAT-DFCC201
Ultra High Frequency System	YAT-UHF101
Global Positioning System	YAT-GPS101
Flight Data Recorder	YAT-CFM101
External Modules	
Air Data System	YAT-ADS201
Attitude Heading Reference System	YAT-AHRS101
Air Data Transmission	YAT-ADT101
Ground Equipments	
Mission Control System	YAT-MCS201
Auto Tracking Antenna	YAT-ATA101
RC Controller	Common type



ATR(air Tracking Rack) Specification

ATR protects the internal modules and supplies electronic power to the flight control system.

ATR Spec.	
Performance	
Update Rate (Hz)	50Hz
Operating Temperature	-20℃ ~ 70℃
Acceleration	±10g operational, 100g damage
Maximum altitude	800m or 12km(optional)
Physical	
Size(mm)	250 × 144 × 165 [W × H × D]
Weight(kg)	2.67
Electrical	
Supply voltage(Vdc)	3.3, 5
Consumption current(mA)	12 ~ 20Vdc
Interface	RS-232, RS-485, PWM, Dual-Power RC input, GPS input, UHF input



Block Diagram

