UAVOS

AP10.2 - AUTOMATIC UAV CONTROL SYSTEM (AUTOPILOT MINI VERSION)
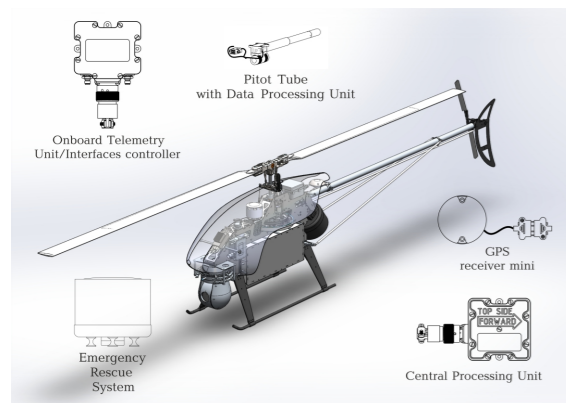
UAVOS

APPLICATION

AP10.2 system is designed to control the vehicles in automatic, semi-automatic or manual modes.
The following system configuration options are available:

- for the aircraft take-off from a hand and landing with a parachute in automatic mode
- for the aircraft take-off from the runway and landing on the runway in automatic mode
- for the helicopters take-off and landing in automatic mode
- for the aircraft lighter than the air

Payload of almost any type can be connected to and controlled through the interfaces:
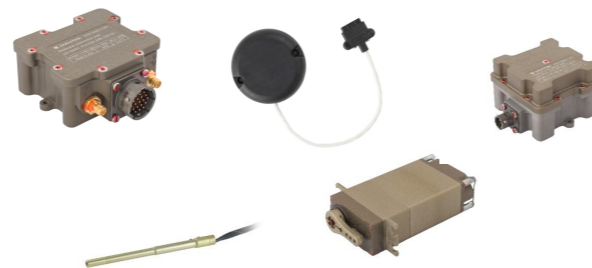- CAN
- RS-485
- RS-232
- UART
- 1-Wire

AP10.2 can be installed into unmanned vehicles with a weight of 15 kg up to 100 kg.

Main benefits:
- Low weight and dimensions (avionics - 220 g)
- reduced energy consumption

AP10.2 SYSTEM CONFIGURATION FOR VTOL:

Pitot Tube with Data Processing Unit
Onboard Telemetry Unit/Interfaces controller
GPS receiver mini
Emergency Rescue System
Central Processing Unit

Basic modules of AP10.2 system

CPUM interfaces:

· 12x servo drivers (PWM outputs)
· 12x RPM sensor inputs (hall effect sensor)
· 1-Wire interface
· UART interface
· RS-485 interface
· CAN interface
· RS-232 interface
· 4x Low-side power output (4.7A, @ 27V,68mOhm)
· 12x digital inputs (timing, level)
· 12x general purpose inputs-outputs (remappable on MCU)

Key features of the AP10.2:

- automatic control of the vehicles
- operating mechanisms control
- engine control
- semi-automatic control with automatic stabilization of a moving object
- manual control via the main 928MHz communication channel
- from ground control station
- control of the vehicles in emergency mode
- payload control

APPLICATION CASES

HELICOPTER

AIRCRAFT
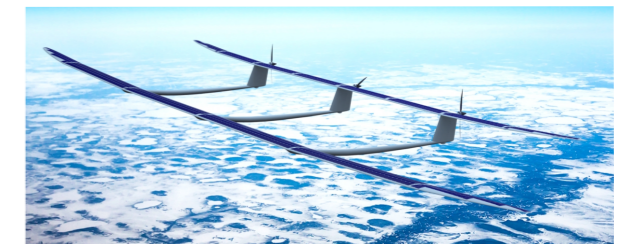
Power supply		Protection	
7-27 V	All digital logic inputs and outputs are protected	ESD protection	Power supply reverse-polarity protection

TECHNICAL SPECIFICATIONS:

Operating temperature	IP rating	Housing material	Connector
-40°C to +60°C	IP67	aluminum alloy	Harwin m300-3240696M1 Amphelon PT02E14-19P Amphelon PT02E8-4P Harwin M80-9420605

- payload feedback
- telemetrics feed and transfer between control GCU and the vehicles
- ground simulation mode – flight simulator
- onboard power control
- power stabilization
- conversion
- on board power monitoring