Technical Datasheet

TRANSITION

Aircraft

Dimensions

Wingspan	3000 mm
Length	2300 mm
Height (Empennage)	525 mm
Ground Clearance (Fuselage)	170 mm
Ground Clearance (Pusher Propeller)	65 mm

Weight

MTOW (Maximum Takeoff Weight)	18 kg
Empty Airframe	5.8 kg
RTF (Dry Weight)	11.8 kg
RTF (Including Fuel & Batteries)	16.5 kg
Max Payload	1.5 kg

Flight Performance

Stall Speed	13-15 m/s
Cruise Speed	20 m/s
VNE (Velocity Never Exceed)	30 m/s
Maximum Crosswind	10-15 m/s
Maximum Service Ceiling	13,000 ft. AMSL
Flight Time (VTOL)	Up to 3 minutes
Flight Time (Fixed Wing)	Up to 12 hours
Temperature Range	-10˚ C to +50˚ C

VTOL Propulsion

Motors	T-Motor ALTI U7
Motor KV	420 KV
ESC	T-Motor ALTI 80A Flame
Propeller	T-Motor 18x6.1 Carbon Fiber
Battery Power Supply	2 x 9000mAh 4S Lipo

Fixed Wing Propulsion

Internal Combustion Engine	Saito FG21

Command & Control | C²

Dimensions

Length	630 mm
Width	394 mm
Height	208 mm

Weight

Ground Control Station	12 kg
Volumetric Weight	14 kg (Avg) (Shipping Purposes)
Case	Pelican 1555 AIR

Hardware

Intel NUC8	
Storage (SSD)	120 GB
Display	2x ASUS 15.6" HD Monitors
HDMI Out	1x External UHD Compatible
USB	3x External USB 3.0 Ports
Bluetooth	Yes
LAN	1x External LAN port
Cooling	2x Active Cooling Fans
Pilot Controller	Futaba
Keyboard & Mouse	Yes
Main AC Power	120-220v - 19V
Battery Power	2 x 9000mAh 4S Lipo
Intelligent Power Management	Yes

Links

Groundside

Data Telemetry / Video Link: TaiSync

- AES128 or 256
- Omni Antenna, 4 Section Collinear, 6 dBi Gain
- Cylindrical Sector Antenna, 12 dBi Gain

Control Link: 868 / 915 MHz

- TBS Crossfire
- TBS Diamond Antenna Gain: 2.88dB

Airside

Data Telemetry / Video Link: TaiSync

- AES128 or 256
- 2 x Omni Antenna, Half Wave Dipole 2.15dBi Gain

Control Link: 868 / 915 MHz

- TBS Crossfire
- Custom Build 1/4 Wafe dipole antennas 0dBi Gain

Technical Datasheet

TRANSITION

Advanced Tracking Antenna Systems

Groundside

Video Link: 2.4GHz

Silvus Radio (SC4200E)
Antenna:
Tracking antenna
OSPT10 (100km) | OSPT25 (150km)

Control Link: 868/915 MHz

TBS Crossfire
TBS Diamond Antenna Gain: 2.88dB

Airside

Video Link: 2.4GHz

Silvus Radio (SC4200E) OEM
2x Omni Antenna, Half Wave Dipole 2.15 dBi

Control Link: 868/915 MHz

TBS Crossfire
Custom Build 1/4 Wafe dipole antennas 0dBi Gain

Transportation Case

Dimensions

Length	1740 mm
Width	1040 mm
Height	550 mm

Weight

Aircraft, GCS & Accessories	110 kg
Volumetric Weight	316 kg (Average) (Shipping Purposes)

Sound Levels

Ground @ 5m Distance	
Front Idle	65 dB
Left-side Idle	60 dB
Rear Idle	64 dB
Right-side Idle	61 dB
Passing Overhead @ 70m AGL	57 dB
Passing Overhead @ 100m AGL	52 dB
In VTOL Hover @ 20m AGL	70 dB
In VTOL Hover @ 1m AGL	90 dB

Please note that the maximum range from point of operation indicated above is with clear Line of Sight (LOS), in other words, there are no major obstructions between the GCS and Aircraft.

Autonomous Flight Modes

> Auto Take-off and Landing
Allowing for fully autonomous VTOL take-off and landing

> VTOL Transition
Seamless autonomous transition between multirotor and fixed-wing modes

> Payload Triggering
Auto trigger payload once or multiple times using Geo Reference, Time or Distance Interval. An override for manual triggering is also available

> Guided Mode
Point and click autonomous mission flight mode. Aircraft will fly to and loiter (circle) at the selected location and altitude

> Loiter
Circle around the point where you started the loiter, holding altitude for efficient flight

> Return to Launch (RTL)
Aircraft will return to the home (take-off) position in Cruise mode until it is within the RTL radius, after which it will transition to Q-Loiter (VTOL) mode and land. Radius and RTL altitude is configurable in Mission Planner

> Various other advanced mission planning and flight features available

v2020.2 | All information subject to change without notice

GET IN TOUCH
info@altiuas.com | www.altiuas.com | +27 44 382 7051