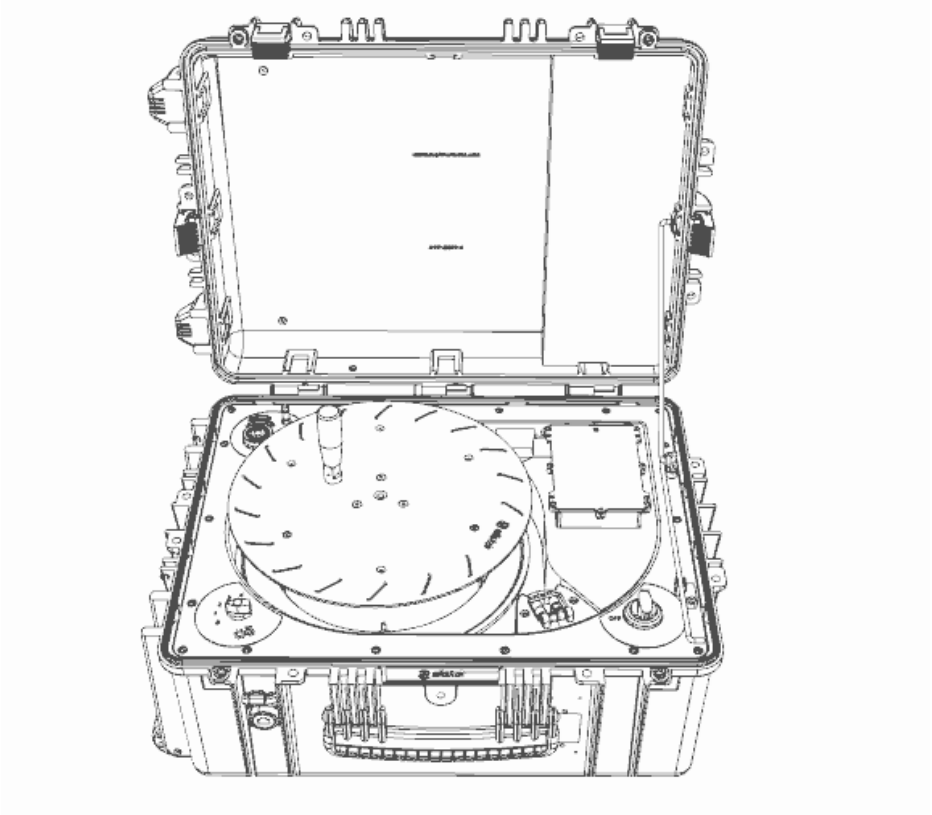
LIGH-T 4

Product Presentation

V4.1



ELISTAIR
THE TETHERED DRONE COMPANY

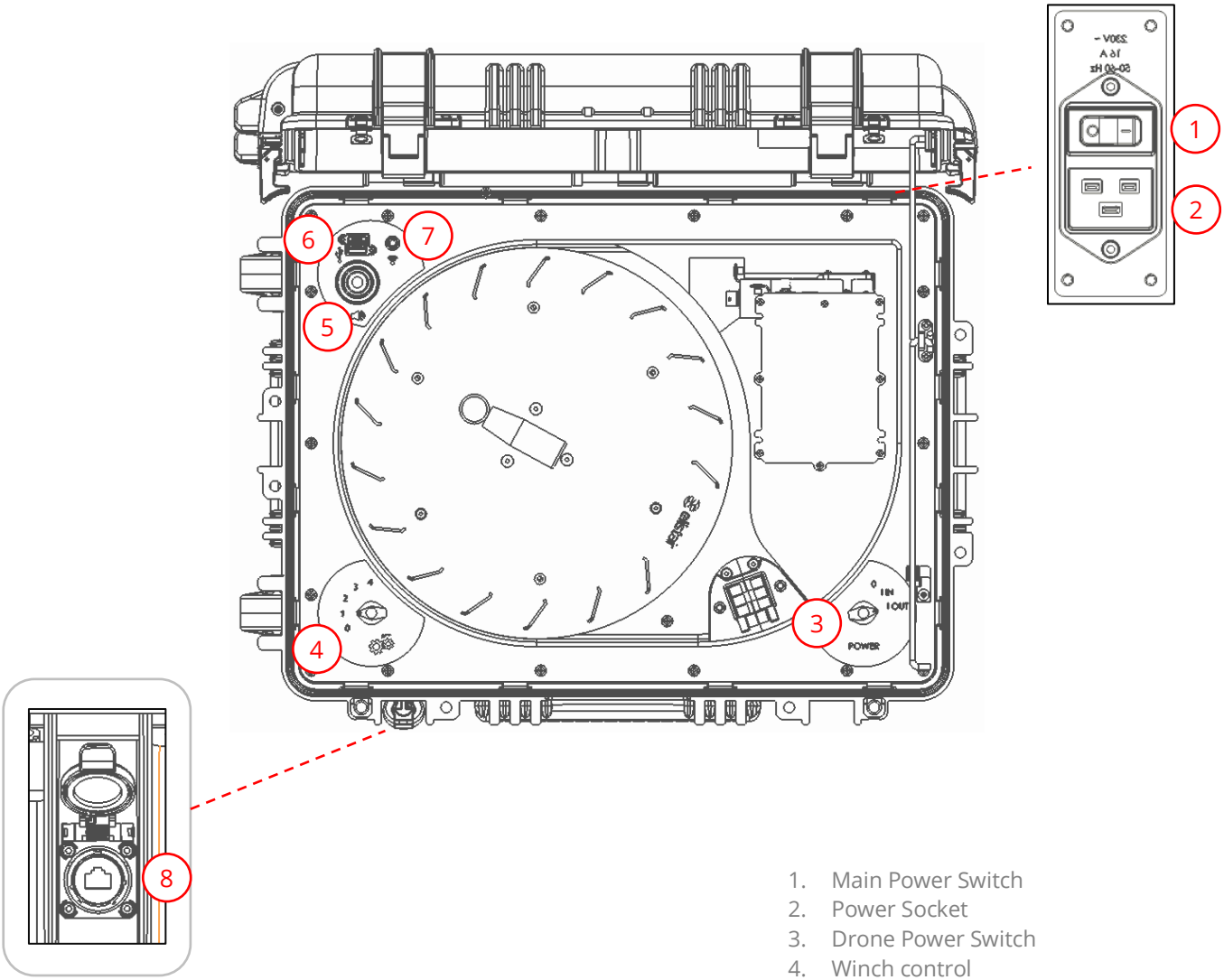
Ligh-T 4

The Elistair Ligh-T is a compact and rugged tether station for drones, offering extended flight time to drone operators. The micro-tether provides a continuous power supply, secure and high-speed data transfer and physical security against fly away. Easily transportable and deployable on various types of terrain, the Ligh-T is compact, and can be operational in minutes. Designed to meet the requirements of the NF EN 60950-1 standard and French Civil Aviation laws, the Ligh-T brings a greater legal flexibility to drone operations.

The Ligh-T 4 includes:

- Dual-Mode Winch: Automatic Tether Management system, with motorized auto-tensioning, adjustable to your mission needs. This Enables the user to switch from motorized to manual mode easily, depending on the mission.
- Data Transfer: Up to 200 Mb/s Ethernet datalink, secured and unjammable.

Non-conducting and crushproof, the Ligh-T case is tailored for demanding field operations. Its padded handle makes it easily transportable whilst the foam integrated lid protects and secures the micro-tether's integrity during transportation.



1. Main Power Switch
2. Power Socket
3. Drone Power Switch
4. Winch control
5. Buzzer
6. USB Plug
7. Wifi Antenna
8. Ethernet Plug

Ligh-T User Interfaces

Main Power Switch (1) and Power Socket (2): The power socket is located on the back of the station. It allows the station to be connected to 110-230V 50Hz. In case of an emergency, unplugging the cable will cut the power supply to the station.

Drone Power Switch (3): Power through the micro-tether needs to be activated with this switch. I IN feeds power to the system. I OUT gives power to the micro-tether. Serious injury could occur if the micro-tether is manipulated once it is switched I OUT. Only turn the power switch I OUT when the drone is connected, and you are ready to take-off.

Torque Button (4): Position 0 will stop the motor and allow the winch to turn freely. Position 1 to 3 provides increasing levels of torque which can be used to manage the micro-tether during flight. Position 4 will automatically start to reel in the tether.

Buzzer (5): The buzzer alerts the user to possible problem (power consumption, temperature, power ON, power standby).

USB Plug (6): The USB plug is used to upgrade the software of the LIGH-T station.

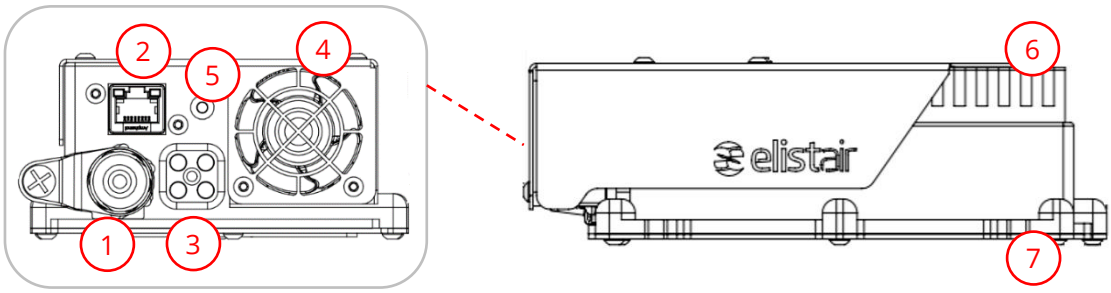
WIFI Antenna (7): The antenna sends data to a smartphone or android tablet for the T-Monitor Application.

Ethernet Plug (8): The ethernet plug can be used to send and receive data to and from the drone.

Air Module

The Ligh-T is compatible with Elistair's range of Air Modules[1], providing flexibility and compatibility with a range of commercially available drones. This manual uses the Elistair Standard Air Module Data (6S or 12S versions) as an example. For other Elistair Air Modules used with the Ligh-T, please refer to and carefully read the Air Module User Manual for complementary information.

The Air Module is a key component of the Ligh-T. Miniaturized and ruggedized to fit in standard battery compartments, this compact module delivers a continuous DC power supply to the drone, whilst also providing a failsafe feature with a safety battery system.



1. Micro-tether Connector
2. Ethernet Port
3. Drone connector (AS150 female red and XT150 female black)
   Safety Battery connector (XT90 male)
4. Air Vent
5. Air Module LED
6. Metallic Cooling Plate
7. Fixing Inserts

[1] Air Modules can be purchased separately from Elistair or official partners.

Specifications

- **Ligh-T**

Dimensions	627x475x292 mm (25x19x12 in)
Weight	20 kg (44 lbs.)
Built-in protection	Fuse
Power Supply Cable	Type E
Micro-Tether Management	Dual-mode Winch: Manual with handle or Motorized
Wi-Fi Connectivity	Protocol 802.11 b/g/n, Frequency 2.4G-2.5G (2400M-2483.5M) Encryption WEP/TKIP/AES, Security WPA/WPA2. T-Monitor Android application (WIFI)
Carriage	3 + telescopic handle and wheels
Torques	Position 1 = 1 N Position 2 = 2 N Position 3 = 4 N Position 4 = 6 N

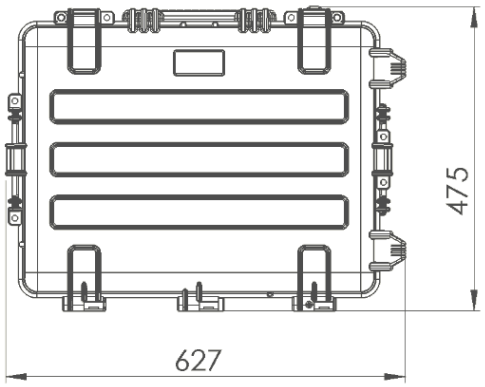
- **Micro-tether configurations**

Power Supply	**120 VAC**	**230 VAC**
Length	70 m (230 feet)	-
Linear Weight	16 g/m	-
Total Weight	1120 g	-
Tensile Strength	150 daN	-
Diameter	3,5 mm	-
Power Source Requirements	120 VAC	-
	50-60 Hz	-
	3 kW min	-
	pure sinewave inverter	-
Max continuous Power	900 W	1200 W
Peak Power 10 s	1200 W	1500 W
Peak Power 3 s	1500 W	2000 W
Recommended Safety Battery	6S 5Ah 35C	6S 8Ah 35C
Tether operating range	30 to 70 m	-
	60 to 200 ft	-
Operational temperature	-10° to 40° C	-
	(14° to 95° F)	-

Data - data speed	80Mb/s minimum (up to 200Mb/s, depends on the packet size)
Data - data connectors	Ethernet RJ45 (Air Module and Ligh-T)

- **Standard Air Module**

Dimensions	168x109x54 mm
Weight	700 g
Output Voltage	6S / 24 V (±2 V) or 12S / 48 V (±3 V)
Safety Battery Cable dimension	15 cm
Safety Battery Cable Connector	XT90 Male (to be connected to XT90 female with anti-spark)
Drone Cable dimension	15 cm
Drone Cable Connectors	AS150 RED Female, XT150 Black Female
Recommended Cabling min section	6 mm² (1200W to 1500W drone power consumption) 10 mm² (1800W drone power consumption)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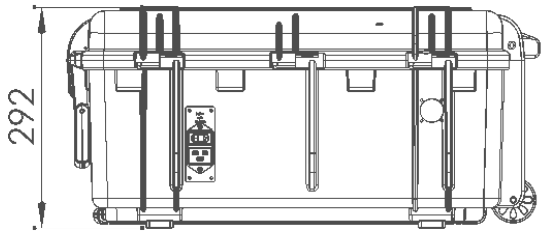
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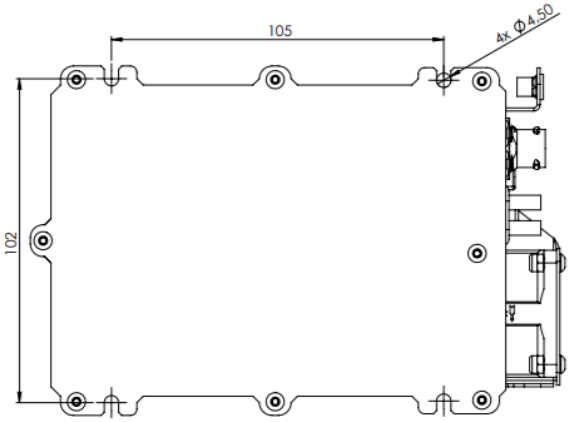
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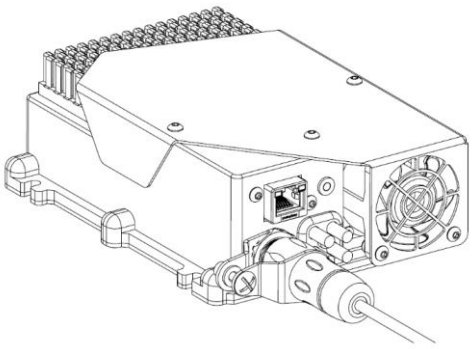

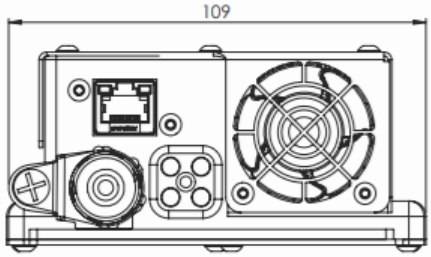
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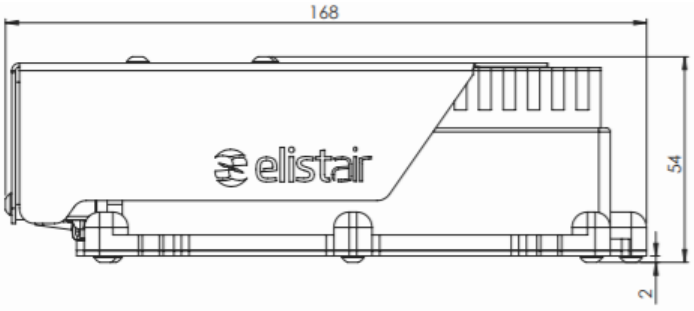
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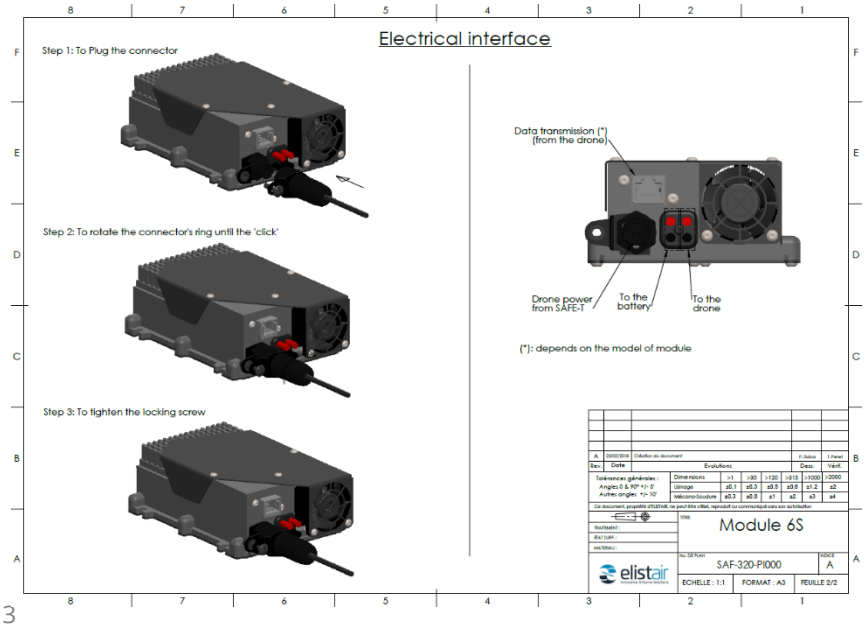
Electrical interface
Step 1: To Plug the connector
Step 2: To rotate the connector's ring until the 'click'
Step 3: To tighten the locking screw
Data transmission (*)
(from the drone)
Drone power
from SAFE-T
To the
battery
To the
drone
(*): depends on the model of module
Module 6S
SAF-320-PI000
A
ECHELLE : 1:1
FORMAT : A3
FEUILLE 2/2