DATA SHEET

PANTILT36030HWS

2 – axis Azimuth (PAN) and Altitude (TILT) control with absolute encoder

Pictures may differ from reality

FEATURES

- 2-axis movement (Azimuth and Altitude)
- High speed (15 rpm Max)
- Angle output resolution 0.01°
- Low backlash ≤ 0.07°
- Lock when power failure
- Ethernet / RS-485/ CAN interface
- Pan axis moves 360 degree continuously
- Light weight body below
- Electromangnetic Brake: Save and lock positions when power down *(both Pan and Tilt)*
- Offline Maps/ GPS/ Compass with geomagnetic maps

APPLICATIONS

PANTILT36030HWS is targeted at applications demanding high stability and accuracy with tough environmental requirements.

Typical applications include:

Antenna alignment	Camera Pan Tilt mount	Positioning and guidance systems	Leo Satellite tracking

1. INTRODUCTION

This document contains essential technical information about the PANTILT36030HWSincluding specifications, electrical properties and outline drawing

2. SPECIFICATIONS

2.1 General Specifications.

Specifications for PANTILT36030HWS	
Pan angle range	360° Continuously
Tilt angle range	160° (-80° ─ 80°). 0° position is Home position and Tilt' Jig is horizontal.
Pan max speed	75°/s - *may be customized*
Tilt max speed	60°/s - *may be customized*
Position resolution	0.01° *(both Pan and Tilt)*
Position accuracy	0.15° *(both Pan and Tilt)*
Backlash	0.07° *(both Pan and Tilt)*
Rate Moment	45 N.m *(both Pan and Tilt)*
Pick Moment	60 N.m *(both Pan and Tilt)*
Lock moment	75 N.m *(both Pan and Tilt when positioning completed)*
Load capacity	Top mount up to 30 kg
Voltage Supply	24 - 36 VDC (recommend 36V for high power)
Power consumption	Max load 200W (100W per one axis)
Interface	Ethernet/ RS-485/ Can
Ethernet Switch	2 port Giga: 1 port for control, 1 port for other device
Software control	Web Service/ Als control *(only Windows)*
Protocol	Provide API control
Slipring	Giga Ethernet/ RS485/Can
	Power: current rating 10A
Material	Aluminum
Size	H265 x D191 x W120 mm (± 5%)
Weight	8±0.5 kg (Not include pole mount and accessory)
Operating temperature	-10°C - 60°C
IP rating	IP66 (IP67 option)
Humidity	Up to 98%
Support	Salt fog (*MIL STD 810G Method 509)* Vibration: Vibration amplitude 1.19mm, frequency from 15Hz to 50 Hz in 30 minutes.

Shock: Acceleration 20g, frequency 60 to 80 times/min, impact 18 times.

2.2 Connect Maps

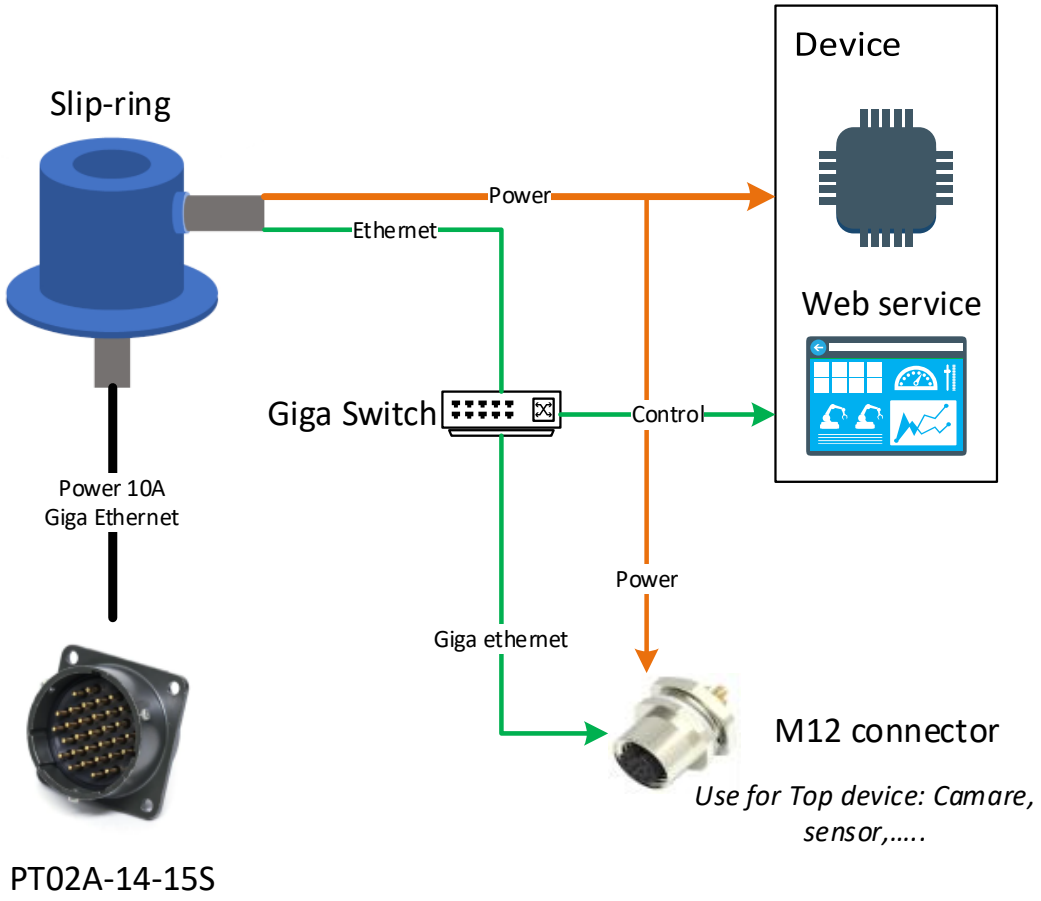
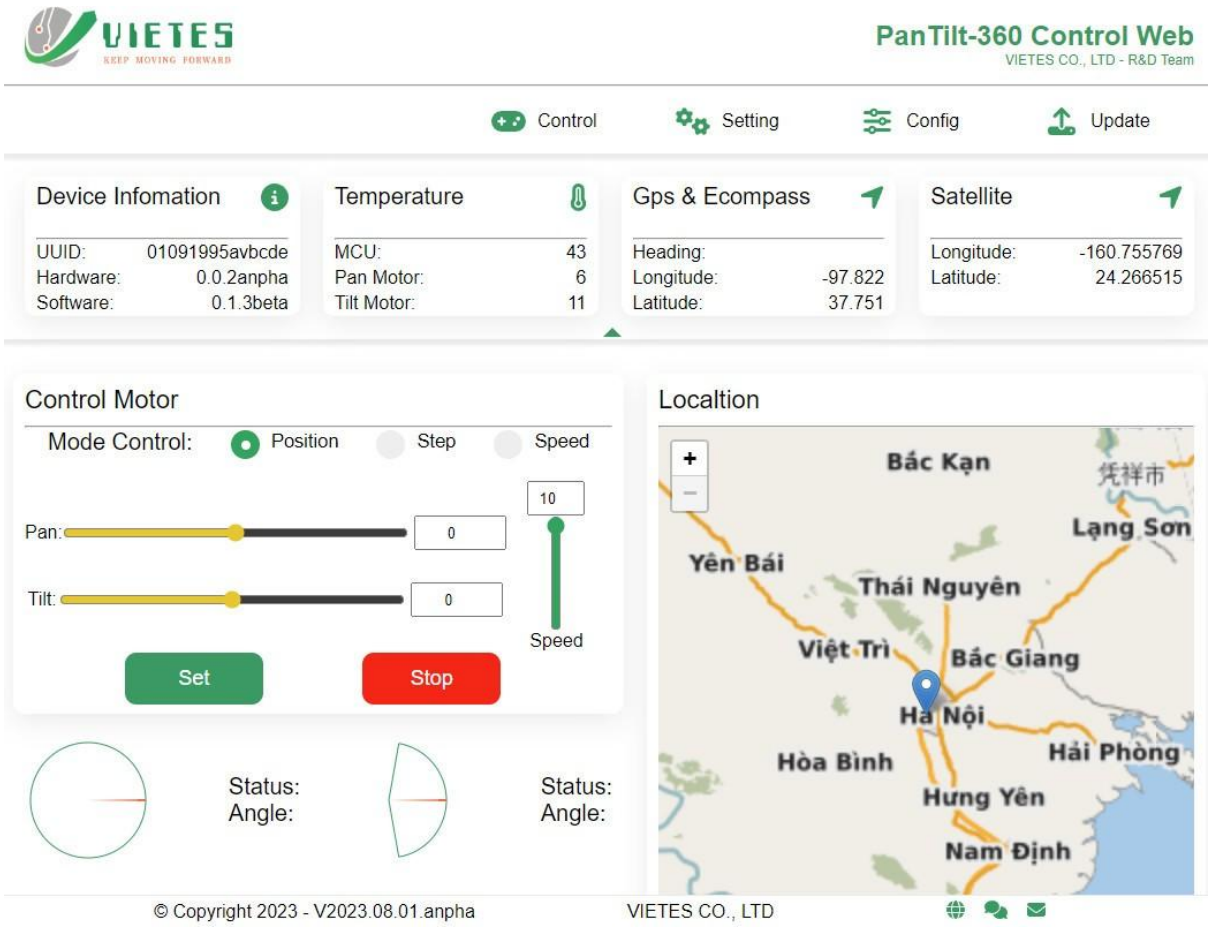
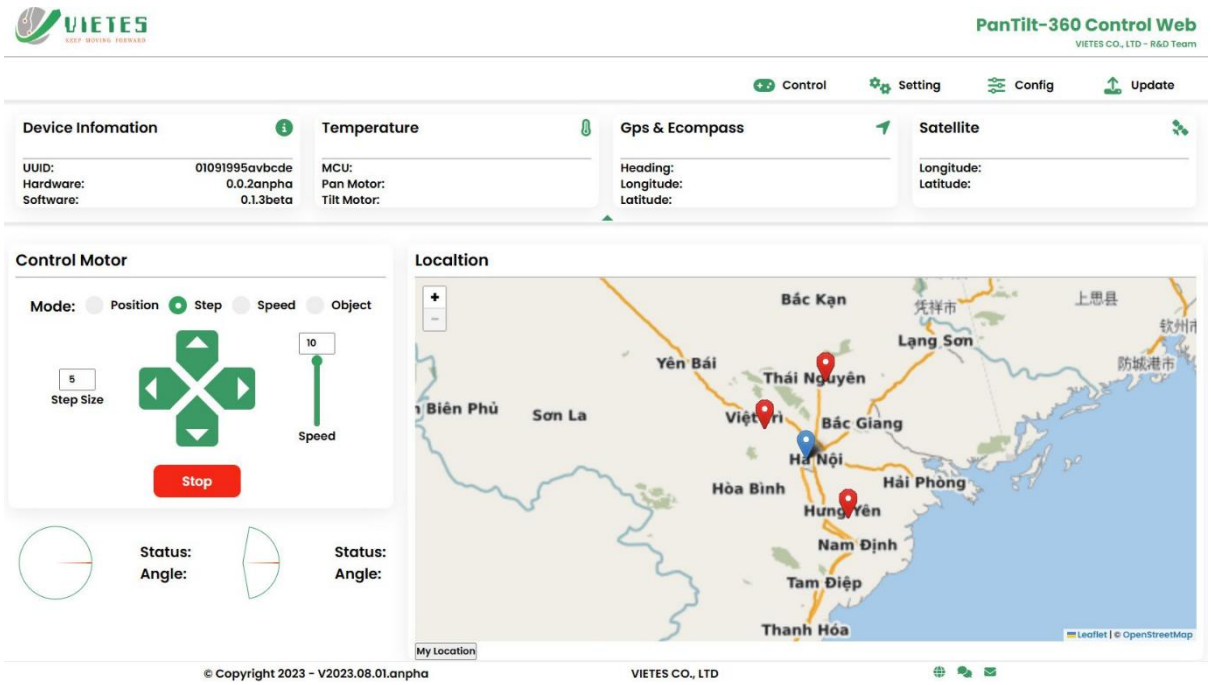


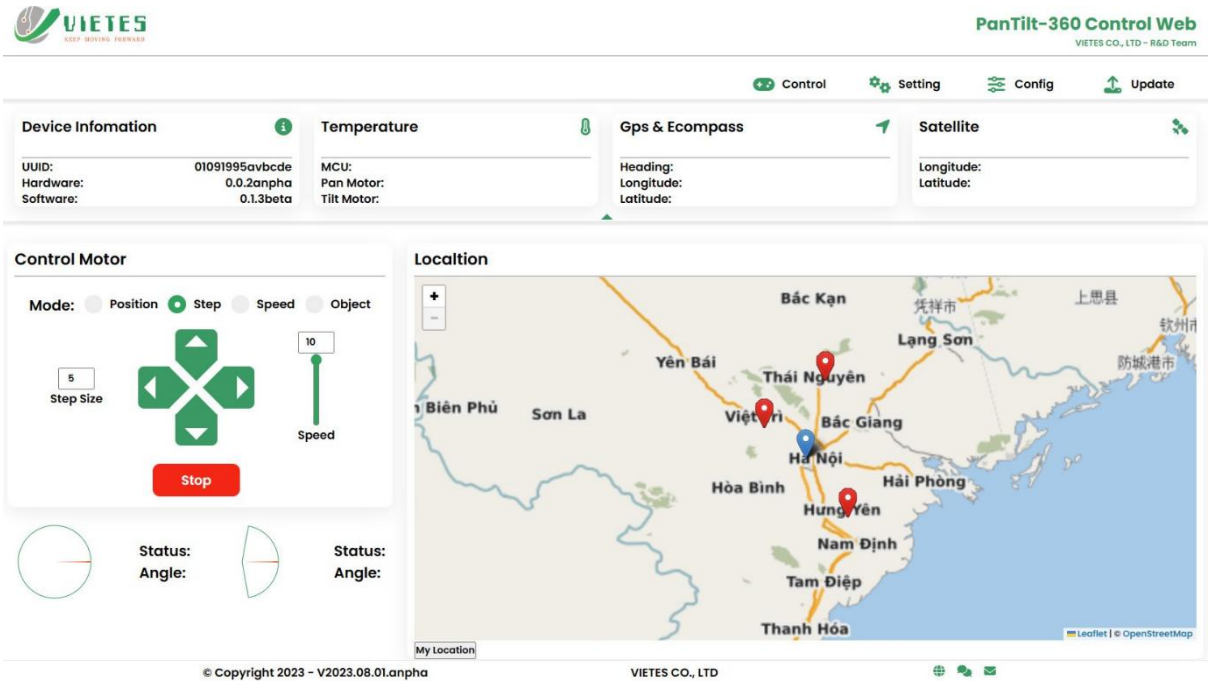
Figure 2: Process flow diagram

2.3 Web Service

(Some picture about user interface and function control.
Continue to update)






PanTilt-360 Control Web
VIETES CO., LTD - R&D Team
Control
Setting
Config
Update
Device Infomation
UUID: 01091995avbcde
Hardware: 0.0.2anpha
Software: 0.1.3beta
Temperature
MCU:
Pan Motor:
Tilt Motor:
Gps & Ecompass
Heading:
Longitude:
Latitude:
Satellite
Longitude:
Latitude:
Control Motor
Mode: Position Step Speed Object
5
Step Size
10
Speed
Stop
Status:
Angle:
Status:
Angle:
Localtion
Bắc Kạn
Lạng Sơn
Yên Bái
Thái Nguyên
Sơn La
Bắc Giang
Hà Nội
Hòa Bình
Hải Phòng
Nam Định
Tam Điệp
Thanh Hóa
My Location
Leaflet | © OpenStreetMap
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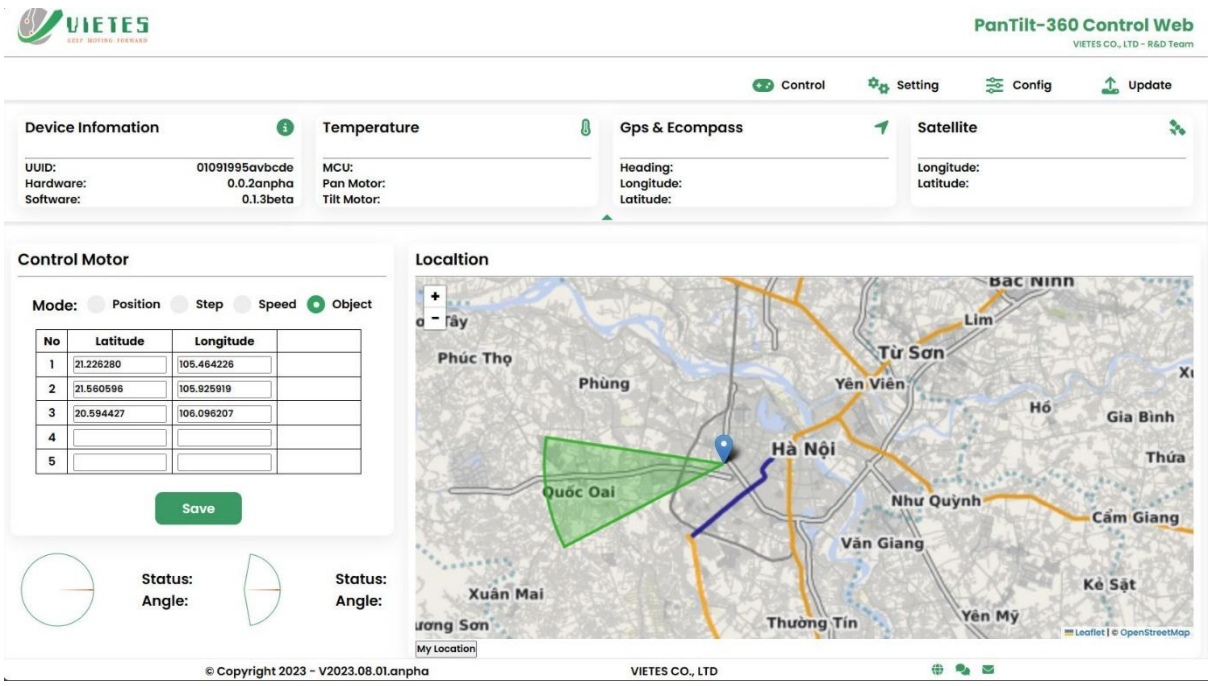
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Tilt Motor:
Gps & Ecompass
Heading:
Longitude:
Latitude:
Satellite
Longitude:
Latitude:
Control Motor
Mode: Position Step Speed Object
No Latitude Longitude
1 21.226280 105.464226
2 21.560596 105.925919
3 20.594427 106.096207
4
5
Save
Status:
Angle:
Status:
Angle:
Localtion
Phúc Thọ
Phùng
Từ Sơn
Yên Viên
Hà Nội
Quốc Oai
Như Quỳnh
Văn Giang
Xuân Mai
Thường Tín
Yên Mỹ
Gia Bình
Cẩm Giang
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My Location
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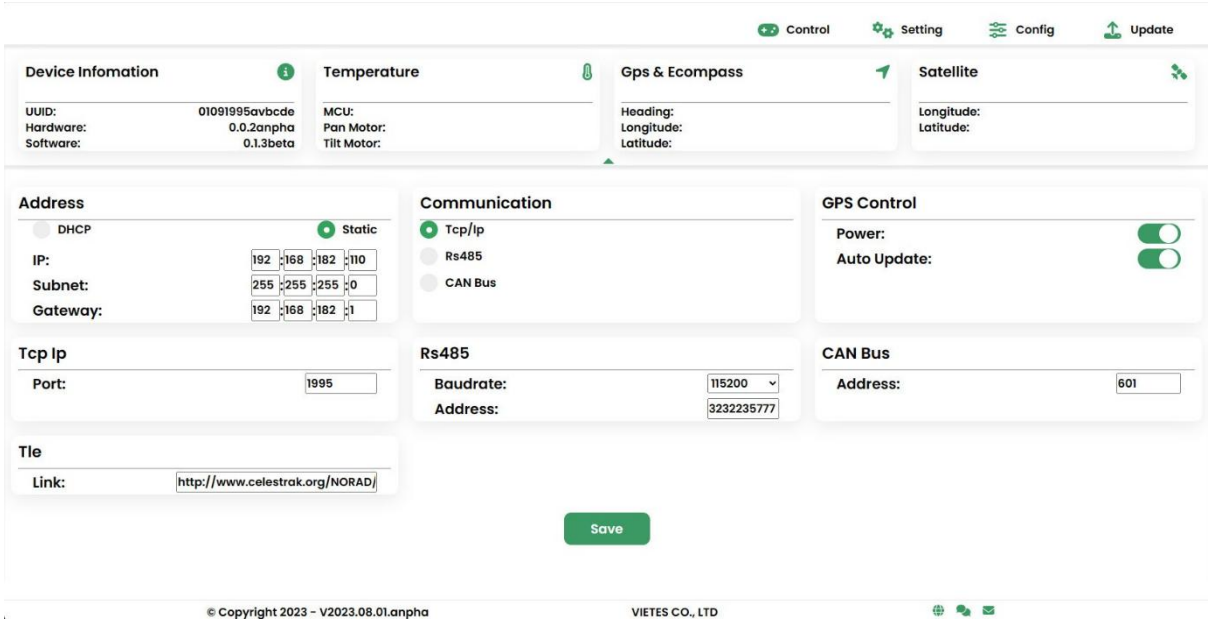
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MCU:
Pan Motor:
Tilt Motor:
Gps & Ecompass
Heading:
Longitude:
Latitude:
Satellite
Longitude:
Latitude:
Address
DHCP
Static
IP: 192 168 182 110
Subnet: 255 255 255 0
Gateway: 192 168 182 1
Communication
Tcp/Ip
Rs485
CAN Bus
GPS Control
Power:
Auto Update:
Tcp Ip
Port: 1995
Rs485
Baudrate: 115200
Address: 3232235777
CAN Bus
Address: 601
Tle
Link: http://www.celestrak.org/NORAD/
Save
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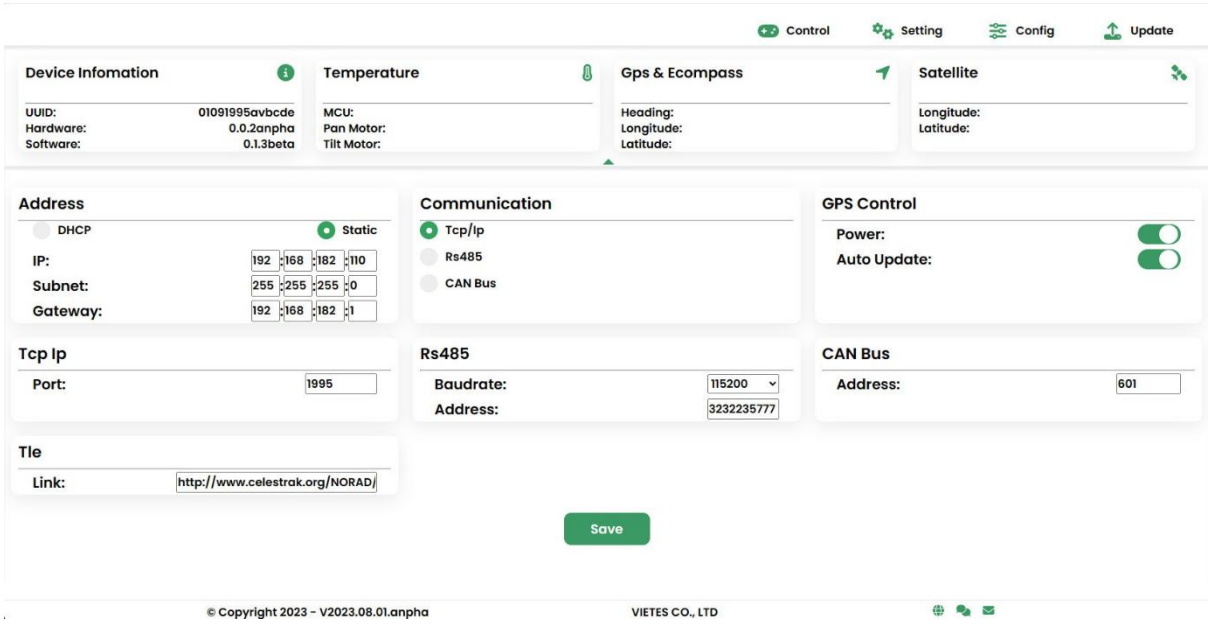
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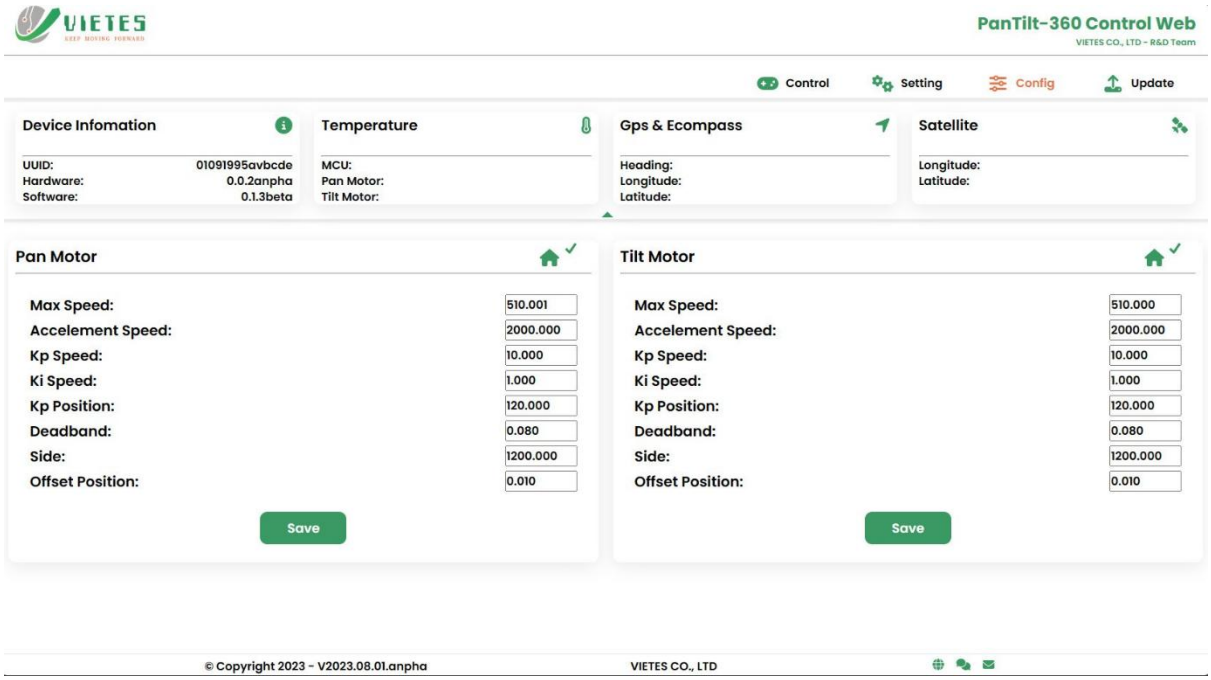
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Temperature
MCU:
Pan Motor:
Tilt Motor:
Gps & Ecompass
Heading:
Longitude:
Latitude:
Satellite
Longitude:
Latitude:
Pan Motor
Max Speed: 510.001
Accelement Speed: 2000.000
Kp Speed: 10.000
Ki Speed: 1.000
Kp Position: 120.000
Deadband: 0.080
Side: 1200.000
Offset Position: 0.010
Save
Tilt Motor
Max Speed: 510.000
Accelement Speed: 2000.000
Kp Speed: 10.000
Ki Speed: 1.000
Kp Position: 120.000
Deadband: 0.080
Side: 1200.000
Offset Position: 0.010
Save
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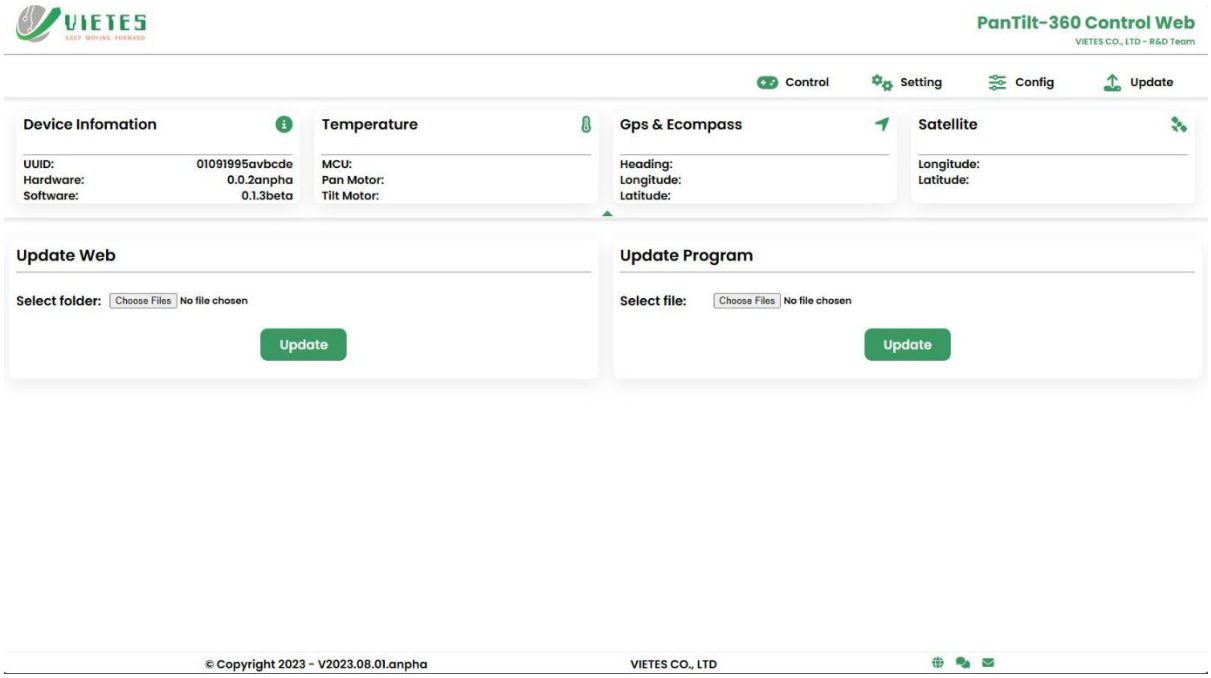
VIETES CO., LTD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Temperature
MCU:
Pan Motor:
Tilt Motor:
Gps & Ecompass
Heading:
Longitude:
Latitude:
Satellite
Longitude:
Latitude:
Update Web
Select folder: Choose Files No file chosen
Update
Update Program
Select file: Choose Files No file chosen
Update
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2.4 Product Outline Drawing

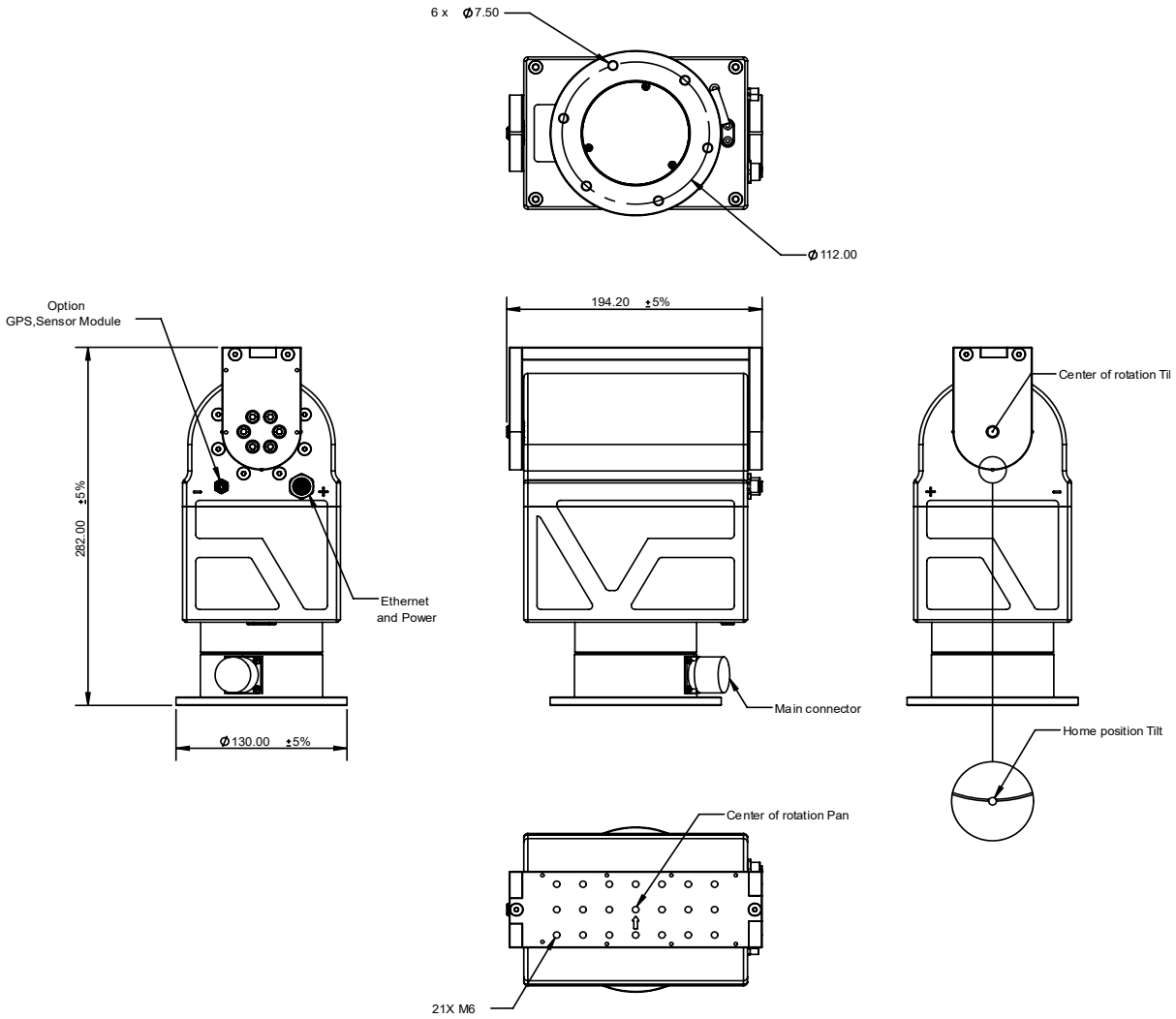

Figure 3: PANTILT36030HWS outline Drawing (Tilt and Pan positions are 0°)

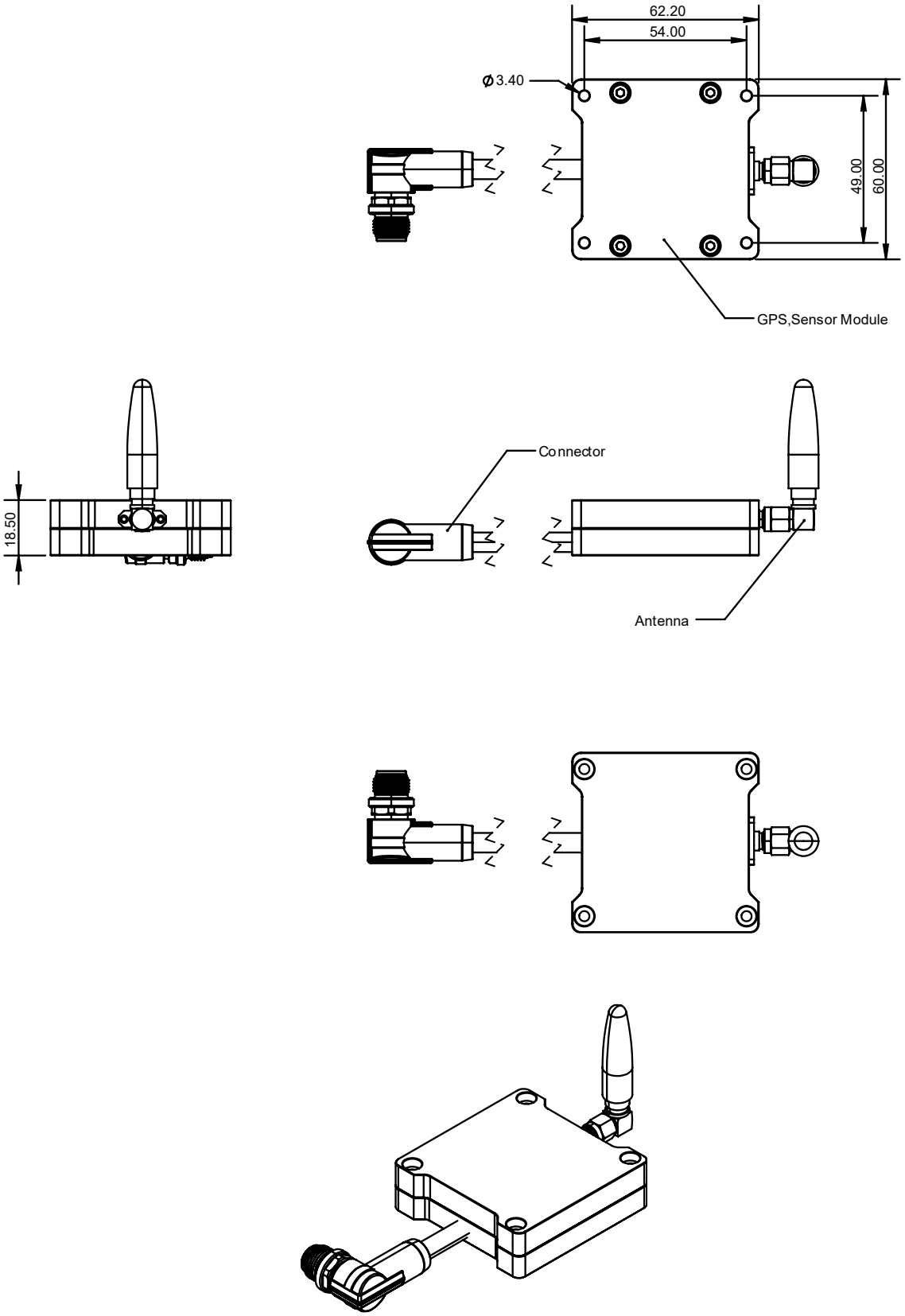

Figure 4: GPS, IMU, COMPASS module

2.5 Accessory

No.	Name	Quantity
1	Cable control connect Device to other system control (ex. Auto alignment …)	1 pcs
2	Pole mount (inox – 304)	1 pcs
3	Screws and tool	1 set
4	User guide and quick start paper	1 set

3. EDITING HISTORY

Date	Version No.	Content changes	Performer
11/2023	Ver 1.0	Create new datasheet	Jack

4. CONTACT US

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