OrbitLink Consulting

UNLOCKING THE POTENTIAL OF SPACECRAFT CONTROL AND COMMUNICATIONS

PRODUCT BRIEF / YAESU G-5500 ROTOR CONTROLLER

Network control for your Yaesu G-5500 rotator.

A controller that connects a **Yaesu G-5500** azimuth/elevation rotator to tracking software and to your network. Control it with **OrbitLink Ground Station**, our own ground station control software, or with Gpredict and other software that speaks **GS-232B or EasyComm II**. It also adds a web UI and REST API.

GS-232B + EasyComm II
Serial protocols, switchable at runtime

12-bit
MCP3208 position ADC with 3.000 V reference

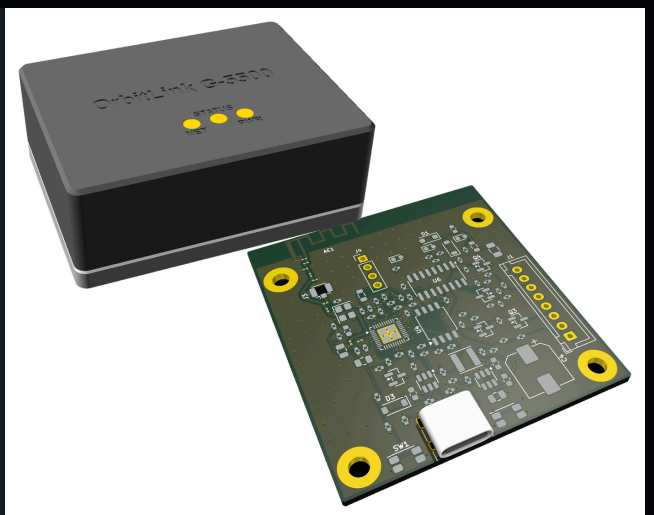
Wi-Fi
Web UI, REST and 250 ms WebSocket position updates

DIN pin 7
Powers from the rotator, USB-C as backup

50 × 55 mm
Four-layer board, M3 mounting

USB-C
Serial, console and backup power

DESIGN RENDERINGS



01

Tracking software

- Controlled from **OrbitLink Ground Station** software
- Also works with **Gpredict**, using GS-232B or EasyComm II
- Shortest-path azimuth across the **0–450°** overlap

02

Network control

- Web UI with live position, go-to and jog
- **REST API** and **WebSocket** streaming
- mDNS name and wireless firmware updates

03

Rotator safety

- **4.5 min** continuous duty limit, 2 min cooldown
- Open-collector motor switches
- Calibration and settings saved to flash

04

Position sensing

- **MCP3208** with **REF3030** reference, ferrite-fed analog rail
- Divided, filtered pot inputs
- Supply voltage on a third ADC channel

05

Power and wiring

- TVS, PTC and ferrite on the **pin 7** input
- 4–36 V **TPS560430X** buck
- JST XH harness to a panel DIN socket

06

Build

- **ESP32-C6** with PCB antenna or u.FL
- Sized for a printed enclosure, panel-access buttons

NOTICES

Figures are design values or estimates, not measurements. Available for US Government use and as evaluation kits for product developers, software developers and system integrators.

Running a G-5500 ground station?

Request a quote for your ground station, with or without OrbitLink Ground Station.

orbitlink.org →