



TRANSPORTABLE UAS GROUND STATION

The Transportable Ground Station (TGS) Series from Optimum Solutions brings a new level of flexibility, performance, and reliability to the UAS ground station market. The TGS is designed to provide UAS operators with the flexibility to operate from temporary locations with the features normally reserved for complicated fixed ground stations. The TGS integrates mission management, command control and real-time sensory imagery in a compact transportable package. True mobile and portable UAS operations are practical using the TGS Series.

The TGS Series provides full ground station functionality for UAS using the Piccolo family of autopilots from Cloud Cap Technology (CCT).

It hosts primary, secondary (optional) as well as satellite communications links for the Piccolo flight control system, runs Piccolo Command Center (PCC) or third party user interface applications, and provides the manual piloting link. The unit is capable of managing multiple airborne systems; it also provides differential GPS corrections to the piccolo avionics.

The Piccolo flight control system is a mature autopilot option used by a broad spectrum of the UAS market, supporting fixed wing and VTOL vehicles, multiple aircraft control from a single ground station, and a host of advanced flight control features and options.

Multiple video displays allow the user to monitor aircraft performance, real time mission progress, and sensor imagery at the same time. The built-in digital video recorder captures data for later analysis. The ground station may be configured with command, control and video downlinks in a variety of frequency bands to meet specific operating conditions.

The TGS' integral joystick can easily be customized to operate a variety of payload sensors including CCT's TASE and TASE Duo series. Optimum Solutions' Transportable Ground Station is well suited for UAS applications in Pipeline and Power Line Surveillance, Homeland Security, Law Enforcement, and Fire Protection.

FEATURES

- High Performance Transportable UAS Ground Station
- Dual Screen Computing
- Includes mission management system, command & control link, and payload video link
- Multiple Video displays for mission management, GIS, video downlink
- Integral Sensor Control Joystick
- Multiple Frequency band options
- Built-in Digital Video Recorder
- Supports Pacific Microwave Research Tracking Antenna system for long-range operations
- Rugged Packaging
- AC or DC Powered



OPTIMUM SOLUTIONS

ENGINEERING CONSULTING FIRM

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PICCOLO INTERFACES:

- Link 1 options include 900MHz ISM, 2.4GHz ISM, UHF Discrete. N style antenna connection, RS232 Comms connection
- Optional 2 Comms link available. N style antenna connection, RS232 Comms connection
- Iridium SATCOM modem integration. N style antenna connection, RS232 Comms connection
- Manual flight control through Futaba trainer port interface to TGS.

ELECTRICAL:

- Frequency Range
 - L-Band– 1.7 to 1.9 GHz
 - S-Band – 2.2 to 2.5 GHz
 - C-Band – 4.4 to 5.0 GHz
- Antenna (s) – Type 'N' female connectors
- Tuning Control –Channelized front panel recording
- Integral Digital Video Recorder
- Transmission Format: COFDM Digital or FM analog

- Optional Rechargeable Battery – 3 hrs. typical
- Digital Video Output – USB
- External Network -RJ-45
- Analog Video Output – BNC
- Remote Control – 100BaseT Ethernet
- Video Standard – NTSC or PAL
- Dual Touch Screen Monitors

ENVIRONMENTAL:

- Operating temperature: -10 to +65 °C
- Relative humidity: 0 to 95%, non-condensing

MECHANICAL:

- Case is transportable by conventional means
- Dimensions – 9" H x 16" W x 48" L inches
- Internal Temperature Management

- Housing – injection molded resin case w/wheels
- Weight ~ 70 lbs.
- Power Input – IEC Connector

POWER:

- Operating voltage: +12Vdc or 110/220 Vac
- Consumption: ~100 W

OPTIONS:

- Antennas: Directional and non-directional antennas available

ACCESSORIES:

- Rechargeable Battery
- Spare rechargeable Lithium-Ion battery

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