



(202) 827-6301 / SALES@AISINTEROP.COM
www.AISINTEROP.com
Bethesda, MD. Sunrise, FL. Berlin, Germany

AGILE CAGE: 7WTH2
AGILE DUNS: 080324701
NAICS CODE: 334220
GSA MAS CONTRACT NUMBER: 47QCA19D0052

Drone over Cellular

The AGILE Drone over cellular framework facilitates remote operation of unmanned vehicles and enables real-time data transmission. It leverages open-source autopilot software and incorporates bonded, multi-channel cellular 5G/LTE technology.



Components

Ground Control Station (GCS)

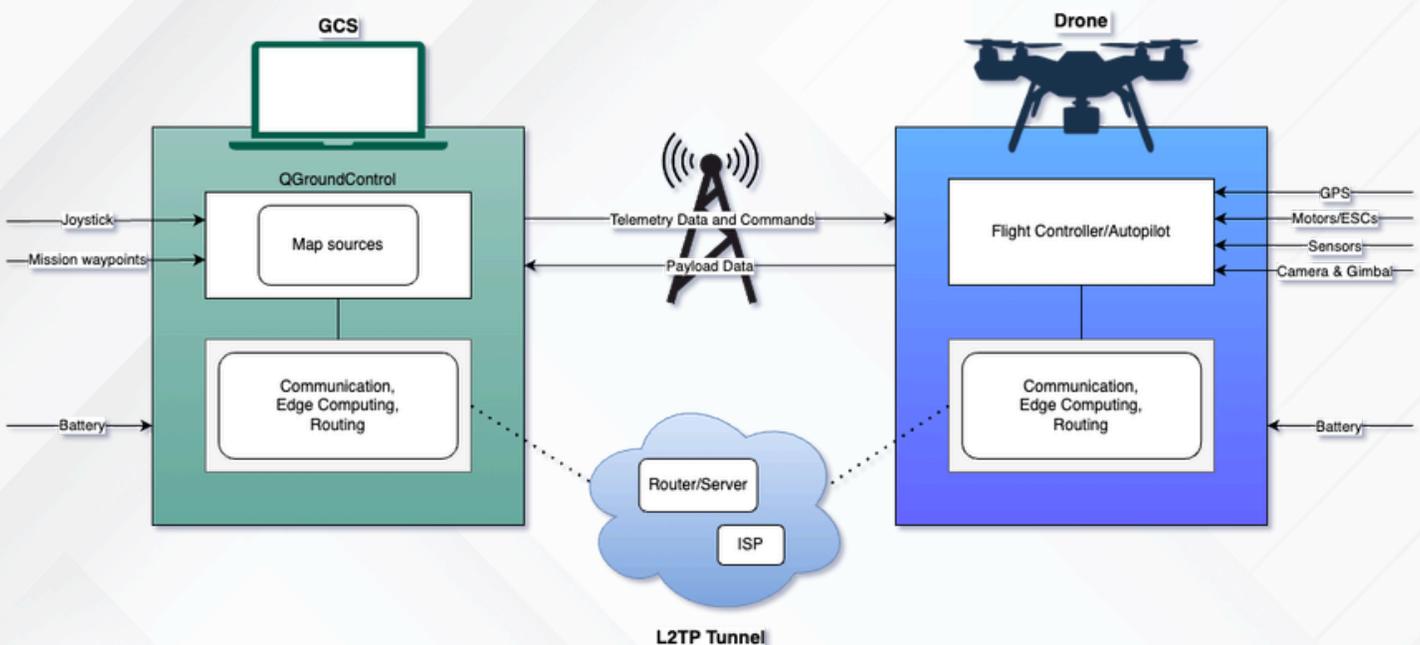
A durable, transportable GCS featuring an integrated 5G/LTE cellular gateway, an internal power source, and an Ethernet connection for straightforward laptop setup. After activation, it automatically links to a cellular network, providing a reliable internet connection for the control/monitoring application on the laptop. This link allows the GCS to operate with the drone from considerable distances, surpassing the limitations of conventional radio systems.

Autopilot

The drone incorporates a sophisticated, high-performance autopilot system, providing precise control and enabling advanced flight operations. It is compatible with various airframe types, including multi-rotor and fixed-wing designs. Furthermore, integration with the onboard cellular gateway facilitates real-time communication and control over extended operational ranges.

Communications Kit

The onboard CommsKit enables seamless, secure communication between the drone and GCS via a dedicated tunnel. This tunnel establishes a direct, secure link, allowing instant interaction between the drone and GCS upon cellular connection.



Features

Operational Resilience

The system incorporates failover mechanisms and return-to-home presets, guaranteeing secure drone base return in the event of connectivity disruptions or emergencies. Furthermore, a secure tunnel established between the Ground Control Station (GCS) and the drone ensures a stable communication link, facilitating reliable control within challenging environments or during critical operations.

Flexible Chassis & Payload Options

The system's components are adaptable to various chassis configurations, including multi-rotor and fixed-wing, and payload options. This flexibility allows users to select the optimal platform for their mission requirements. The modular design ensures easy integration, providing versatility and scalability for diverse applications. For instance, we can achieve longer airborne loiter times by allocating more payload capacity to additional batteries.

Secure LTE Connectivity & Extended Operational Range

The drone system utilizes 5G/LTE connectivity to achieve extended operational ranges, thereby exceeding the limitations of conventional radio control systems. Integrated 5G/LTE gateways and a secure tunnel between the drone and the ground control station (GCS) guarantee robust and uninterrupted communication. Furthermore, this system supports multicast functionality, allowing for multiple ground control stations or operators to receive real-time data streams concurrently.

Multicast Communication

This system is designed to support multicast functionality, allowing for the simultaneous reception of real-time data streams by multiple ground control stations or operators.

User-Friendly

The Ground Control Station (GCS), contained within a durable Pelican case, features an Ethernet port to facilitate laptop connectivity. We recommend the installation of a single, user-friendly application for operators to monitor and control the drone.





The Basics

- 2 LTE 5G Global FR1 channels / 2 SIM slots
- GPS tracking embedded
- Open-source autopilot
- Hardware-agnostic
- May be deployed singularly or in a peer-to-peer mesh with other AGILE CORE systems
- CORE Control 2 adds virtual SIM management, centralizing SIM cards while allocating the correct SIM cards per location of each CORE system

Applications

- Infrastructure monitoring for utilities oil & gas
- Video Surveillance and Security
- Agricultural Monitoring
- Disaster Response
- Search & Rescue

Application

1 compute processor with onboard CPU minimum spec processing capability quad CORE 1.8GHz clock speed processor 4GB RAM. Operating system FEDRAMP Ubuntu 22.04 LTS. Proprietary software to operate cellular connectivity, routing, SD WAN and other communications functions. Supports 2-3 cellular radios

About AGILE

Headquartered in the United States, AGILE is a global innovator and a qualified small business, providing superior capabilities, secure communications, interoperability, upgradability, and ruggedized design for continuous use, adapting to rapidly evolving communication technologies across diverse environments.

AGILE provides an extensive array of voice, messaging, and data solutions for both 4G and 5G networks, incorporating advanced encryption technologies. Our offerings encompass comprehensive training and adaptable designs, enabling operators to concentrate on their duties without equipment-related concerns. We are specialists in mobile, 5G/LTE, and interoperability solutions, with a particular emphasis on secure operation within untrusted networks. Leveraging over a decade of experience, we present American-designed software and hardware solutions for cellular devices, capable of addressing the most challenging applications.

