

## ETHERNET VIA TELEMETRY SYSTEM



### Put Your Test Article on Your Ground Station LAN

Redefine the "Local" in Local Area Network. With the Quasonix Ethernet Via Telemetry (EVTM) system, your test article can be on your ground station LAN, just like any other computer or Ethernet appliance. With an Ethernet switch in your test article, you can connect cameras, Voice over IP, computers, etc. to your network on the ground.

- **High Speed Ethernet Traffic Over Telemetry Links**

*Ethernet telemetry data rates up to 40 Mbps using standard Ethernet protocols\*\**

- **Enables Ethernet Data Transmission for a Wide Variety of Applications**

*Multimedia streaming, data source selection, data source isolation and forwarding, source rate and coding control in reaction to channel impairments, network extension, Voice over IP (VoIP), COTS based Ethernet products such as Industrial Control Sensor Devices and data recorders*

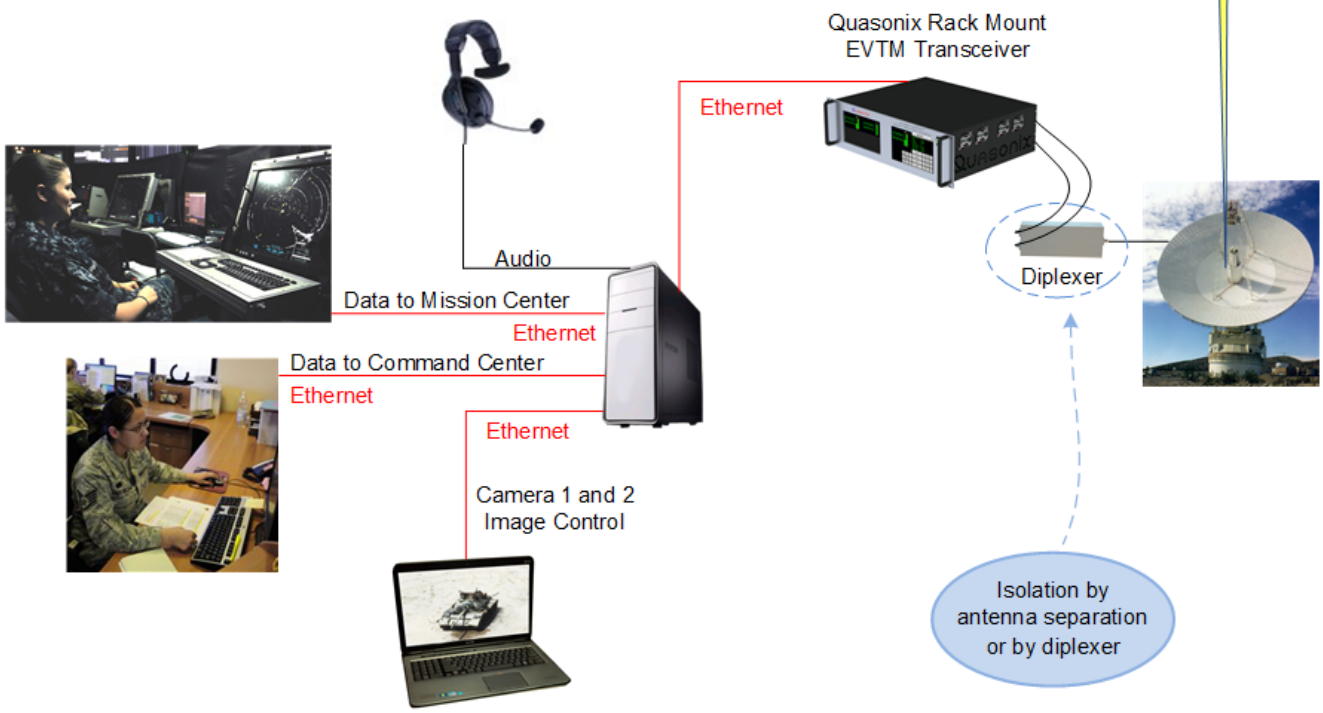
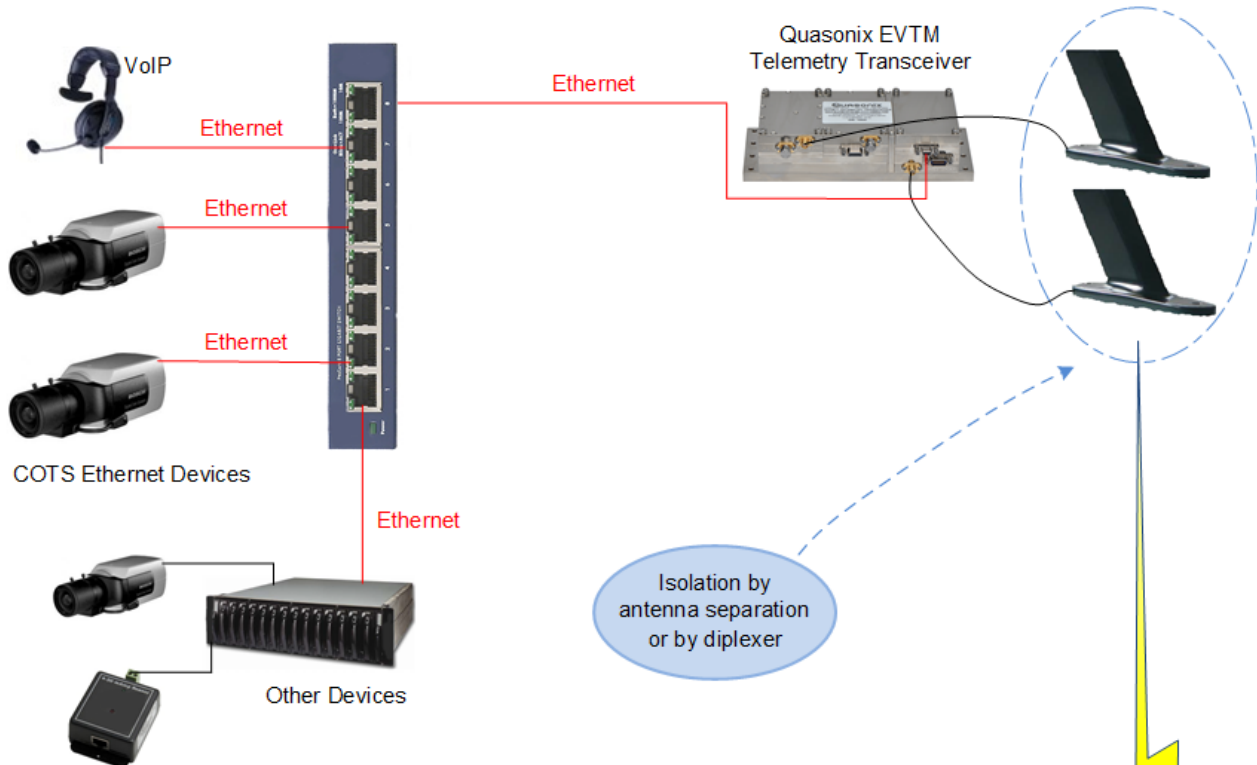
- **Complete Telemetry System**

*An Ethernet solution package that includes an integrated Quasonix TIMTER™ Transmitter and a Quasonix Compact RDMS™ Telemetry Receiver for the downlink. The uplink includes a TIMTER™ Transmitter and a Quasonix Rack Mount RDMS™ Telemetry Receiver*

- **Supports all TCP/IP Packet Types**

*Streaming UDP packets, TCP connections, ICMP and SNMP messages are all passed over the air. Connection-oriented traffic requires a bidirectional link.*

**ETHERNET VIA TELEMETRY AIRBORNE EXAMPLE WITH OPTIONAL TWO-WAY UPLINK**



### Advantages of the Quasonix Ethernet Via Telemetry Solution:

- **Network Extension**  
Puts your test article on the same network as your ground equipment
- **Simple Interface Exposed to the End User**
  - Packets appearing on the Quasonix transmitter's Ethernet port are sent over the air
  - The same Ethernet packets are available at the receiver's Ethernet port
- **Optional COTS Devices Provide Tremendous Additional Capability**
  - An industrial computer module between the data sources and the transmitter allows sophisticated control of the downlink traffic
  - Ethernet enabled data recorders provide an interface for legacy sensors
- **Data Rates Up to 40 Mbps**  
Fixed in advance for unidirectional links or controllable in flight with optional uplink

### Possible applications include:

- **Source Control/Selection**  
Devices can be optionally enabled, disabled, and controlled either directly for Ethernet devices or via an Ethernet-enabled controller for devices without an Ethernet interface
- **Encryption**  
The same security and encryption protocols available on the Internet become available over the telemetry link
- **Transmitter Power Cycling Controls**  
For power-sensitive application, the ground controller can send messages to an air Ethernet-enabled controller to power the transmitter only when downlink data is required
- **Network Extension**  
Isolated networks can be bridged over any terrain
- **Diagnostics and Health Monitoring**
  - The same status and error messages that maintain the Internet are available for monitoring and administration of the telemetry network
  - The Ground controller can monitor for transmitted network messages indicating link and link loss
  - For low security operations, GPS location data can be easily inserted into the downlink network traffic
  - Alarm, fault, and status messages can be multiplexed into the downlink stream using standard protocols (such as ICMP)
- **Data Isolation and Forwarding**  
Source data can be partitioned by its network destination address permitting the ground station to forward traffic only to the appropriate destination
- **Control of COTS Camera Parameters Through the Ethernet Uplink**
  - Video resolution
  - Video compression
  - Camera direction

*Contact Quasonix for more details*

## QUASONIX EVTM AIRBORNE HARDWARE

### Airborne Transceiver

- Available in any supported band (L, S, or C)
- Transmit power up to 25 W
- Completely integrated—one Ethernet connection for both directions



EVTM Telemetry Transceiver

### Ethernet Enabled Receiver

- Built on proven RDMS receiver hardware
- Ethernet or serial data in same package



Ethernet Enabled RDMS™  
Compact Telemetry Receiver

### Ethernet Enabled Transmitter

- Available for most TIMTER transmitter models
- Ethernet or serial data in same package

Ethernet Enabled TIMTER™ Transmitter



### Airborne Encoder/Decoder

- Add Ethernet capabilities to existing airborne systems
- Flight ruggedized design
- Compatible with any transmitter



Airborne EVTM Encoder/Decoder

## QUASONIX EVTM GROUND STATION HARDWARE



1U Rack Mount EVTM Encoder/Decoder

### Rack Mount Transceiver

- Fully functional ground station receiver
- Separate Ethernet connections for remote control and payload data

### Rack Mount Encoder/Decoder

- Used for transmit or receive
- Two channels with separate Ethernet connections
- Compatible with any receiver or transmitter



3U Rack Mount EVTM Transceiver