



Ground Control Station Overview





Overview



- Overview
- Control Interface
- Communications
- Power System
- Transportability

Overview

COTS Rugged Computer



COTS Controller



Control Transit Case

- Storage for Computer
- Integrated Radios
- Additional Processing and Storage
- Power Distribution Unit

For Instructional Use Only



Vehicle Transit Case

<https://www.pelican.com/us/en/product/cases/dji-matrice-600-pro-drone-case/flightline/fltdm600>

<https://na.panasonic.com/us/computers-tablets-handhelds/computers/laptops/toughbook-31>

Control Interface

- Control Interface is 100% Commercial-Off-The-Shelf
- Panasonic Toughbook + Xbox One
- Leverages extensive industry base
- Easy replacement
- Reduced training



Computer	
Model	Panasonic Toughbook 31
Size	13.1 in class
Processor	Intel i7
Storage	512 Gb Solid State
RAM	32 GB
Operating System	Red Hat Enterprise Linux
Controller	
Model	Xbox One Controller

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- Integrated Radios
 - UHF Band Control Link
 - Ku / L band payload link
- Can support multiple antenna options
 - Man portable (included in transit case)
 - Vehicle mounted (connect through auxiliary cables)
- Power Distribution Unit
 - Powers all GCS equipment
 - Includes battery with 10 hour battery life
 - External power connections for 115 VAC and 12 VDC
- Additional Processing
 - Image processing capability for stitching wide area images
 - Auxiliary image/video storage



Control Radio	
Model	Atlas Inc XR Datalink
Payload Radio	
Model	Z4 Technologies Multi-band Datalink
Processor	
Weight	40 lb (with laptop)
Processor	Quad Core Intel Processor
Storage	10 TB Solid State
RAM	32 GB

Transportability



- All Nomad equipment (including vehicle) is transportable in two transit cases
- Designed to be unloaded and operational within 10 minutes by a single operator
- <100 lb total weight



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