Product Brochure

Crysalis™

SOFTWARE/HARDWARE/ANTENNAS



For more product information, **visit avinc.com**

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VERSION 250424

GROUND CONTROL SIMPLIFIED

Crysalis™ — AV's next-generation Ground Control Solution for command & control of compatible AV unmanned aircraft systems (UAS) & payloads through an intuitive user interface. Crysalis improves battlefield communication and collaboration by enabling users to easily share real-time information and coordinate mission-critical decisions.

Crysalis offers complete interchangeability, either as a network of interconnected, modular elements or turnkey systems—both are adaptable to meet specific missions. Crysalis delivers a standardized User Experience (UX) across assets for streamlined training, operations and deployment.

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INTUITIVE
USER INTERFACE

Improved situational awareness; designed to reduce cognitive load and training burden to allow the operator to focus on the mission. Streamlined battlefield communication & collaboration.



MODULAR
AND ADAPTIVE

One Solution, Multiple Mission Capabilities; software-based GCS platform allows operators to meet dynamic mission needs.



STANDARDIZED
USER EXPERIENCE

Streamlined operations and deployment across compatible UAS and their payloads with a full suite of software tools—from mission planning to multi-mode flight operations.



INTEGRATION
WITH BATTLEFIELD SYSTEMS

Compatible with Nett Warrior and battlefield management applications to match increasingly complex network-centric battlefields.

TACTICAL MISSION OPERATIONS

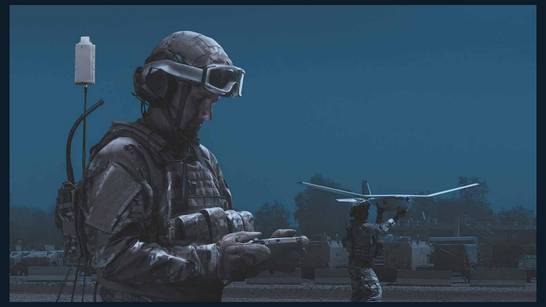


Independent aircraft command & control, UAS operational hand-offs, and remote video terminal capabilities across the battlefield with direct or supporting roles, all equipped with Crysalis-enabled devices.

CUSTOMER BENEFIT

- *Standardized UX–Streamlined Operations*
- *Mastery of User Experience (AV UAS)*
- *Rapid, Agile Operational Response*
- *Reduced Operator Cognitive Load*

NETWORK-CENTRIC BATTLEFIELD



Today's battlefield is network-centric in nature requiring collaboration across multiple nodes/platforms. Crysalis allows multiple operators in the battlefield area with either direct or supporting roles to share mission-critical information quickly and securely.

CUSTOMER BENEFIT

- *Modular & Adaptive—Operational Versatility*
- *Simplified Battlefield Intelligence Sharing*
- *Enhanced Mission Coordination/Execution*
- *Interoperable with DoD systems*

ISR & ACTIONABLE INTELLIGENCE



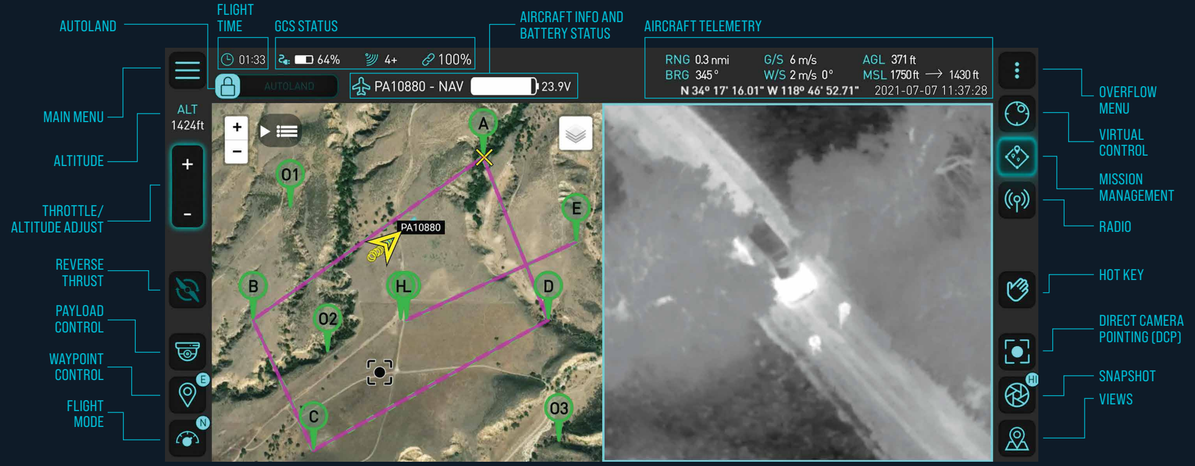
Gathering actionable intelligence and real-time distribution up channels to strategic decision-makers is mission defining. Crysalis will aid operations by distributing intelligence in real-time from multiple sources when action can be taken.

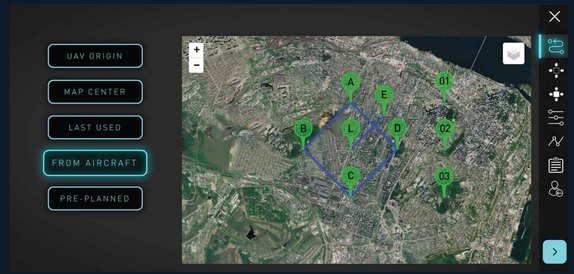
CUSTOMER BENEFIT

- *One Solution—Multi-Mission Capabilities*
- *Faster Decision Making—Tactical Execution*
- *Increased Force Projection/Protection*
- *Shorten the Time from Target Identification to Prosecution*



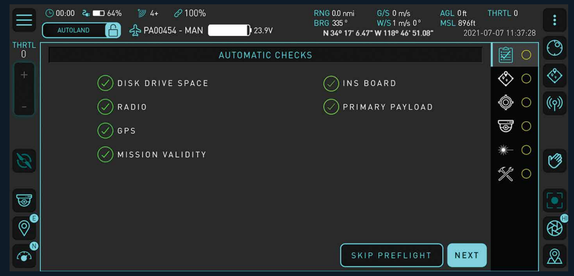
CRYSALIS™ CONTROL // MAIN WINDOW





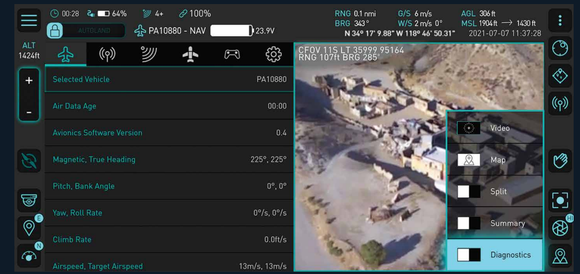
MISSION PLANNING WIZARD

Takes operators through a step-by-step process to set flight operations and mission waypoints, identify any DTED conflicts, or quickly re-fly missions previously saved to the UAS or GCS.



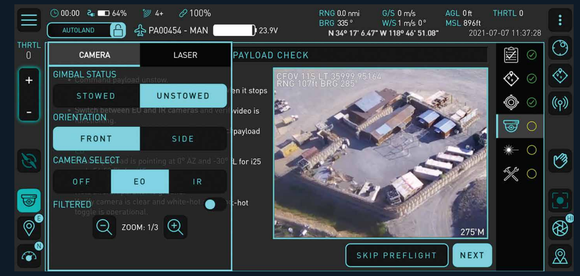
BUILT-IN PRE-FLIGHT CHECKLIST

Comprehensive checklist covering avionics & navigation systems, radio systems, mission waypoints, aircraft and payload control and aircraft instrumentation reducing the time from set-up to deployment.



MISSION FLIGHT DIAGNOSTICS & CAMERA MODES

View aircraft, GPS, telemetry, radio, GCS and mission plan diagnostics at any time with dynamic retasking. Select from multiple view options including Real-time Video, Map, Split Screen and Summary mode to customize your viewing experience.

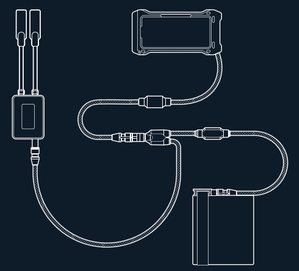


PAYLOAD CONTROL

Quickly access multiple camera and payload status and control options with zoom capability.

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CRYSALIS™ RVT
REMOTE VIDEO TERMINAL



USE CASE

Single operator (wearable), situational awareness, battlefield coordination and support to large and/or small teams; passive downlink video viewing and UAS telemetry data

DISTINCTIONS

PORTABILITY // WEARABLE

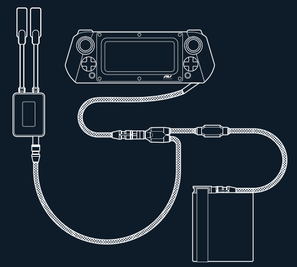
RANGE 5 km

SETUP TIME // 5 min

COMPONENTS

- *End User Device (EUD): Samsung™ smartphone in Juggernaut.Case™*
- *APP: Crysalis™ RVT*
- *Antenna: pDDL*
- *Battery: Single BB-2557*

CRYSALIS™ ULTRALIGHT GCS
ULTRALIGHT & WEARABLE



USE CASE

Single operator (wearable); ideal for on-the-move and mobile ISR operations; virtual touchscreen or tactile joystick control of UAS and payloads

DISTINCTIONS

PORTABILITY // WEARABLE

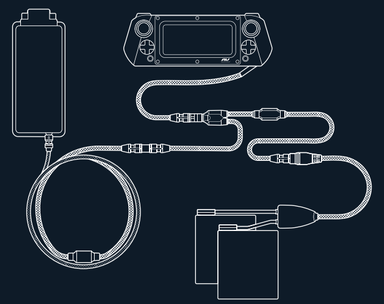
RANGE 5 km

SETUP TIME // 5 min

COMPONENTS

- *EUD: Crysalis™ Controller Pro*
- *APP: Crysalis Control*
- *Antenna: pDDL*
- *Battery: Single BB-2557*

CRYSALIS™ TACTICAL GCS
LIGHTWEIGHT & MODULAR



USE CASE

Single operator deployment and launch, full control of UAS and payloads through virtual or tactile joysticks; backpackable, lightweight, and rugged for use in any environment with an operational range up to 20 km

DISTINCTIONS

PORTABILITY // BACKPACKABLE

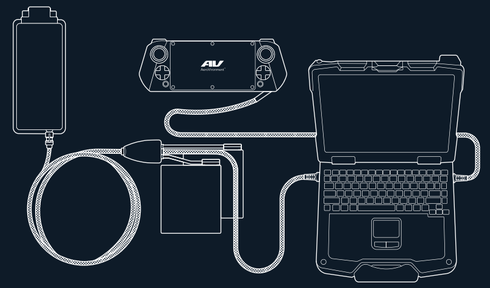
RANGE // 20 km

SETUP TIME // 10 min

COMPONENTS

- *EUD: Crysalis Controller Pro*
- *APP: Crysalis Control*
- *Antenna: Standard Range Antenna*
- *Battery: Dual BB-2557*

CRYSALIS™ COMMAND GCS
EXTENDED ISR OPERATIONS



USE CASE

Single or dual operator deployment; all-in-one modular and flexible ground control system and payloads through tactile joysticks; ideal for command-level operations; semi-fixed positions

DISTINCTIONS

PORTABILITY // MAN-PACKABLE

RANGE // 20 km

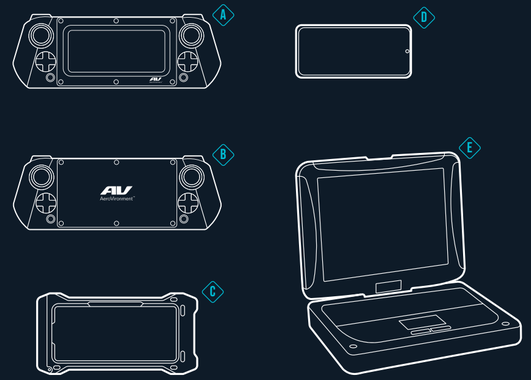
SETUP TIME // 15 min

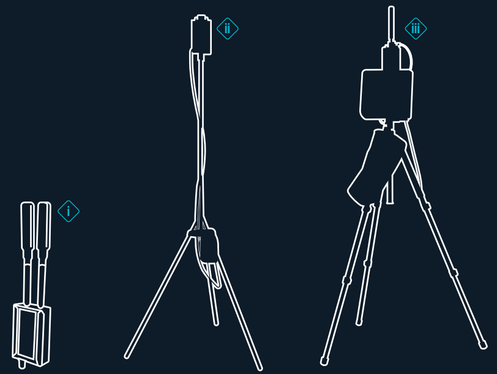
COMPONENTS

- *EUD: Crysalis™ Controller Lite, Panasonic™ laptop*
- *APP: Crysalis Control*
- *Antenna: Standard Range Antenna*
- *Battery: Dual BB-2557*

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CONFIGURE YOUR SYSTEM





OPTIONAL END USER DEVICES

A **CRYSALIS CONTROLLER PRO**	Samsung smartphone in custom wrapper; virtual touchscreen or tactile joysticks for active input to Crysalis Control app
B **CRYSALIS CONTROLLER LITE**	Custom controller with tactile joysticks for active input to Crysalis Control app
C **CRYSALIS RVT**	Samsung smartphone in Juggernaut.Case; touchscreen
D **ANDROID® PHONE**	Standard phone-based EUD
E **PANASONIC LAPTOP**	Fully ruggedized 2-in-1 hybrid laptop

COMPATIBLE ANTENNAS

I **pDDL**	pDDL: Ultra-compact
II **STANDARD RANGE ANTENNA**	Lightweight; patch/omni-directional configuration
III **ERA**	Add-on kit for the standard antenna

NETWORK CONNECTIVITY

AV's Digital Data Link (DDL) is a small, lightweight, broadband digital network module enabling enhanced command and control of small UAS. DDL is IP-based, allowing maximum flexibility and interoperability between small airborne and ground systems with limited power and bandwidth to maximize the number of systems that can operate in a given area.



DDL FREQUENCIES

M1/2/5 OR
M3/4/6

COMPATIBLE UAS

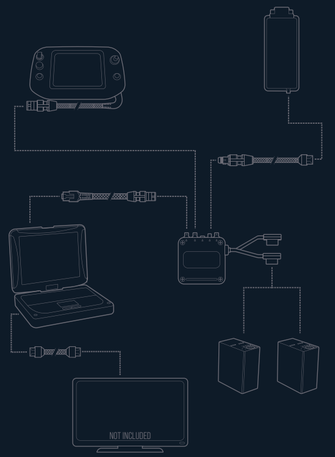


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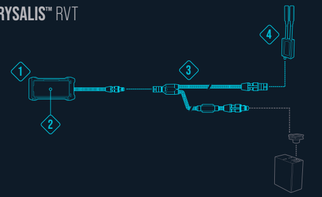


PATHS TO UPGRADE // CRYSALIS GCS

LEGACY GCS



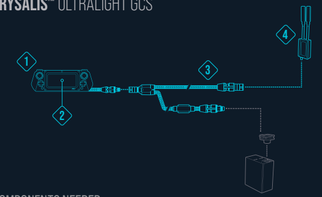
CRYSALIS™ RVT



COMPONENTS NEEDED

1	SAMSUNG SMARTPHONE IN JUGGERNAUT.CASE
2	CRYSALIS RVT APP
3	CABLING
4	pDDL

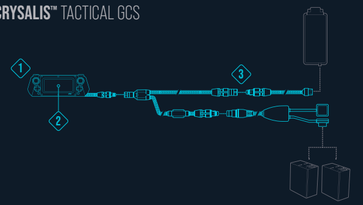
CRYSALIS™ ULTRALIGHT GCS



COMPONENTS NEEDED

1	CRYSALIS CONTROLLER PRO
2	CRYSALIS CONTROL APP
3	CABLING
4	pDDL

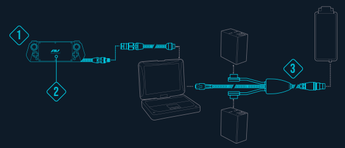
CRYSALIS™ TACTICAL GCS



COMPONENTS NEEDED

1	CRYSALIS CONTROLLER PRO
2	CRYSALIS CONTROL APP
3	CABLING

CRYSALIS™ COMMAND GCS



COMPONENTS NEEDED

1	CRYSALIS CONTROLLER LITE
2	CRYSALIS CONTROL APP
3	CABLING

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