For more product information, visit avinc.com.
Crysalis™—AeroVironment’s next-generation Ground Control Solution for command & control of compatible AeroVironment 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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WHY CHOOSE CRYSTALIS?

USER INTERFACE AND ADAPTIVE USER EXPERIENCE WITH BATTLEFIELD SYSTEMS

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 NetWarrior and battlefield management applications to match increasingly complex network-centric battlefields.
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.

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.

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.

- Standardized UX—Streamlined Operations
- Mastery of User Experience (AV UAS)
- Rapid, Agile Operational Response
- Reduced Operator Cognitive Load
- Modular & Adaptive—Operational Versatility
- Simplified Battlefield Intelligence Sharing
- Enhanced Mission Coordination/Execution
- Interoperable with DoD systems
- One Solution—Multi-Mission Capabilities
- Faster Decision Making—Tactical Execution
- Increased Force Projection/Protection
- Shorten the Time from Target Identification to Prosecution
SOFTWARE

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.

CRYSALIS™ CONTROL // MAIN WINDOW
**Integrated Systems**

**Crysalis™ ULTRALIGHT GCS**

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

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

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

**Setup Time:** 5 min

**RANGE:** 5 km

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**Crysalis™ COMMAND GCS**

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

**Distinctions:**
- 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

**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

**Setup Time:** 15 min

**RANGE:** 20 km

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**Crysalis™ TACTICAL GCS**

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

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

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

**Setup Time:** 10 min

**RANGE:** 20 km

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**Crysalis™ RVT**

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

**Distinctions:**
- 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

**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

**Setup Time:** 5 min

**RANGE:** 20 km

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AeroVironment’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.

### HARDWARE & ANTENNAS

**CONFIGURE YOUR SYSTEM**

**OPTIONAL END USER DEVICES**

- **CRYSTALIS CONTROLLER PRO**
  - Samsung smartphone in custom wrapper; a back touch button or tacticle joypad for active input to Crysalis Control app.

- **CRYSTALIS CONTROLLER LITE**
  - Custom controller with back touch button for active input to Cryslalis Control app.

- **CRYSTALIS RXT**
  - Samsung smartphone in haptic touch case.

- **SMARTPHONE / PHONE**
  - Standard phone with Joysticks.

- **ANDROID PHONE**
  - Standard phone.

- **CRYSALIS CONTROLLER LITE**
  - Custom controller with tactile joysticks for active input to Cryslalis Control app.

- **PANASONIC LAPTOP**
  - Fully ruggedized 2-in-1 hybrid laptop.

### COMPATIBLE ANTENNAS

- **pDDL: Ultra Compact**
  - Lightweight; patch/omni-directional configuration.

- **ERA**
  - Add-on kit for the standard antenna.

### NETWORK CONNECTIVITY

- **EXTENDED RANGE ANTENNA (ERA)**
  - Portability // Man-Packable
  - Range // 40 km

- **STANDARD RANGE ANTENNA**
  - Portability // Backpackable
  - Range // 20 km

- **pDDL ANTENNA**
  - Portability // Wearable
  - Range // 5 km

### DDL FREQUENCIES

- **M1/2/5 OR M3/4/6**

### COMPATIBLE UAS

- **PUMA™ LE**
- **RAVEN®**
- **WASP®**

**Additional Features**

- **Virtual Touchscreen or Tactile Joysticks** for active input to Cryslalis Control app.
- **Juggernaut.Case** for the Samsung smartphone.
- **Virtual Controller** with tactile input for active control.
PATHS TO UPGRADE // CRYSALIS GCS

**LEGACY GCS**

**COMPONENTS NEEDED**
- Samsung Smartphone in Juggernaut Case
- CRYSALIS™ RVT
- CABLING
- pDDL
- CRYSALIS CONTROLLER PRO
- CRYSALIS CONTROL APP
- CABLING

**CRYSALIS™ TACTICAL GCS**

**COMPONENTS NEEDED**
- CRYSALIS CONTROLLER PRO
- CRYSALIS CONTROL APP
- CABLING

**CRYSALIS™ ULTRALIGHT GCS**

**COMPONENTS NEEDED**
- CRYSALIS CONTROLLER PRO
- CRYSALIS CONTROL APP
- CABLING

**CRYSALIS™ COMMAND GCS**

**COMPONENTS NEEDED**
- CRYSALIS CONTROLLER LITE
- CRYSALIS CONTROL APP
- CABLING