



AVALON HUMAN-MACHINE TEAMING

COMBAT RECONNAISSANCE VEHICLE

The Boxer Electronic Architecture supports the use of Breaker Industries' AVALON; providing voice-control through natural language of one-to-many autonomous systems. This enables a new class of human-machine teaming for the modern warfighter.

HUMAN-MACHINE TEAMING

Breaker's AVALON software system provides a one-to-many relationship between an Operator and their team of robots; with higher-level mission-based tasking.

PLATFORM-AGNOSTIC

Breaker's AVALON software system supports open standards for autonomous system control such as MAVLink and ROS2; removing the need for a discrete Ground Control Station or hand controller.

NEXT-GEN SITUATIONAL AWARENESS

AVALON and the Boxer CRV's Electronic Architecture provide a complete Operating Picture through Cursor-on-Target and TAK.

BEARER-AGNOSTIC

AVALON and the Boxer CRV's Electronic Architecture support any IP-based bearer, including modern MANET meshing tactical radios such as those found on today's in-service UASs.

KEY FEATURES

Control

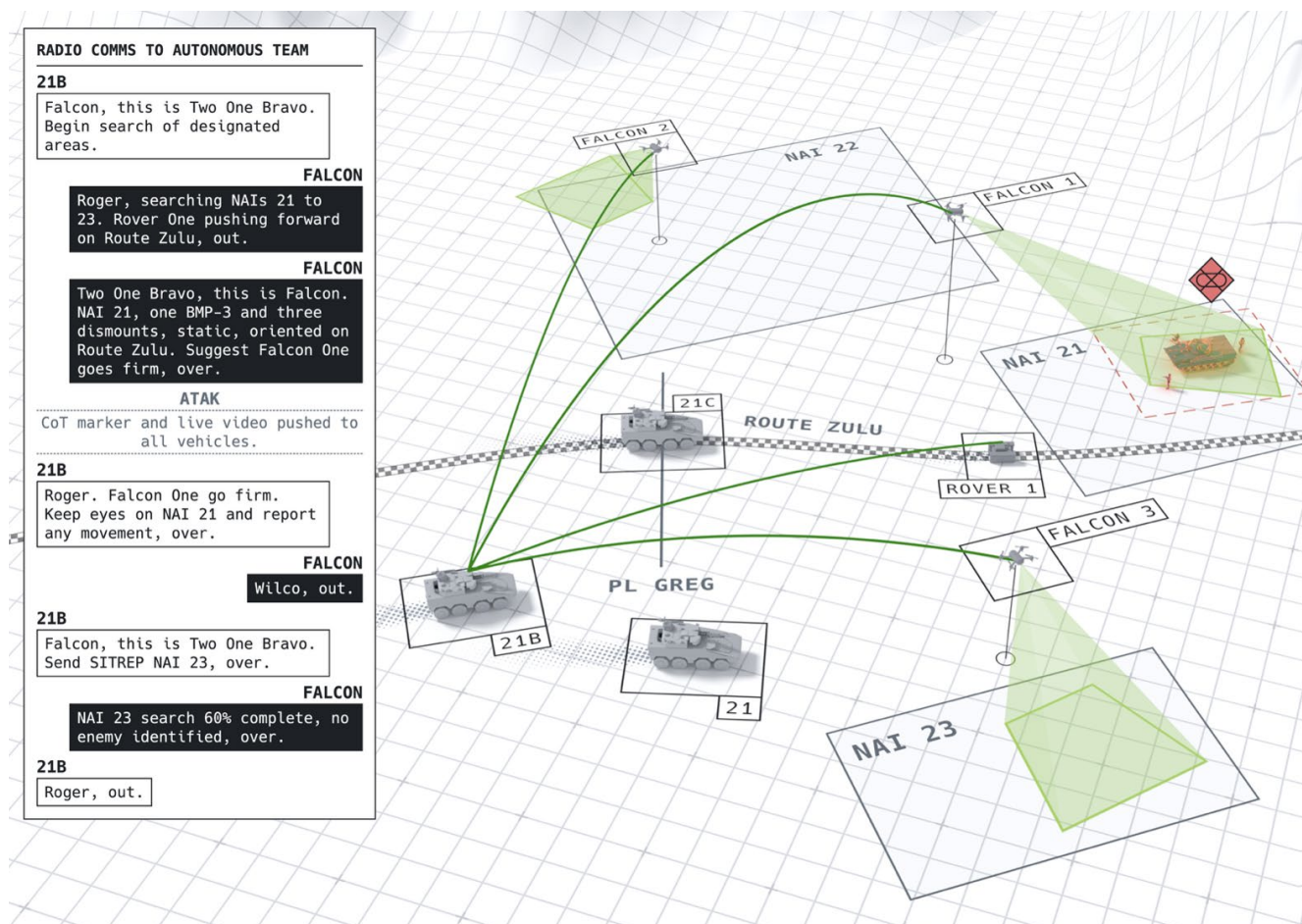
Voice Input	Vehicle intercom
Radio	Any IP-based radio that has a ground station and UAS module
GCS	Not required, QGroundControl provided
Hand Controller	Not required
Mission Planning	Possible through voice, or C2 eg ATAK
Processing	On the vehicle and autonomous system, no cloud

Situational Awareness - Tracks

Cursor-on-Target	Yes
ATAK	Yes
SAPIENT	In development

Situational Awareness - Visual

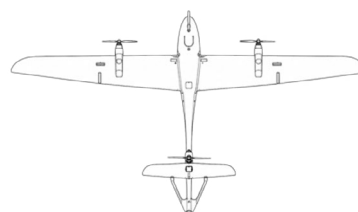
Video	H.264 multicast UDP
Computer Vision	Yes, detections provided as tracks and bounding boxes



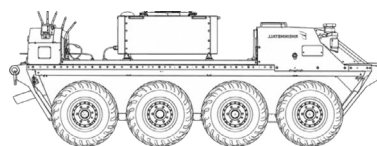
CONOP: One Commander Four Uncrewed Systems

WHAT THE TROOPS GAIN

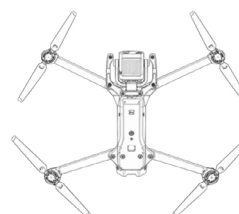
- **See first**
The team searches ahead, so the troop can find the enemy before it exposes a vehicle.
- **No added crew**
The commander directs the team.
The troop needs no dedicated drone operator.
- **One picture**
Every vehicle sees each contact, with video, at the same time.
- **Commander in control**
AVALON recommends. The commander decides.



Fixed Wing ISR



Ground Rover



ISR and Effector Multirotor

SYSTEMS THAT CAN BE COMMANDED WITH AVALON

The Avalon system is able to command and work on a range of platforms giving an armoured vehicle commander significant flexibility.

Rheinmetall Defence Australia

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