# DATA SHEET Pronto4 Uomo 10 Minute Rapid Install Kit





The Pronto4 Uomo controls the vehicle from the driver's seat. In about 10 minutes, the Pronto4 Uomo can be installed in a vehicle and control the steering, brake, throttle and transmission.

The Pronto4 Uomo (pronounced wo-mo) is a Robotic Appliqué Kit that converts existing man-drivable vehicles into remotely operated vehicles. An Italian word for Man, Uomo sits in a vehicle's driver seat and controls the vehicle's steering, brake, throttle and transmission. It can be installed in an unmodified vehicle in about 10 minutes to provide tele-operation and GPS path following control. The rapid install allows for a semi-permanent installation in a vehicle, which releases the user from committing to one vehicle platform or a particular vehicle. The Uomo enables optional, dependable unmanned capabilities for training, construction, tactical and security operations.

## **UOMO AT A GLANCE:**

- Spun out of efforts for the DARPA Robotics Challenge
- Doesn't require vehicle's electrical systems (runs off BA5590 military battery)
- Tele-operation, GPS path following, 3rd party applications
- Vehicle can be unprepared
- Small footprint
- Vehicle is still man-drivable
- Folds into ruggedized carrying case
- Mechanical positional adjustments simulate human positional adjustments
- The Uomo's body houses additional utility bays for capability add-ons (OBD, radios, GPS, I/O, etc.)
- Controllable via Shepherd OCU Software; integrates with select 3rd party OCUs and software





The Pronto4 Uomo steering mechanism (left) utilizes a high angle gimble to control the steering wheel. The Pronto4 Uomo's feet (right) control the brake and throttle pedals.

#### ISO 9001:2008 REGISTERED GSA SCHEDULE GS-07F-0226U

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## **KEY FEATURES:**

- Use on any vehicle (vehicle agnostic)
  - Kit can be installed in any ground vehicle that a human can operate
  - Kit is not linked to specific vehicle types
  - Enables remote driving of the vehicle
  - Vehicle can be unprepared and unmodified prior to installation
- Kit converts already-built vehicles currently used by humans into an unmanned vehicle
  - Modes of Operation
    - Tele-operation
    - GPS path following
    - Supervised autonomy with 3rd party software or sensors
- Day or night operations
- Rugged build designed after MIL-STD-810G
- Ensures operational flexibility
  - Rapid install releases user from committing unmanned capabilities to one vehicle platform
- Variable power source
  - BA5590 style battery, or
  - Vehicle's electrical power (12V or 24V)
- Weighs approximately 50 lbs / 23 kg

# FUNCTIONALITY:

- Tele-operation remotely drive the vehicle from a command center or operator control unit using a steering wheel or game pad controller
- GPS path following record GPS waypoint paths for playback (remote vehicle driving of the path without human intervention). Single or multi-path courses can be programmed and played back. Multiple courses can be stored.
- Supervised autonomy with 3rd party software integration.
- Upgrade sensors for additional path accuracy (RTK GPS, IMU, Laser Scanner, Wheel Odometry, etc.) or enhanced situational awareness (Cameras, LIDAR, Radar, etc.).
- Vehicle telemetry (time, space, position information) available at OCU
- Control settings such as speed, route definition, E-stop, etc.



- Kit ships in a rugged briefcase
- Comes equipped with GPS, Radio, E-stop, Cameras
- Add sensor or software upgrades via industry standard protocols and operating systems
  - Windows or Linux



A human operator can sit on top of the Uomo and drive the vehicle.

- Ethernet, USB, Serial, etc.
- Controllable via Kairos Shepherd OCU Software, or integrates with select 3rd party OCUs and software
- Can achieve speeds which are safe for the vehicle and / or environment
  - Demonstrated 90 + mph / 145 km

## **BENEFITS:**

- Semi-permanent installation
  - 10 minute install
  - Remove once the mission or task is complete
- Ensures operational flexibility
  - Rapid install releases user from committing robotic assets to one vehicle platform
- Reduces logistics support (a line replaceable unit just like an oil filter or spare tire)
- Reduces need for skilled installer



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