



Colossus Technical Proposal

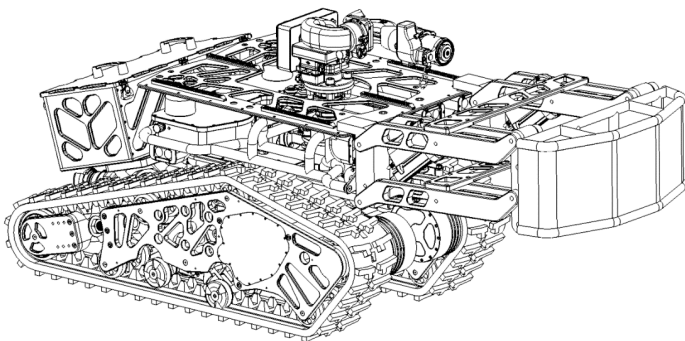
COLOSSUS

UGV providing technical support for security units



Fire Fighting & Operational Support

Fire extinction, material transport, reconnaissance and observation with sensors, transport of wounded persons, remove obstacles or vehicles



BRIGADE DE SAPEURS-POMPIERS
DE PARIS

COLOSSUS

COLOSSUS is a versatile unmanned ground vehicle designed to support troops and firemen in risk areas.

Able to evolve on all types of ground, this robot will assist security men to :

Extinguish fire at distance, carry heavy equipment, transport wounded persons, gathering information (temperature, gas, CBRN etc.. allow day / night and thermic vision with video equipment *.

It can easily accommodate many options.

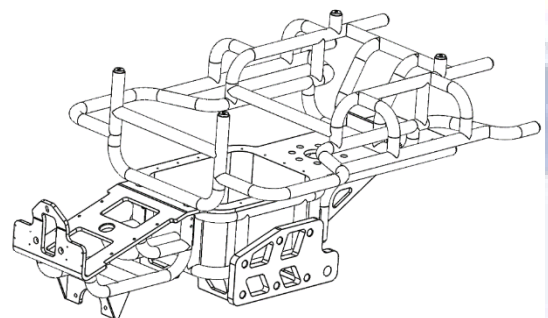
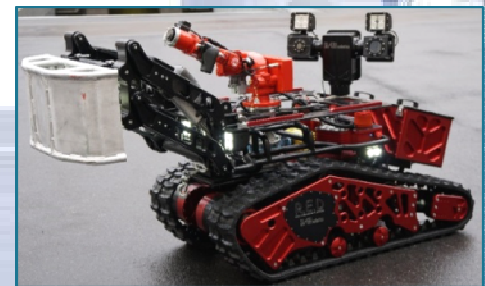
COLOSSUS was chosen by the Firemen of Paris to assist and support security men.

The strengths of COLOSSUS:

- Rapid implementation,
- Outstanding power (2 x 4000W),
- Ability to cross and climb stairs,
- Easy to pilot,
- Few and easy maintenance,
- Fully designed, machined and assembled in our workshops,
- Traction capacity 1 tons (plus),
- Carrying capacity 550kg (plus)

Designer and manufacturer SHARK ROBOTICS will support you for equipment and option selection and equipment training.

*Optional



COLOSSUS

TECHNICAL SPECIFICATIONS

Dimensions : L x l x H : 160 x 78 x 76 cm

Weight: 490 Kg

Speed: 3.5 km/h

Payload : 550 Kg

Duration : 8h00 (continuous)

Obstruction clearance: 30 cm (Ability to cross)

Slope: 50°

Side Slope: 45°

Watertight and waterproof IP67

Battery : 6 x Batteries 24V – 46Ah

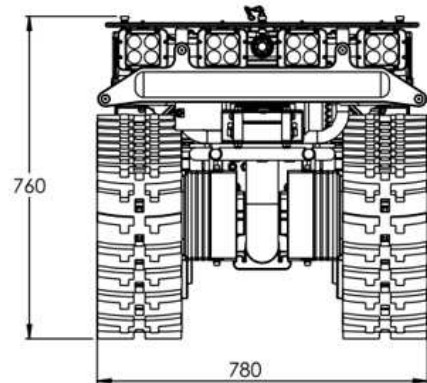
Motorization : 2 x 4000W with 48V (Outstanding power)

**Los (external) 600 meters (plus)
(depending on the control system)**

Aluminum chassis mechanically welded

Electromagnetic Brakes

Picatinny Rails



OPTIONS

Video Turret 2 axis – camera with zoom (night and day) and Thermographic video camera (Flir Type)

PC pilot tablet with photography, videos and telemetry functions (temperature, gas, CBRN..)

IP long- distance transmission system relay: 5000 m +

Camera tray

POK Water canon motorized (3000 Liters / minutes)

Smoke extraction fan SKID EASY 4000

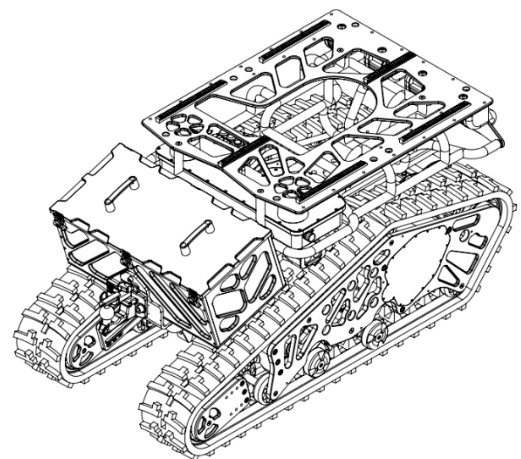
Tray handling

Extra Battery

Gas, CBRN, temperature sensors

Motorized Bull bar

Transmission cable (200 meters on options)



COLOSSUS

SHARK ROBOTICS propose the hardened NX-SHARK touch pad to remotely control the robot

The hardened NX-SHARK touch pad:

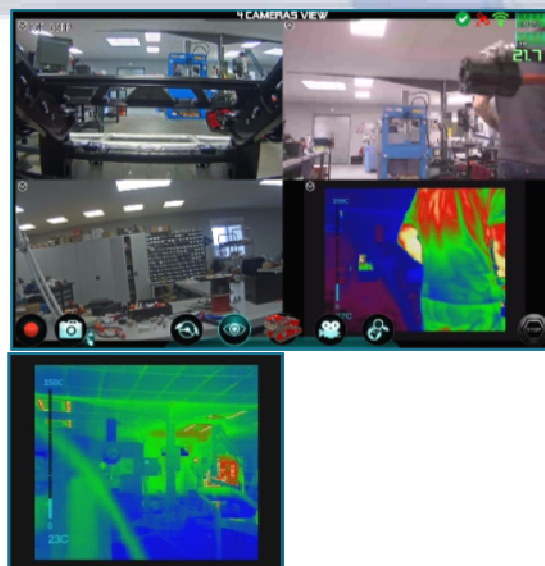
Allows to remote control of the robot with 7 " video on-screen feedback, as well with following functions:

- Taking pictures and videos,
- Telemetry (ambient temperature, engine temperature, GPS position, speed, inclinometers)
- Possibility to connect sensors: CBRN, gas...
- Allows the use of a microphone and a loudspeaker
- Allows the use of a video turret, with zoom camera, thermal camera (FLIR Type)
- High performance 2.4GHz band OFDM
- Integrated mini joystick and touch buttons (on-screen)
- Menu language configurable by the user (English, Turkish..)



This system integrates a computer into the robot

Transmission control distance : 600 meters



COLOSSUS V1

➤ Colossus robotics platform for ground support missions

TECHNICAL SPECIFICATIONS

Dimensions : L x l x H : 160 x 78 x 76 cm

Weight: 510 Kg

Speed: 3.5 km/h

Payload : 550 Kg

Duration : 8h00 – 10h00 (ops conditions)

Obstruction clearance: 30 cm (Ability to cross)

Slope: 50°

Side Slope: 45°

Watertight and waterproof IP67

Battery : 6 x Batteries 24V – 46Ah

Motorization : 2 x 4000W with 48V (Outstanding power)

Los (internal) 600 meters

Aluminum chassis mechanically welded

Electromagnetic Brakes

Picatinny Rails

PC pilot tablet with photography, videos and telemetry functions on the hardened NX-SHARK touch pad

Basket to transport heavy materials

Stretcher to transport wounded persons



COLOSSUS V1

➤ Missions

The Colossus V1 allow to provide ground support on indoor and outdoor missions

- Transport heavy equipment with the basket
- Evacuate wounded persons with the stretcher
- Training of pilots and users
- Lightening operation zones
- Reconnaissance with sensors (Gas, temperature, CBRN etc.)



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ROBOTICS

COLOSSUS V2

➤ Colossus with vidéo turret and motorized water canon

TECHNICAL SPECIFICATIONS

Dimensions : L x l x H : 160 x 78 x 76 cm

Weight: 550 Kg

Speed: 3.5 km/h

Payload : 550 Kg

Duration : 8h00 – 10h00 (ops conditions)

Obstruction clearance: 30 cm (Ability to cross)

Slope: 50°

Side Slope: 45°

Watertight and waterproof IP67

Battery : 6 x Batteries 24V – 46Ah

Motorization : 2 x 4000W with 48V (Outstanding power)

Los (internal) 500 meters

Aluminum chassis mechanically welded

Electromagnetic Brakes

Picatinny Rails to add on equipments

Motorized water canon (3000 liters/minute)

PC pilot tablet with photography, videos and telemetry functions on the hardened NX-SHARK touch pad

HD Camera with zoom (night and day vision)

360° Video Turret 2 axis for control and detection

Thermic camera (type Flir) resolution 640 x 512

Led projectors 3500 Lumens



COLOSSUS V2

➤ Missions

The Colossus full V2 allow to extinct indoor and outdoor fire with low visibility (in the smoke or gas for example)

- Robot can be used on every type of fire (Tunnel fire, parking fire, forest fire, industrial and chemical fire..)
- HD Day/Night camera to operate in low visibility : smoke, Gas etc.
- CBRN, Gas and temperature detection
- Video Turret with thermic camera to localize obstacles and find wounded persons even in the smoke
- Lightening operations zones to support firemen
- Can be used by firemen as cool shield to progress behind the Colossus to reduce the temperature



COLOSSUS V3 (Full Options)

- **Colossus with video turret, bull bar and the hardened NX-SHARK touch pad**

TECHNICAL SPECIFICATIONS

Dimensions : L x l x H : 160 x 78 x 76 cm

Weight: 590 Kg

Speed: 3.5 km/h

Payload : 550 Kg

Duration : 8h00 – 10h00 (ops conditions)

Obstruction clearance: 30 cm (Ability to cross)

Slope: 50°

Side Slope: 45°

Watertight and waterproof IP67

Battery : 6 x Batteries 24V – 46Ah

Motorization : 2 x 4000W with 48V (Outstanding power)

Los (internal) 600 meters

Aluminum chassis mechanically welded

Electromagnetic Brakes

Picatinny Rails

Motorized water canon (3000 liters/minute)

PC pilot tablet with photography, videos and telemetry functions on the hardened NX-SHARK touch pad

HD Camera with zoom (night and day vision)

360° Video Turret 2 axis for control and detection

Thermic camera (type Flir) resolution 640 x 512

Led projectors 3500 Lumens

Motorized Bull-Bar to push obstacles and vehicles



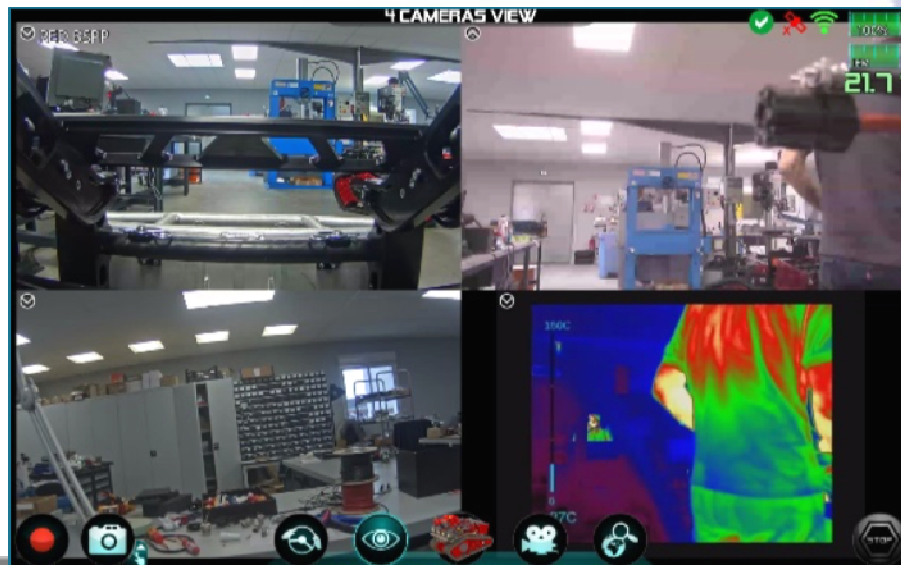
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ROBOTICS

COLOSSUS V3 (Full Options)

➤ Missions

The Colossus full options allow to intervene on indoor and outdoor missions with full range of capacity

- Robot can be used on every type of fire (Tunnel fire, parking fire, forest fire, industrial and chemical fire..)
- 360° HD Day/Night camera to operate in bad visibility
- CBRN, Gas and temperature detection
- 360° Video Turret with thermic camera to localize obstacles and find wounded persons even in the smoke
- Motorized Bull bar to remove obstacles and vehicles
- Basket material transport to carry heavy equipment
- Stretcher to transport wounded persons



COLOSSUS

Strong Points compare to competitors

- ✓ Outstanding power : 2 engines of 4000W
 - ✓ Traction Capacity : 1 tons
- ✓ 70 mm Hose traction capacity (with water) 200 meters
 - ✓ Payload : 550 Kg
- ✓ Autonomy : 8 hours continuous
- ✓ Operational Autonomy : 12 hours
- ✓ Temperature and gas sensors directly visible on tablet
 - ✓ Speed 3,5 km/h
 - ✓ Ability to climb stairs
- ✓ Facility access to the engines to maintain
 - ✓ Motorized Bull-Bar to push vehicles
- ✓ 360° Video Turret IP68, zoom camera Sony HD day/night
- ✓ 360° Thermic camera 640 x 512 to detect bodies even in the smoke
 - ✓ Replacement of batteries in 30 seconds
 - ✓ Replacement of engine in 30 minutes
- ✓ Operators training and Maintenance training for 1st and 2nd line



COLOSSUS



Most powerful Electric UGV (category 500 Kg)
Fire Fighting and ground support proven by the Paris Firemen (BSPP)