

XENA 5.0 ROBOT ATV



MODEL: XENA 5.0 ROBOT ATV

APPLICATION: FIREFIGHTING REMOTE VEHICLE

BRAND MAKE: CLUB FIRST

Specification:

RC Control ATV robotic platform with Camera & Monitor

- Heat Proof, Water Proof
- Smart Remote Operated fire monitor up to (3000 LPM)
- PTZ Thermal remote controlled Camera (Optional)
- Automatic Fire point detection & alarming (Optional)
- Foam & Water monitor
- LCD on remote side for live video
- Heavy Duty Work
- 2.5-6 Hrs battery backup
- Speed Up to 8 Km/h

Key Parameter:

- The XENA ATV platform Robot Xena 5.0 have top speed 8 km/H
- Compact Design for heavy duty work
- Heavy Duty spiral iron core wire rubber Track



- Track belt suspension
- BLDC Heavy duty motors
- Rc 5000 Meter Range
- Heat and over load protection
- Efficiency Exhaust protection
- 520 Kg Payload capacity
- 180 Kg Drag capacity (UP to 8 Ton Vehicle)
- Climb to possible stairs and elevations
- Fast Charging system
- All-terrain Vehicle Technology

Technical Specification:

Robot Base: 1.5, MM 3 MM dual SS 316/MS powder coated base

Body Material: 1.5mm thick SS 316/MS for heavy duty work

Dimension: Xena 5.0 can fit a box of (1280 x 860 x 650) L x W x H in MM (Robot Vehicle Only)

Total Weight: 290 Kg

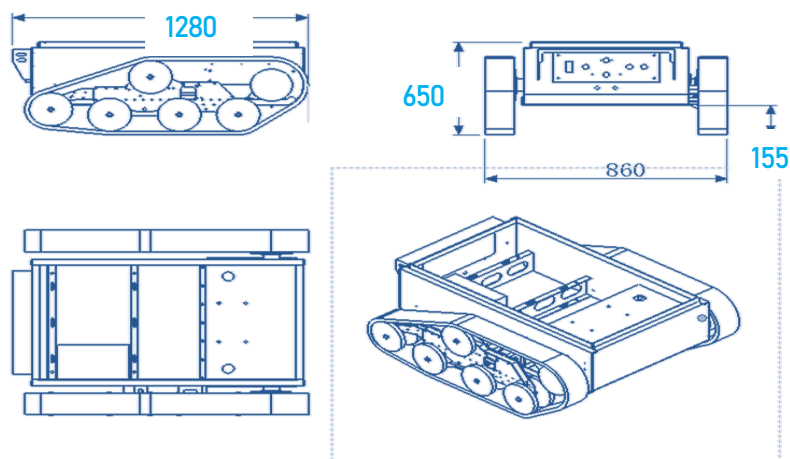
Working Temperature: --20°~+95° Up to 500° in Self Cooling

Climbing Slope Angle: ≤45°

Climbing Stairs Angle: ≤30°

Fire Monitor:

- Remote Controlled monitor 1800-3000LPM
- Flow Cap @ Up to 10 Kg/Cm²
- Vertical Movement +25 to 85 Degree
- Horizontal movement ±180 Degree
- Both ATV and Monitor controlled with single Remote controlled



Sr. No.	Particular	Findings As per Actual Sample	Measurement Unit
Robot chassis Parameters MAKE: CLUB FIRST			
1.	Dimension: Length X Width X Height	1280 X 860 X 650 (MM)	Millimeter
2.	Weight	240 KG	Kilo Grams
3.	Maximum Speed	8 KM/H	KM/H
4.	Payload Capacity	520 Kg	Kilo Grams
6.	Pulling Capacity - a vehicle at neutral gear position	8 Ton	Ton
7.	Drag capacity for two numbers of Charged hose of 63MM each	105 Meter	Meter
8.	Slope Climbing Capacity	45 Degree	Degree
9.	Vertical Obstacle Height	350 MM	Millimeter
10.	Stairs Climbing Capacity	25 CM with 32 Degree Angle	Centimeter/ Degree
11.	Battery Type	LI-ION Battery Pack	LI-ION
12.	Battery Capacity	48 Volt 72 AH	Volt -AH
13.	Rubber Track (Width X Thickness)	120MM X 25MM	Millimeter
14.	Motor Power Rating	1100W, 48V	Watt
15.	Operational Duration Mileage	6 Hrs	Hours
16.	Ground Clearance of chassis	140MM	Millimeter
17.	Turning Radius	650 MM	Millimeter
18.	Fog Light	100 W led, 2 numbers	Watt
19.	Maximum back Force	250 Kg	Kilo Grams
Remote Controller Parameters			
1.	Transmission Operational Range	5000 Meter	Meter
2.	Video Transmission Range	4000 Meter	Meter
3.	Transmitter Weight including Battery	600 Grams	Grams
4.	Display Size	5 Inch	Inch
5.	Dimension of Transmitter unit without antenna L X W H	217 X 106.6 X 31	Millimeter
Water Monitor MAKE: CLUB FIRST			
1.	Water discharge capacity	2500 LPM @ 8Kgcm Pressure	Liter Per Minute
2.	Lancing Distance	75 Meter @ 10 KGCM Pressure	Meter
3.	Horizontal Movement	± 180 Degree	Degree
4.	Vertical Movement	+25 Degree to 85 Degree	Degree
5.	Pipe Dimeter		
6.	Shell Thickness	2.5 MM	Millimeter
7.	Inlet Size	63MM	Millimeter



8	Angle of fog mode	110 degree	Degree
Thermal Camera			
1.	Resolution	1280 X 720 Pixel ,1920 X 1080 Pixel	Pixel
2.	Camera Detection Range	Vehicle: 4000M, Human: 1640 Meter, Fire: 2000 Meter	Meter
**	Weight of Complete Robot	290 Kg	Kilo Grams

Sustainability Parameters

1.	Chassis Body Shell Material	Stainless Steel SS 316 Grade / 1.5 MM thick
2.	Track Belt Material	Rubber Track with Iron Core
3.	Siren Hooter (controlled by Remote Control)	Emergency Siren 113 DB at 1 Meter Distance
4.	Automatic Self cooling Sprinkler System that covers complete unit including track belt (controlled by Remote Control)	6MM SS Artery
5.	Motor/Drive Controller Make: Club First	50 Amp 48 Volt , 60 Amp Peak (1 Second) , MPU 6050, Gyro based Straight line following Algorithm, and on axis Angular 360 Degree Movement capability
6.	Remote Control (with straps to carry) Functional operations in single unit (same Remote Control)	Robot- Forward, Backward, Angular, On axis rotation Water monitor- Up, down, on axis, fog mode, jet mode, Horizontal (+ -)180 Degree, +25 to 85 Degree Vertical Movement, LED fog Light, Siren Hooter, Sprinkler valve, camera video feedback
7.	Robotic Water Monitor Make: CLUB FIRST	Stainless Steel, SS 316 grade, 2.5 MM shell thickness
8.	Inlet	Two BIS articulated elbow type to negotiate the bend and entangling of 63 mm hose, integrated with non-returning valve along with shut off mechanism.
9	Robot Operational Parameter	4 Hrs at 500 Degree Celsius Temperature
10	Drive Controller	ARM 2.6 Quadrate microcontroller
11	RC Controller	2 HDMI Video Input, 4X Cortex A53, GPU: 4 Core Mali- T860 eMMC: 4 GB Video Latency: 110MS, Frequency 2.4 Ghz
12	Drive Mechanism	Deferential drive and each drive powered with 1100w BLDC Motor individually



13 Handles

4 numbers foldable type

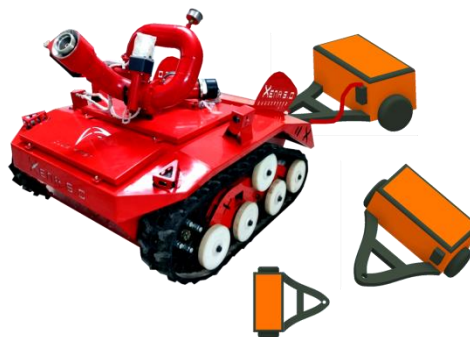
Testing Method

1.	Robot Chassis & Water Monitor	IP 67
2.	Battery	UN
3.	Thermal Imaging Camera	IP 67
4.	Temperature Range	500 Degree with Self cooling

Additional Attachments:



PTZ Thermal Camera



Power Bank Attachment

BOM (Body Of Material)

1.	Robot Chassis Make: CLUB FIRST	Li-ion Battery/ Controller	1 NOS
2.	Water Monitor Make: CLUB FIRST	2500 LPM Discharge	1 NOS
3.	Water Monitor Controller	24 V 25AH	1 NOS
4.	Thermal + optical Camera	PTZ Thermal Camera	1 NOS
5.	Spare Battery Pack	48 V 65 AH Battery with trolley that can be attached to robot as a power bank without removing the integrated battery	1 NOS
6	Motors	BLDC 800 W	2 NOS

Applications: Disaster Management, Fire Fighting, Off Road Material Handling. Related ETC.

