



ANANTAK



MX340

Compact electric tow tractor

Motrec (MT340 base) + Anantak Robotics (autonomous system)

Manufacturer

Manual / Autonomous / Remote-Service
Operating Modes

1 operator
Passengers



PERFORMANCE

Towing Capacity	20,000 lbs (9,071 kg)
Load Capacity	500 lbs (227 kg)
Maximum Speed	8 mph (13 km/h)
Turning Radius	68 in (1,727 mm)
Runtime	8+ hours.

OPERATOR COMPARTMENT

Steering	Automotive steering wheel
Seat	Semi-suspension seat on slide adjusters
Display	Multifunction: speedometer, battery SOC, hour meter, odometer, fault warnings; password-protected
Lighting	LED dual headlights and tail/brake lights
Standard Safety	Reverse alarm, deadman seat switch, horn, emergency stop button, anti-slip griptape

CHASSIS & FINISH

Construction	All-steel unibody
Rear-End Plate	2 in thickness
Finish	Powder coating
Available Colors	Security orange, Federal yellow (optional)

SENSOR SUITE

3D LiDAR (Nav+Safety)	Three-dimensional laser scanning for navigation accuracy and height-aware obstacle detection
3D Depth Camera	Rich 3D view for detecting low, irregular, or complex obstacles
Eyrie Unit	Mast-mounted housing combining 3D LiDAR and camera in a single multimodal sensor unit; delivers full-surround perception
2D Safety LiDAR	Flat-plane laser scanner covering vehicle perimeter for obstacle detection

POWERTRAIN & DRIVETRAIN

Motor Type	Brushless asynchronous AC motor
Motor Power	15 HP
Controller	Electronic AC speed controller
Drive Axle	Helical gear differential
Transmission	Direct drive
Brakes	Rear wheel hydraulic drum brakes with regenerative braking
Wheels	Solid tires
Suspension	Leaf spring rear suspension system
System Voltage	48V
DC-DC Converter	48V to 12V for accessories



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AUTONOMOUS NAVIGATION SYSTEM

Navigation Method	Multimodal Sensor System: 3D LIDAR + cameras for spatial mapping;
Infrastructure	None required — works in existing facilities as-is; no floor changes, guide paths, reflectors, or special lighting needed
Path Programming	Pre-captured facility map loaded onboard; vehicle self-localizes and navigates programmed routes autonomously
Localization	AI-powered Visual Place Recognition cross-checks laser and camera data continuously
Compute Platform	NVIDIA Jetson AGX Orin — industrial-grade AI processor for robotics
Connectivity	Wi-Fi 2.4/5/6 GHz and Cellular LTE
Detection Coverage	360° around vehicle at all times during autonomous operation
Obstacle Response	Speed reduces as objects approach; full stop if protective zone is breached; auto-resumes when path is clear
Emergency Stop	Accessible physical e-stops in vehicles in accordance with ISO13850:2015
Remote Monitoring	Live status, error alerts, and telemetry via Siteview web dashboard
Remote Diagnostics	Faults logged automatically in cloud; diagnosed remotely to reduce downtime

SAFETY FEATURES

360° Detection	Continuous LiDAR perimeter scan; any object, person, cart, pallet, or equipment, triggers immediate response
E-Stop Buttons	Accessible physical e-stops in vehicles in accordance with ISO13850:2015; immediate stop on press
Audible Warnings	Configurable tones based on machine states and autonomous travel
Auto Parking Brake	Engages automatically at every stop; prevents unintended movement
Snapbright Lighting	Color-coded LED status indicator communicates operational state in real time
Safe Start Confirmation	Vehicle will not move until all safety conditions are confirmed

OPERATOR INTERFACE TOOLS

Voyager App (Tablet)	Primary on-site interface: route selection, GO/STOP/CONTINUE, live status, battery monitoring, cart management
Siteview (Web)	Cloud-based fleet dashboard for supervisors: multi-vehicle coordination, remote commands, telemetry, health monitoring

ENVIRONMENTAL & OPERATING CONDITIONS

Operating Temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage Temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Relative Humidity	10%–95%, non-condensing
Facility Types	Warehouses, distribution centers, automotive plants, heavy industrial, logistics hubs
Operating Area	Indoor industrial environments with shared human-machine workspaces; limited outdoor use possible
Not Suitable For	Public roads, residential areas, explosive / ATEX-classified zones

FLEET MANAGEMENT

Fleet Manager	Central coordination layer for multi-vehicle task assignment, routing, and traffic management
Queue Management	Dynamic multi-factor orchestration: station availability, intersection load, routing priority, time-of-day patterns
Intersection Control	Virtual zones enforce exclusive machine occupancy at high-traffic intersections
Charging Management	Autonomous routing to charging stations with load balancing across lanes. Opportunity rapid-charge battery available.
Hawkeye	Overhead camera system: detects pallets, vehicles, and personnel in high traffic areas; autodispatches machines without manual triggers
Firefly	IoT devices at key facility points; configurable buttons + Snapbright LED panel for on-floor traffic control and personnel awareness
Fleetview TV	On-prem real-time graphical visualization of all machine positions, statuses, and site activity
Siteview	Cloud-based fleet management and operations dashboard: machines, stations, queues, intersections, alerts, and performance metrics
Site Configuration	Fully configurable station placements, stop locations, queue logic, and intersection zones per facility

CYBERSECURITY

Access Control	Role-based access control (RBAC) with password-protected login across all operator interfaces
Communications	Encrypted HTTPS for all cloud service interactions
Diagnostics	Faults logged automatically in cloud; remote diagnosis reduces on-site downtime



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