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# Say Goodbye to Manual Transport and Hello to the DriveMod Tugger.

Cyngn's partnered with Motrec to transform their Tugger into an autonomous vehicle that can drive itself. Our DriveMod Tugger enables you to automate hauling workflows like transferring goods and delivering supplies.

The age of automation is here, all built on vehicles you already trust.

Safely navigate sites without the need for special infrastructure.

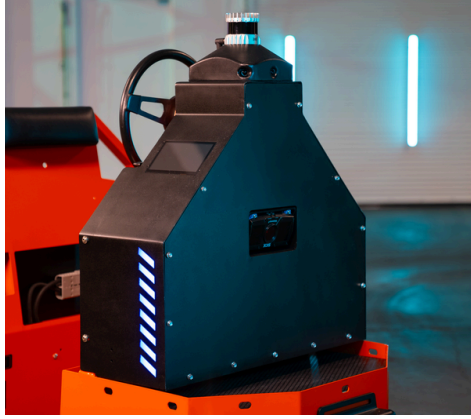
Autonomously haul and tow 12,000 pounds of goods.

Can easily switch into manual mode and let a human driver take over.

Leverage multiple, redundant, and intelligent layers of safety.

Execute missions based on a variety of flexible, programmable skills – including "auto-unhitch".

Can be remotely managed and monitored via the FMS or on-vehicle display.



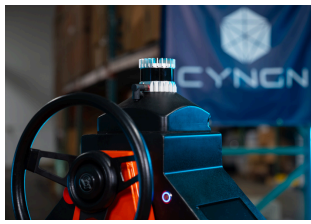
## 64%

**Reduction in human labor costs when using the DriveMod Fleet vs. a forklift.**



## 360°

**Perception and multiple safety redundancies prevent accidents and keep people safe.**





**"The bottom line is DriveMod has made us more productive. Instead of manually moving goods around the warehouse, our team can stay focused on other high-value assignments."**

– Kenn Morris | Vice President GLF

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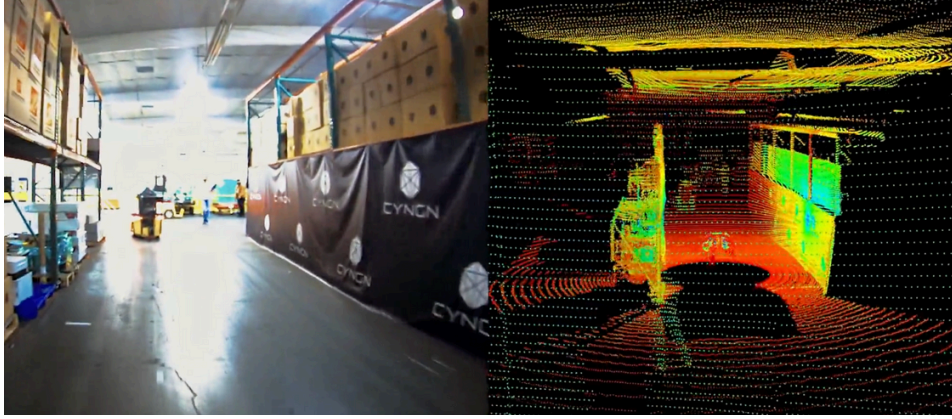
# Cyngn Puts Safety at the Forefront



### Sees the Complete Picture

3D LiDARs bring complete 360° vision to the vehicle by continuously monitoring the surrounding area for obstacles and obstructions. The LiDARs we use on our vehicles can see up to 30 meters and complete a full scan 10 times per second.

### Makes Decisions Instantly

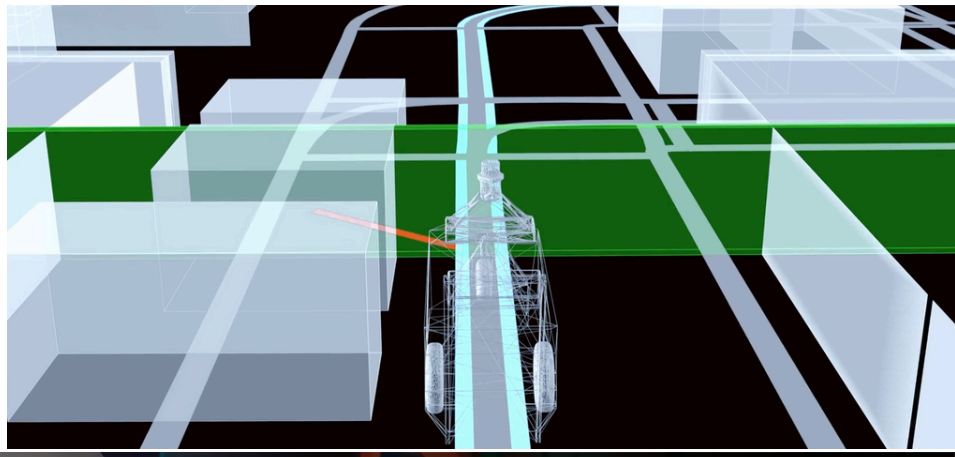
Our Decision Engine interprets what our LiDARs see to make decisions 3x faster than a human driver. Plus, Virtual Bumper, our collision avoidance system, provides a redundant layer of safety through independent linkages to the vehicle's ECU.

### Conveys Intention via Audio/Visual Cues

DriveMod Vehicles come equipped with color-coded LED lighting to communicate vehicle status and intent to the workers in the area. The vehicles also use audible chimes to help notify your employees when a vehicle is turning, departing, or arriving at a stop.

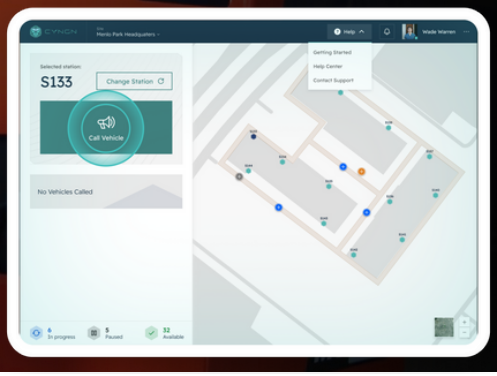
**"Safety continues to be an ongoing priority, which is reflected in the highly technical and rigorously engineered design of our autonomous technology stack."**

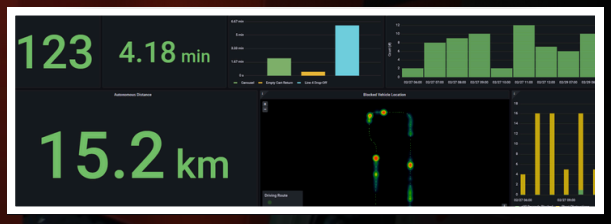
— Elizabeth Nelis | Cyngn, Head of Safety



## Cyngn Insight: Our Autonomous Vehicle FMS

With Cyngn Insight, you can intuitively manage, monitor, and command your self-driving vehicles. Our Fleet Management System has been thoughtfully designed to be simple and straightforward to operate. It's so easy to use, teams can be trained before lunch.




### Deploy missions a few different ways...

1. Directly from HMI on the vehicle
2. From the cloud remotely on any laptop or tablet
3. Call the vehicle to you via a laptop/tablet

Our vehicles drive themselves so your team can focus on everything else.

cyngn.com/autonomous-tugger

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# Technical Specs: Motrec MT-160

## Vehicle Information

| | |
|---|---|
| **Dimensions** | 65" L x 30" W x 55" H |
| **Deck Dimensions** | 18" L x 30" W |
| **Weight** | 1,250 ± 100 lbs depending on options |

## Chassis

| | |
|---|---|
| **Body** | All-steel unibody construction |
| **Steering** | Automotive steering wheel |
| **Brakes** | Self-adjusting H.D. drum brake, regenerative braking, electromagnetic parking brake |
| **Wheels** | 4.8x8 LRC pneumatic tires |

## Performance

| | |
|---|---|
| **Autonomous Speed** (Max) | 2.7 mph |
| **Manual Speed** (Max) | 6 mph |
| **Towing Capacity** (Max) | 12,000 lbs. |
| **Load Capacity** (Max) | 500 lbs. |
| **Turning Radius** | 57" |
| **Minimum Aisle Width** | 55" |
| **Slope** (Max) | 3° |

## Energy System

| | |
|---|---|
| **Battery Voltage** | 48V |
| **Battery Runtime*** | 8 hours |
| **Charge Time** (Lithium) | 2.5-4 hrs. |
| **Charge Time** (Standard) | 8-10 hrs. |

**Runtimes are based on manufacturer recommendations. Times may vary based on speed and load weight*

## Safety Features

- **Emergency Stop**
- **Virtual Bumper** (collision avoidance system)
- **LED Visual Communication System**
- **Audio Cues**

## Sensor Suite

- **360° 3D LiDAR**
- **RGB Camera**
- **TOF Camera**

## Automation Interface

- **Human-Machine Interface**

## Connectivity

- **802.11 Wifi**
- **Ethernet Port for Data Offload**

## Additional Features

- **Auto-Unhitch Capability**
- **Blue Spotlight**