

Multi–Purpose Autonomous Vehicle (MPAV) WD1



Whale Dynamic's autonomous electric vehicles rely on years of development experience in L4 autonomous taxis with testing on public road (urban traffic condition ODD), with perception hardware design, control-by-wire chassis, fusion perception algorithms, MSF localization and high-precision map full -stack technology. The vehicle design is led by designers from well-known North American automobile companies. The modular design from hardware to chassis combines aesthetics and practicality to meet the needs of autonomous vehicles in all scenarios.









Wheel Motor



Battery Remotely



Dual Ackman Chassis







Drivable Testing Vehicle (DTV)

The integration of the chassis into the perception kit lowers the hardware threshold. The use of speed limit protection, remote control takeover, emergency stop switch, collision protection and human machine co-driving functions ensure thesafety of autonomous driving and meets the secondary research and development needs of autonomous driving developers.



### Multi-purpose Autonomous Vehicle (MPAV)

Based on the overall scheme of DTV technology and years of development experience, the DTV technological stack is implemented into the "Non Passenger" scenario to meet the requirements of urban public roads autonomous driving test vehicles.







#### MSF Localization (A)

The multi-sensor fusion and high-precision map matching technology developed by Whale Dynamic makes the centimeter-level/ lane line positioning in the absence of satellite signals and RTK signals come ture. Through the combination of integrated navigation and self-built high precision map, the localisation is achieved from macroscopoic urban area down to a narrow lane line.

#### HD Map (B)

Self-built centimeter-level lidar map tool chain, with data acquisition, PCL production, calibration, semantic map production of the full tool chain capabilities. Self-built map capability will benefit the perception and the hardware team, forming the closed-loop of total perception on the map.

#### Proprietary MSF (C)

Whale Dynamic has mastered a number of core patents for early-stage fusion, including spatio-temporal synchronization technology required for early-stage fusion, high-throughput data stream compression technology, single neural network for PCL and RBG data, etc. **Whole dynamic** 4



#### Early-stage Fusion Hardware (D)

Multi-sensor fusion is currently recognized as the best perception solution in the autonomous driving industry to facilitate rapid deployment by developers and fleets. Early-stage fusion Box makes the multi-sensor microsecond level time synchronization c-ome ture, built-in 10-gigabit server, and has CAN connection function.

#### Chassis Design and Wire Control Modification (E)

With the experience of converting passenger vehicles' control-by-wire protocol, Whale Dynamic has collaborated with the chassis OEM manufacturer to customize a special chassis for the autonomous cargo (van), and the chassis agreement meetsall the requirements for autonomous driving.

#### Passenger Vehicle P&C (F)

Е

Based on the control protocol from the OEM manufacturers, Whale Dynamic insists to use passenger vehicles to verify the PnC module, simulating and foreseeing various scenarios may encountered by our WD1.



Spec Price				
Product Version		Basic	Standard	Advance
Hardware	Lidar	OS0	OS0*2	OS2* 2
	Chassis (2516*1546*616)	Single-direction 2WD Battery Capacity7000W.H	Single-direction 2WD Battery Capacity11000W.H	Single-direction 4WD Battery Capacity11000W.H
	MM Radar	0	2	4
	Camera	1	4	8
	IPC	Single GPU	Single GPU	Dual GPU
	Integrated Navigation	Whale Dynamic IR&D/M2	Whale Dynamic IR&D/M2	Whale Dynamic IR&D/M2
	Fusion Box	1	1	1
Мар	HD Map	×	Enable	Enable

## Commercial Application









# CONTACT US







E-mail:business@whaledynamic.com

www.whaledynamic.com