

1 Morphology chart

Functions	1	2	3	4	5
Navigation system	green!50Lines on the floor	GPS location + pallet detection	green!50Preprogrammed map	green!50Sensor fusion (IMU + GPS)	Bluetooth RTLS
Micro controller / processor	Arduino nano	STM32xx	RaspberryPi	green!50E-ESP32	Option 5
Pallet recognition	green!50LoadCells	Hall Effect	buttons	Ultrasonic	photoelectric
Coding standard	Option 1	Option 2	Option 3	Option 4	Option 5
Mast Stage	green!50Simplex	Duplex	Triplex	Quadriplex	-
Lift solution	Linear Actuator	L.A + RollerChain	green!50Threaded Rod + linear bearings	String&Bearing	Rack&Pineon
Lifting sensing	green!50End stops Top&Down	Encoder	Stepper Motors	green!50LoadCell	-
Motors	green!50Stepper on Mast	green!50DC-Motors Movement	-	-	-
Sensors Fork	green!50LoadCell	-	-	-	-
Sensors Body	green!50Ultrasonic Distance HC-SR04	green!50Infrared Sensors	LiDAR	Optical Sensors	-
Body design Elements	green!50LCD	Tank tracks	green!50Perry the Forklift	green!50Googly Eyes	-

\* Green cells indicates chosen option.