

第三代拓德伸缩叉轨道协作移栽机器人 NONEAD Telescopic Fork Orbital Mobile Cobot CB3

Brochure



Document Version: 1.3.1010

Updated Date: 2023/10/10

Software Version 1.3.0

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Suzhou Nonead Robot S&T Co., LTD.

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技术参数，如有变更，恕不另行通知

新版下载地址：https://www.nonead.com/hardware_content/20803.html

ICS CODE: NH0294
NO.

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nTFOMC is an intelligent transfer robot developed for the container transportation scenario of manufacturing enterprises. This product integrates advanced software and hardware technologies and has functions such as intelligent transportation, autonomous navigation, active obstacle avoidance, and automatic charging. It adopts a composite pick-and-place method of chain transportation + lifting, supports anti-static of the entire machine, and achieves the point-to-point transportation plan of "warehouse to line warehouse", line side warehouse to line side cache rack, and "cache rack to machine". A maximum of 4 boxes of products can be moved at a time, which is highly suitable for the process characteristics of material handling scenarios.

Highlights: Modular installation, simple; MiR-robots can be directly controlled without additional programming; double emergency buttons at the front and back sides to ensure safety; manual automatic switching, convenient inspection; programmable button to increase HCI for MiR-robots; optional power supply module to supply power and signal interaction for the carts; standard modular carts that customers can deploy independently.



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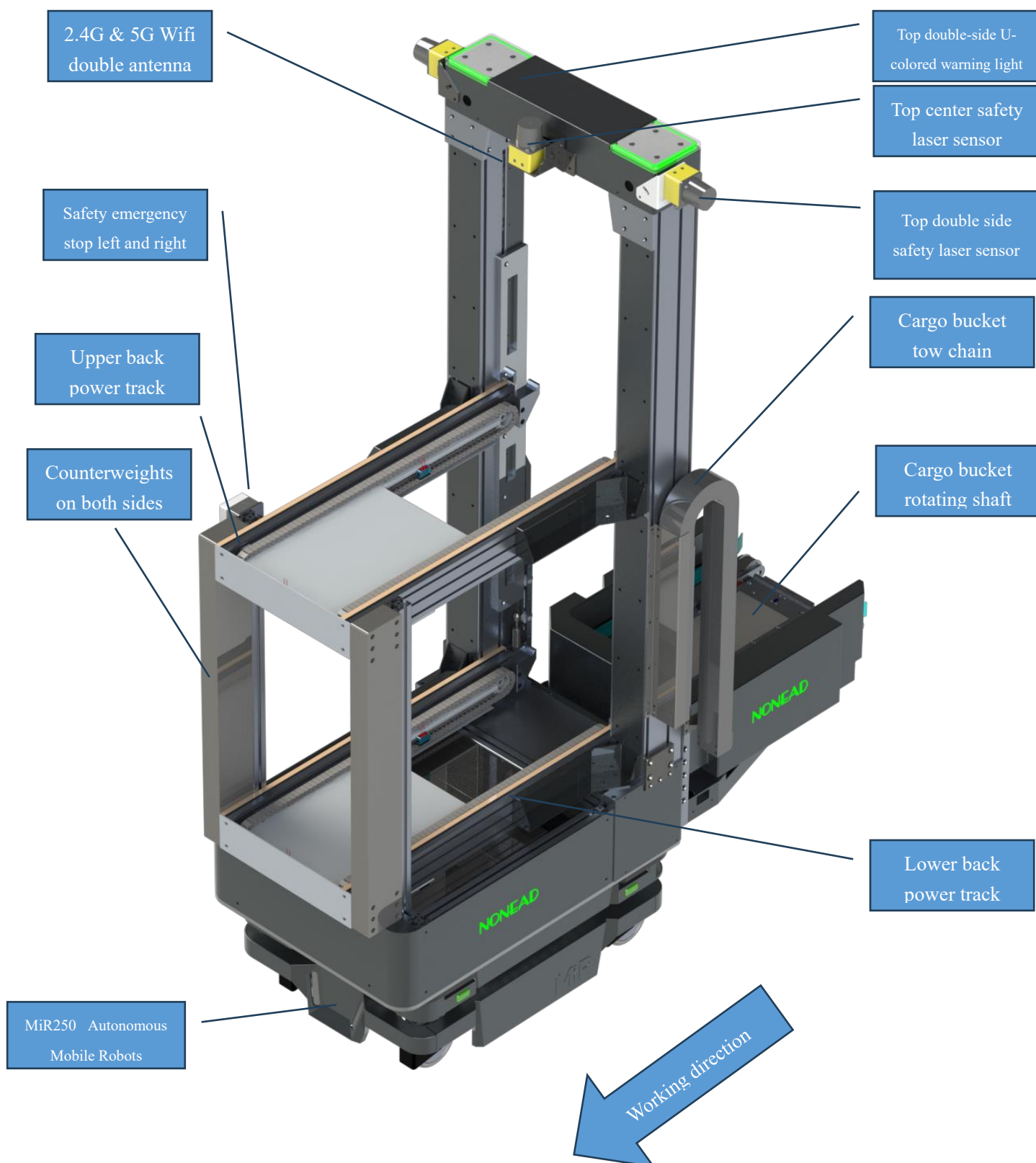
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Function Introduction



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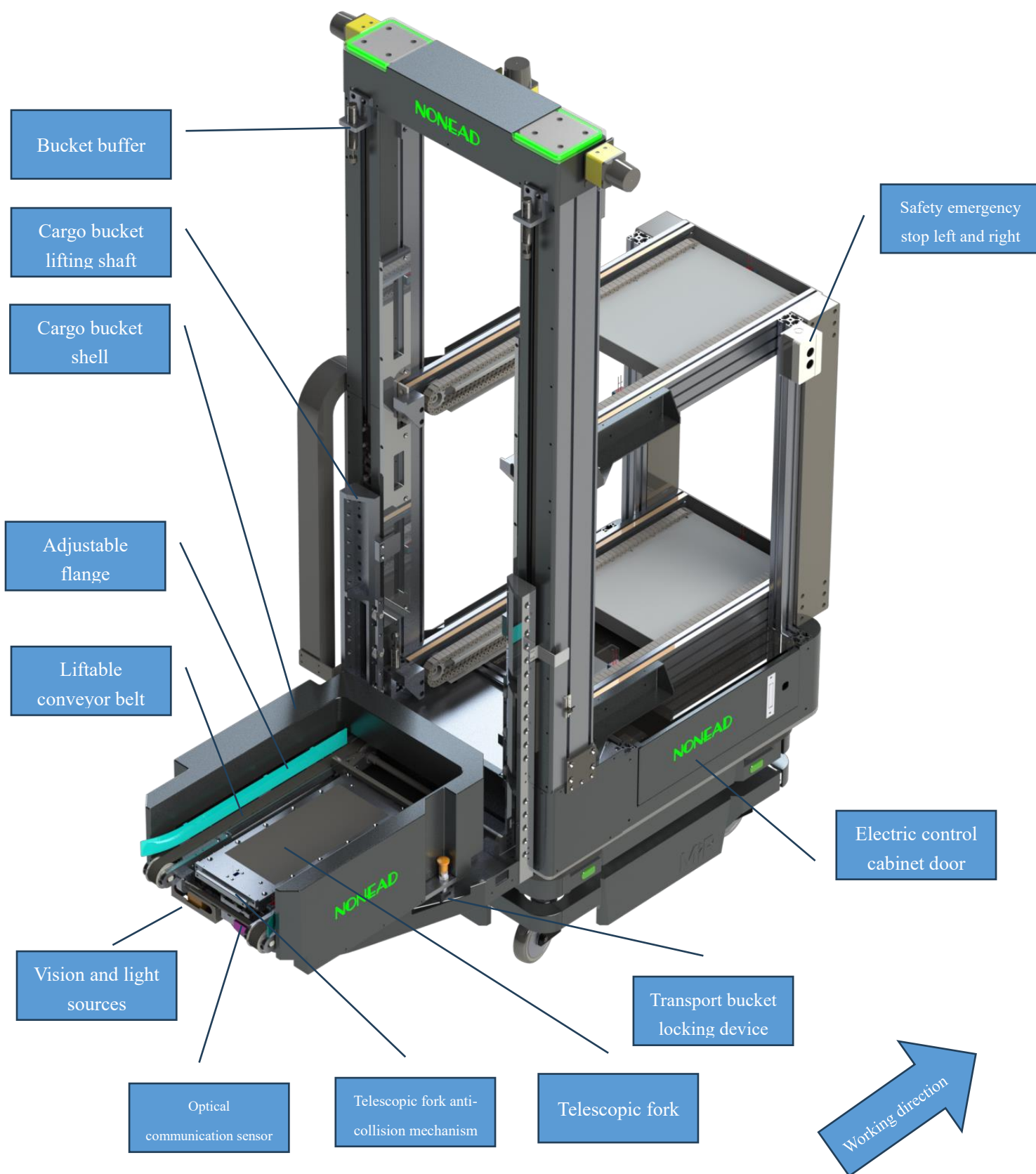
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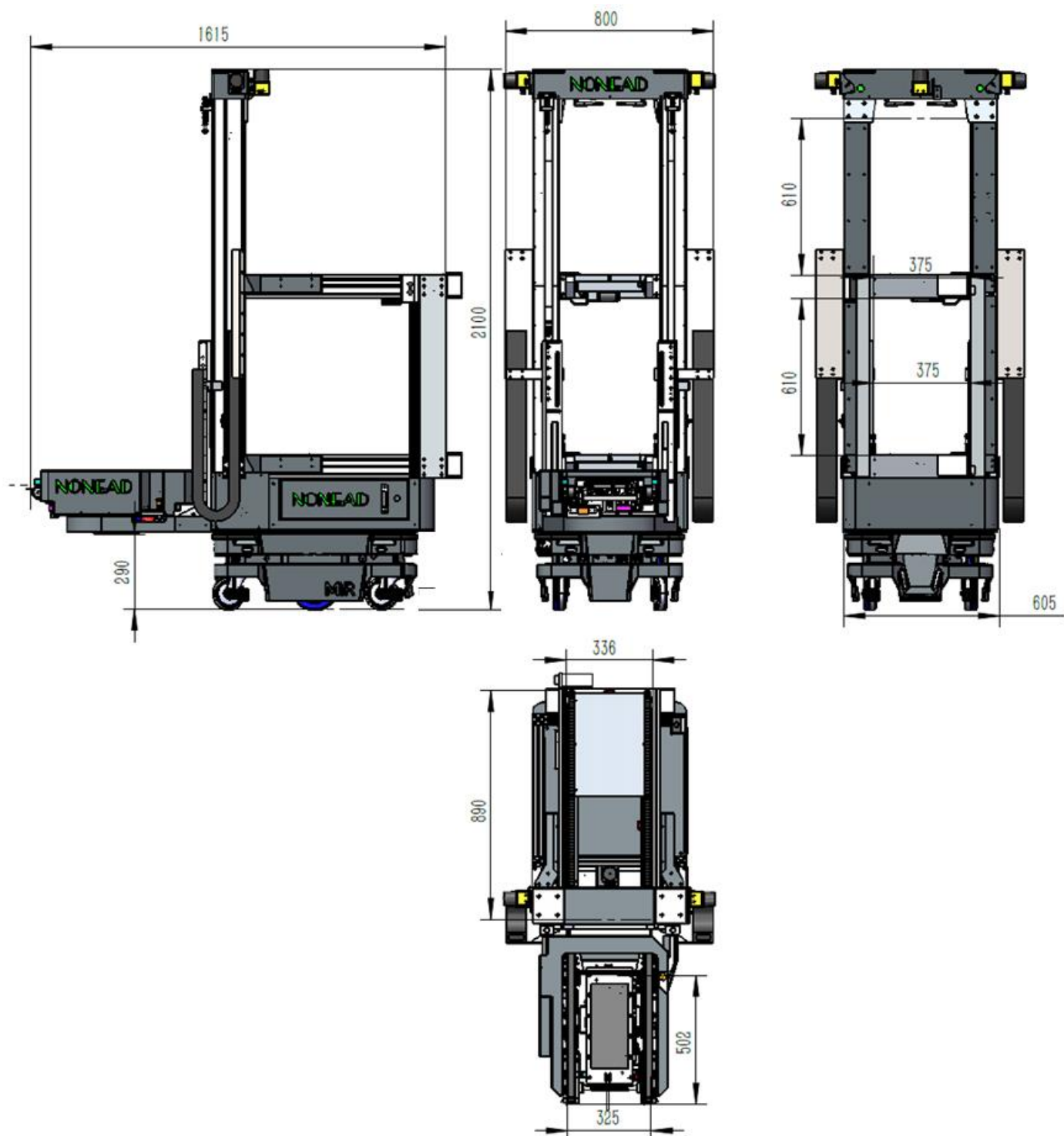
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Dimensional drawing (dimensions during robot transfer)



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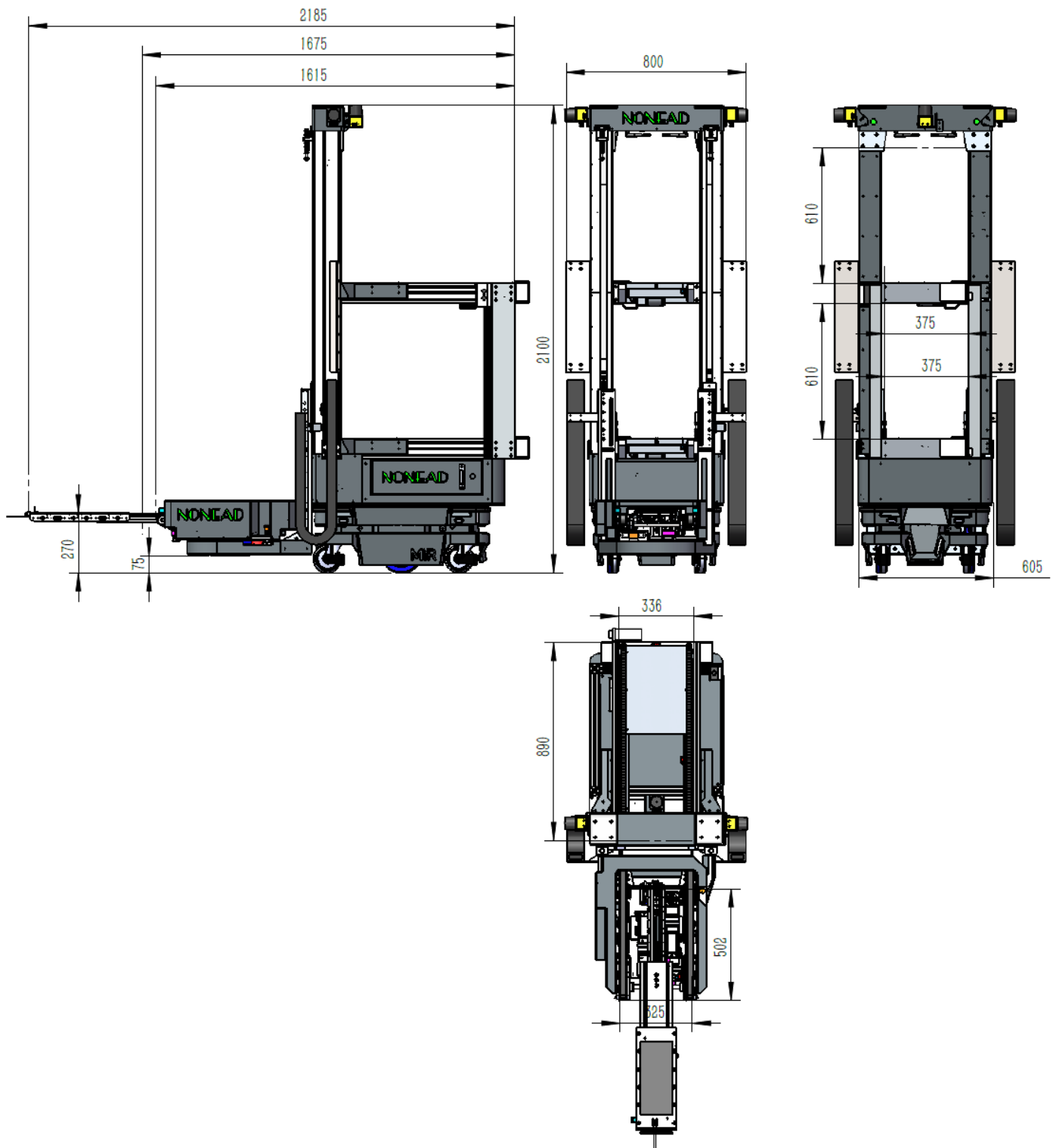
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Dimensional drawing (minimum height of robot fork docking)



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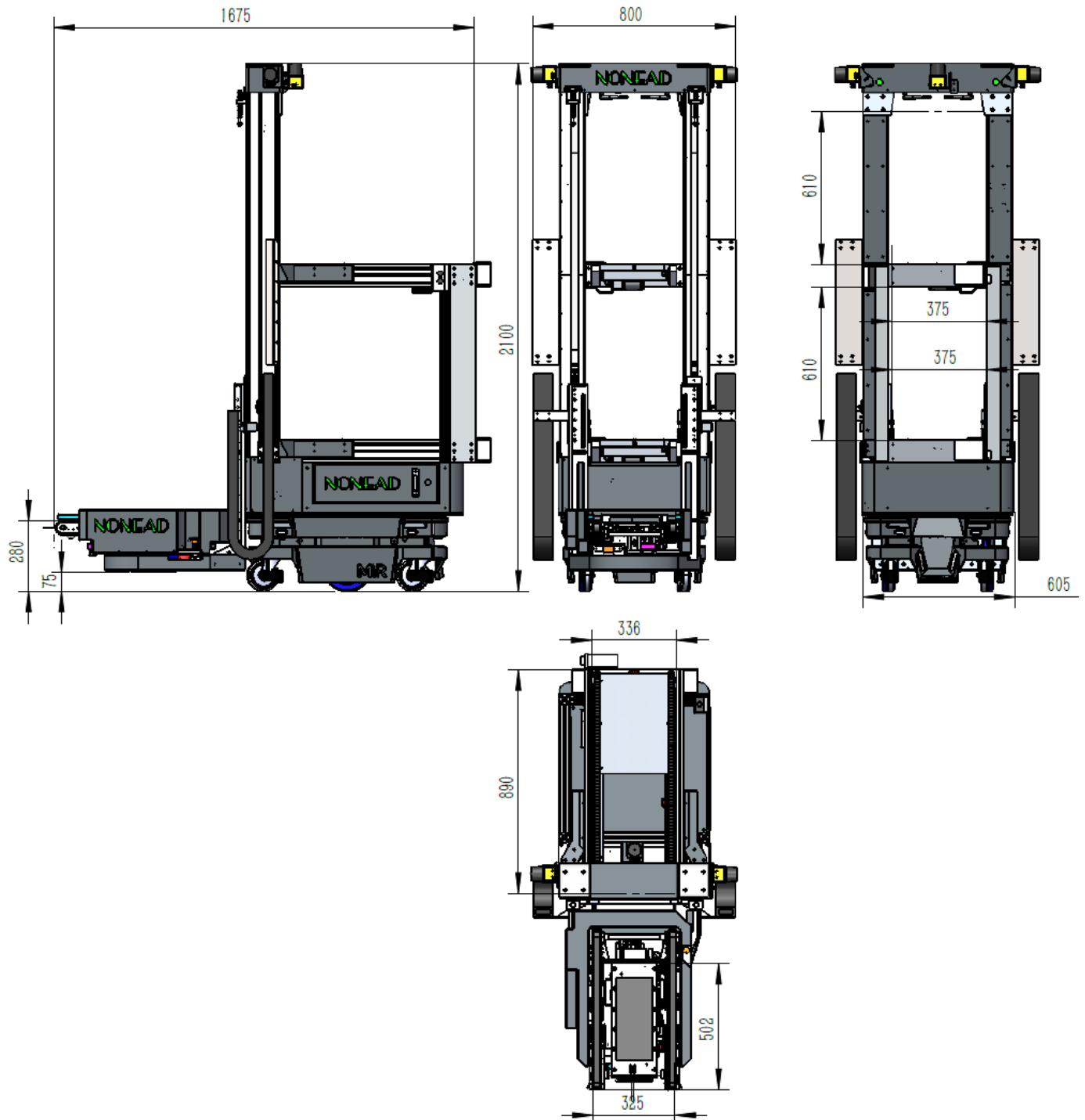
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Dimensional drawing (minimum height of robot track docking)



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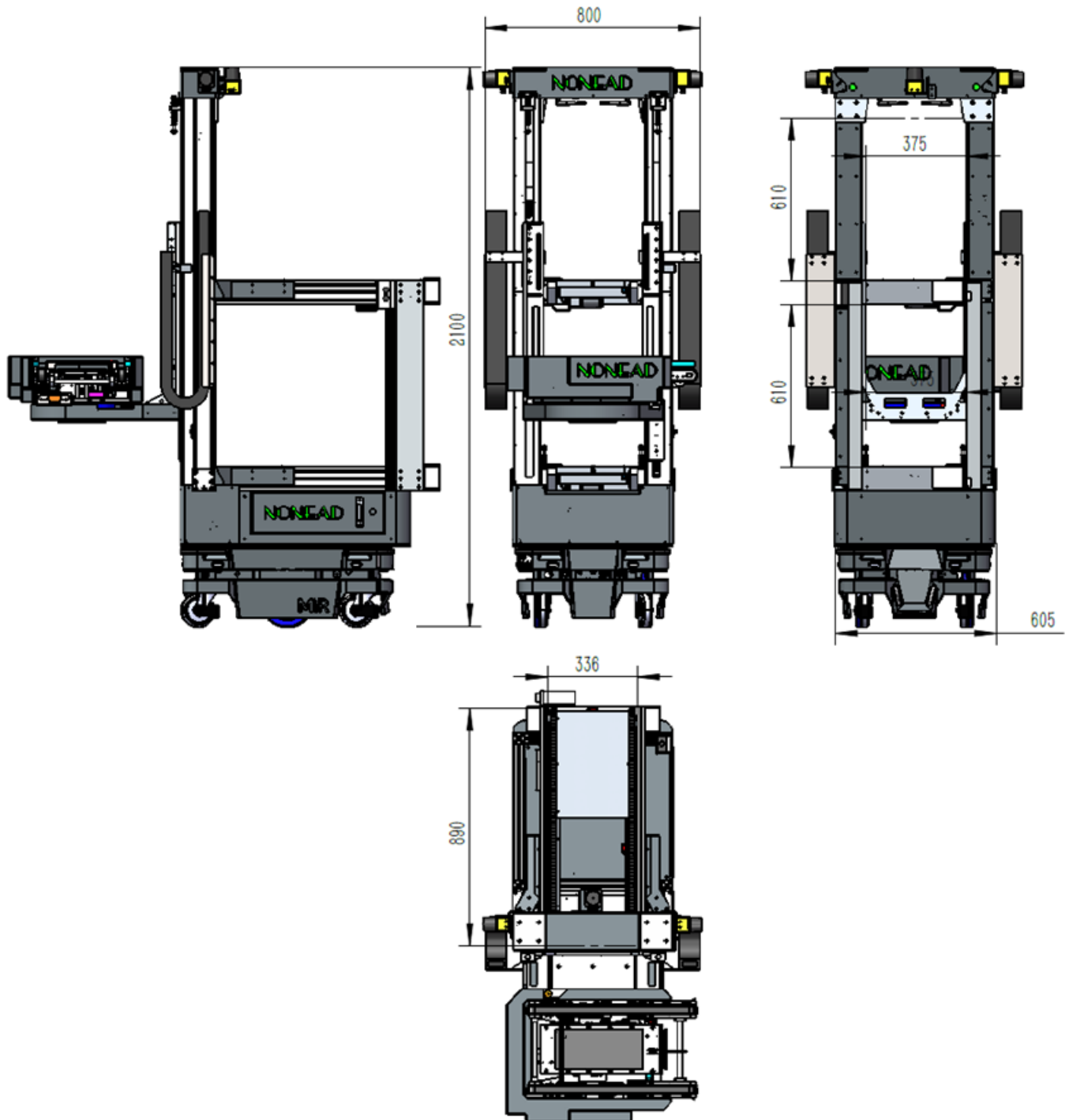
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Dimensional drawing (side alignment)



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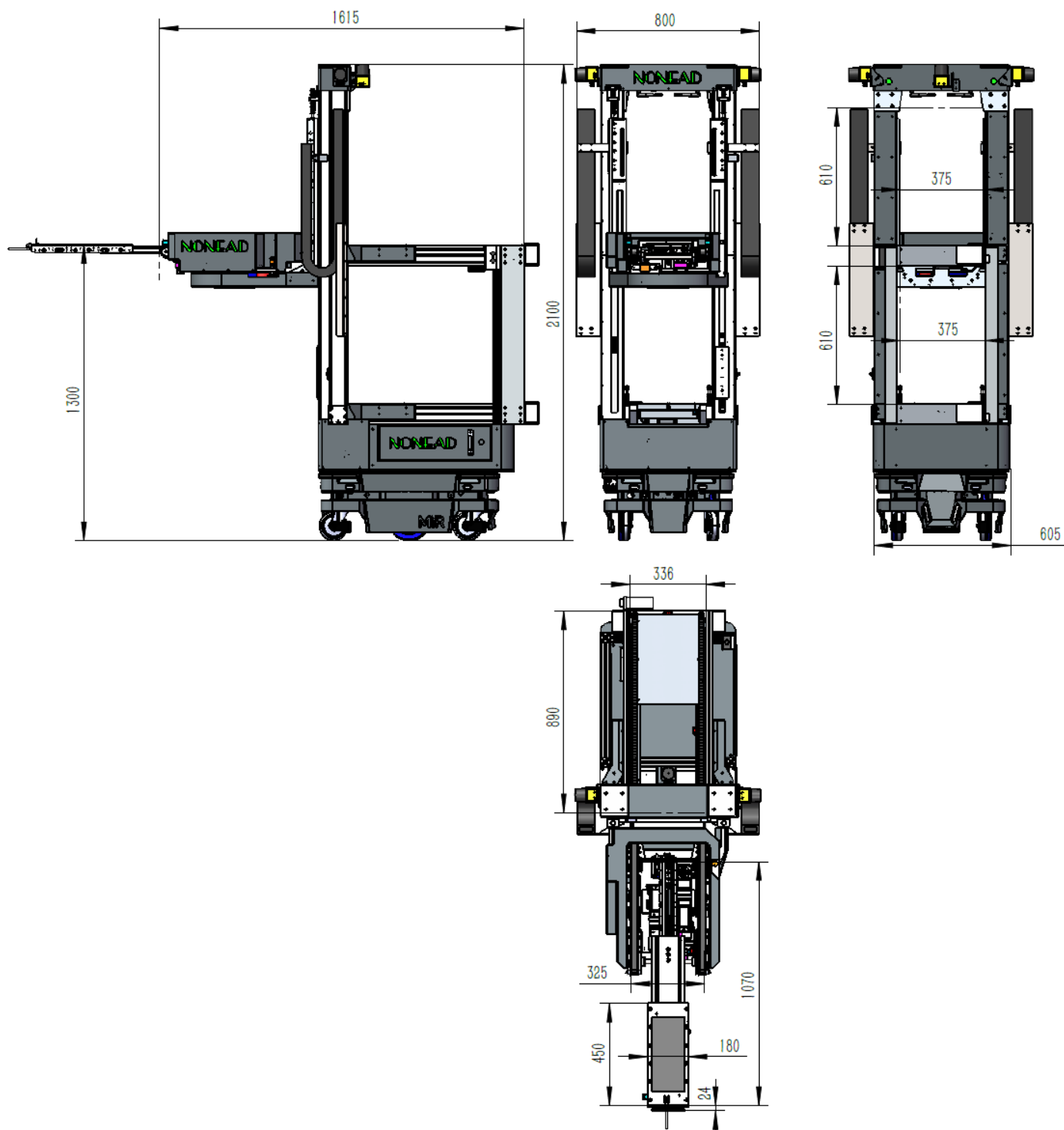
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Dimensional drawing (maximum pick-up height)



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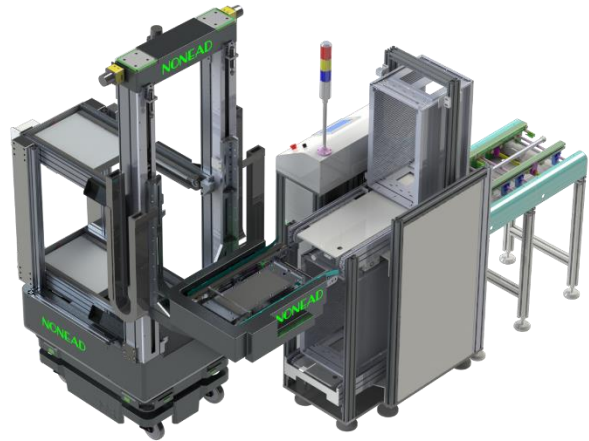
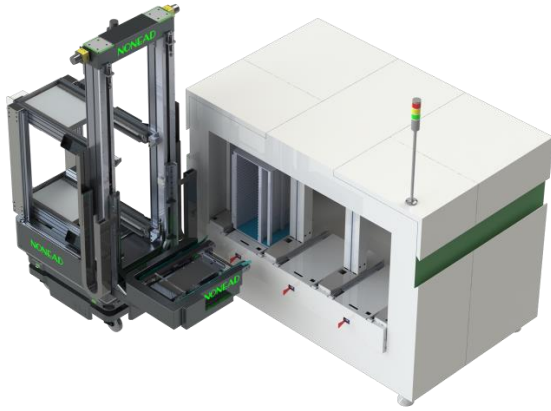
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Docking method (track facing or side facing)



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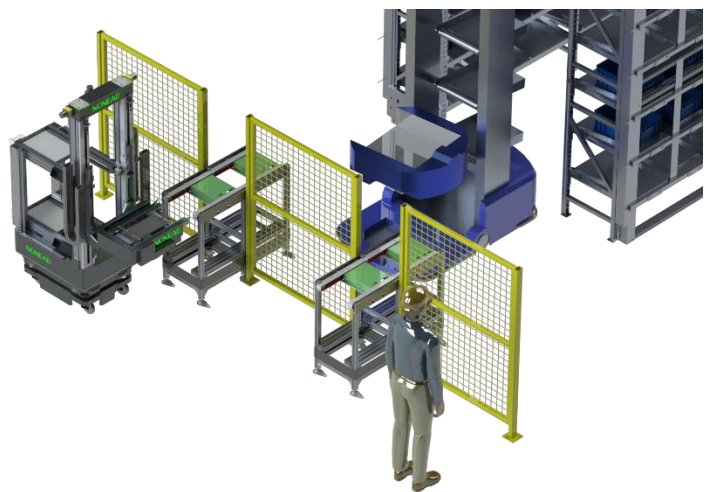
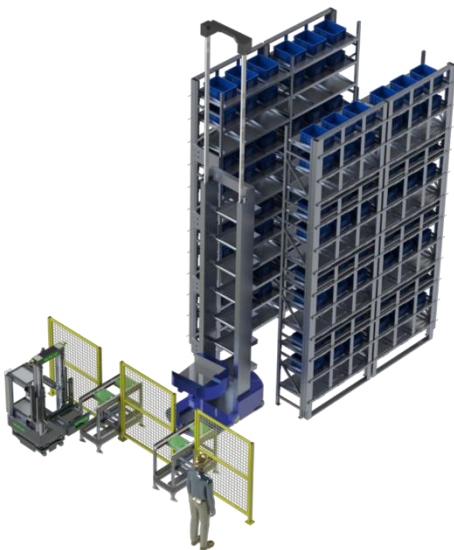


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Docking method (fork facing or side facing)



Docking method (warehouse docking)



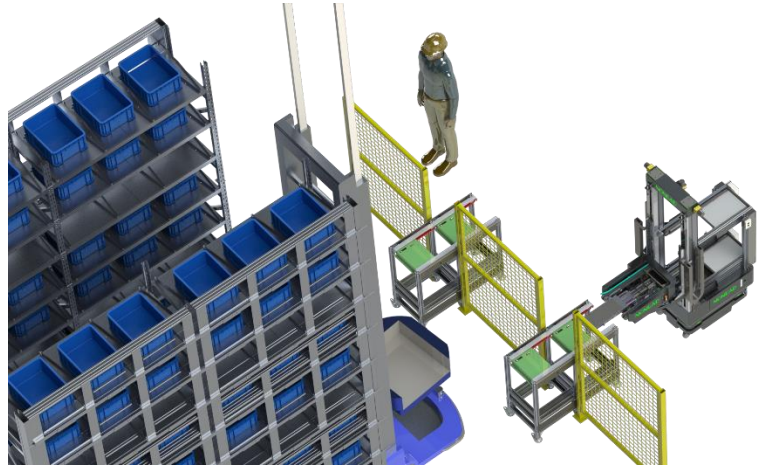
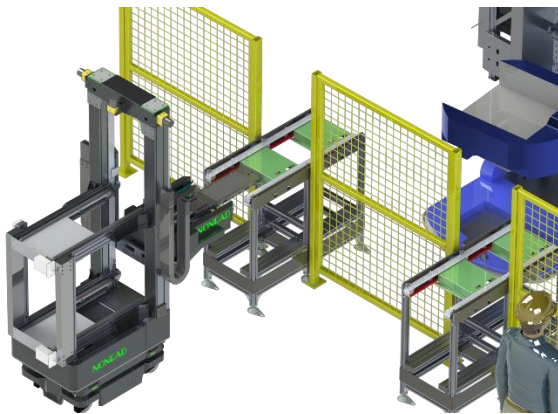
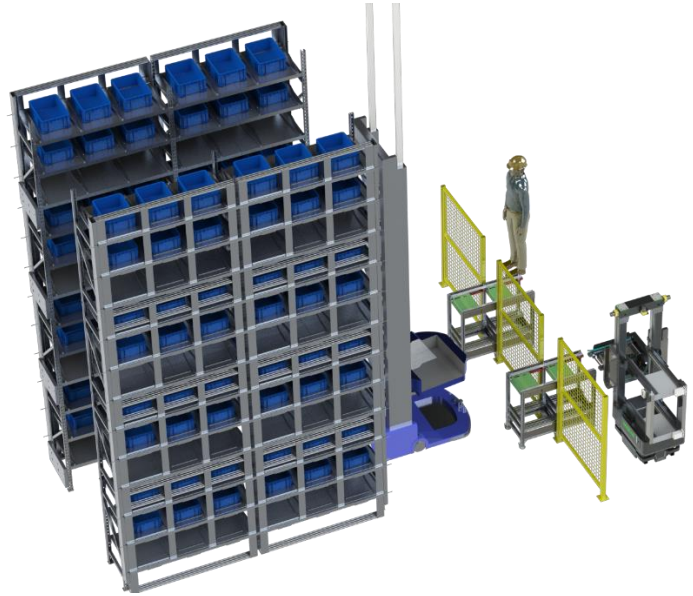
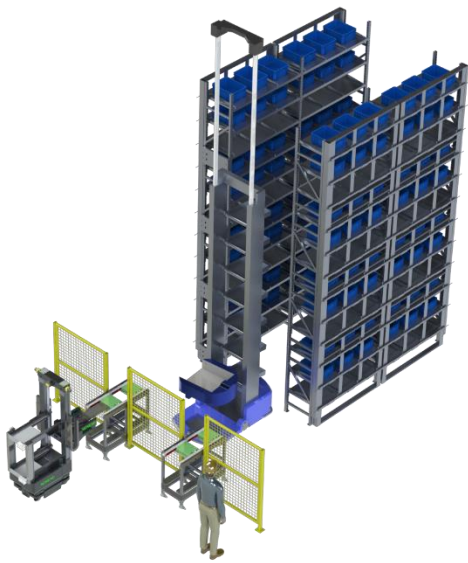
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Technical parameters

ICSCODE	NH0294	nTFOMC
Product name	NONEAD Telescopic Fork Orbital Mobile Cobot	NONEAD Telescopic Fork Orbital Mobile Cobot
Basic parameters	Robot size (mm)	1615*800*2100 (L*W*H)
	Compatible size of cargo box (mm)	350-435*300-325*580 (L*W*H)
	Net weight(KG)	180
	Rotation diameter (mm)	1800
	Maximum load (kg)	100
	Maximum load of cargo box (kg)	30
	Telescopic fork pickup height (mm)	270-1300
	Orbital pick-up height (mm)	280-1310
Repeat positioning accuracy	One-time positioning of mobile collaborative robot map	±30 mm
	VL-Marker or L-Marker Logo secondary positioning	±3 mm
	Vision camera three-dimensional precision positioning camera	2.5D camera ±1mm
	Comprehensive positioning accuracy	Comprehensive repeated positioning accuracy ±1mm
Speed & Performance	Running time	Approximately 5 hours - 8 hours depending on load
	Maximum speed	Forward: 2 m/s Backward: 0.3m/s
	Turning radius	0.85m (Rotate around the center of the robot and measure without carrying a container)
	Minimum crossing gap	10cm
	Height above ground	30mm
	Minimum size	850mm x 560mm x 1600mm
Navigation	Laser navigation	Automatically draw maps, laser navigation, automatically plan paths, operate autonomously, automatically avoid obstacles, take elevators, and mix with people
Net weight	Net weight (No cargo tooling included)	180KG
Power supply	Battery	1 个 Li-NMC, 48 V; Charging time: ≤ 1 hour 100%
Automatic charging pile	L*W*H	620mm x 340mm x 200mm Charging board depth 480mm
	Weight	21 KG
	Install against the wall	Flush with the ground
	Installation height above ground	Ground bottom edge 4.5cm
	Power Output	48V, Maximum current 40A
	Power input	Voltage 100-230V AC, 50-60Hz
	Security related	Push-button relay activates automatic charging, short-circuit relay, 2 overheat protection fans, EN60335-2-29

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Sensor system	Upper laser safety sensor (3 pcs)	2 are protected on both sides when working, and 1 is protected from 1.8 meters to 2.2 meters in front when moving.
	SICK Laser Security Scanner (2 pcs)	360°SICK Nanoscan3 No dead end security protection , SICK security PLC, SICK Safety Relays
	3D Vision Intel RealSense (2 pcs)	Detection object range: the front of the robot, within 2 meters above the ground 50mm-1800mm, 2 meters above the ground 20mm-1800mm
	Ultrasound scanner (4 pcs)	Detect transparent objects: e.g. glass doors
	Dual channel log	Dual wheel independent travel record
	Accelerometer, gyroscope	Acceleration and direction detection
	Mobile collaborative robot	Passed the Industrial EN 1525 indoor unmanned autonomous forklift safety certification, safety level PLd cat.3
	CE certification	Pass
	UL certification	Pass
	Clean room grade	Mobile robot Clean Room certified: Yes
	ESD certification	Pass (Non-ESD standard)
Working environment	Environmental temperature range	0°C to 50°C (humidity 10-90% non-condensing)
	IP Protection level	Upper vehicle IP20, mobile collaborative robot IP20
	Floor flatness requirements	≤5mm
	Gradeability	≤5°
Communication	WiFi	Dual-band wireless AC/G/N/B supports 2.4G or 5G
	API	nURHelper、nMiRHelper、nGripper90Helper、n4DVisionHelper、nCobot V2 API
Control system	Hardware (Vehicle mounted)	Intel nUC, NONEAD nUC
	Software	Control software nCobot V2
	Programming	nCobot V2 NONEAD independently developed visual programming system, WiFi wireless programming, easy to use.
Dispatch system	Hardware	Intel nUC x 2, Non-standard, additional purchase required
	Software	MiR Fleet Official dispatch system, NONEAD Fleet call system, Non-standard, additional purchase required
	Host computer interface form	Web Service