



AFORMIC

FP20

SHUTTLE SYSTEM AMR

A fully automated pallet transport solution with an integrated roller module for seamless loading and unloading

INTEGRATED ROLLER MODULE

The FP20 features a built-in roller module for fully automated pallet loading and unloading, reducing manual labor and boosting efficiency. It integrates seamlessly with existing conveyor systems to ensure smooth material flow in warehouses and production lines.

HIGH PAYLOAD CAPACITY

The FP20 is optimized for efficient pallet transport, with a maximum payload of 1000 kg (2,200 lb). Designed to handle standard loads with ease, its durable structure and integrated roller module ensure smooth operation, precise positioning, and reliable performance — making it a smart choice for fast-paced logistics and production environments.



ADVANCED SLAM NAVIGATION

Equipped with SLAM technology, the FP20 enables real-time mapping and accurate localization. This supports efficient route planning, dynamic obstacle avoidance, and adaptability to changing environments, ensuring reliable operation in dynamic and complex intralogistics settings.

AFORMIC Inc.
140 Congress Blvd,
Suite G Duncan, SC 29334, USA

AFORMIC Polska Sp. z o.o.
Wyczółkowskiego 113
44-109 Gliwice, Poland

sales@aformic.com
aformic.com



COMPREHENSIVE SAFETY SYSTEM

FP20 is equipped with a safety package, including two SICK Micro safety scanners, six emergency stop buttons, 360° laser coverage, and blue spot warning lights. Its onboard IMU module ensures stability and precise motion control even in complex environments, making it safe for operation alongside people and machinery.

GENERAL SPECIFICATIONS

- Payload capacity: 1000 kg (2,200 lb)
- Dimensions (L x W x H):
1916 x 1452 x 500 mm (75.4 x 57.2 x 19.7 in)
- Weight: 538 kg (1,190 lb)
- Maximum speed: 1.5 m/s (4.9 ft/s)
- Drive type: differential
- Drive power: 2 x 1.2 kW

POWER SYSTEM

- Battery type: Lithium-ion (Li-ion)
- Battery capacity: 120 Ah
- Battery voltage: 48 V

TERRAIN CAPABILITIES

- Maximum longitudinal inclination: 3.0°
- Maximum lateral inclination: 5.0°
- Positioning accuracy (+/-): 1.0 cm (0.4 in)

SAFETY FEATURES

- Laser scanner field of view: 360°
- Sick Micro Scanners: 2 units
- Emergency push buttons: 6 units
- Blue spot lamp: 2 units
- Front and rear safety bumpers

NAVIGATION SYSTEMS

- SLAM Technology: yes
- Odometry: yes
- IMU (Inertial Measurement Unit): yes

ENVIRONMENTAL CONDITIONS

- Operating temperature: 15°C – 40°C (59–104 °F)
- Relative humidity: >70%

DIMENSIONS [MM]

