



XuP-Semi

FOUP transport in cleanroom.

*Mean*WHILE

Technical specifications :

| General | |
|-------------------|--------------------------------------|
| Max speed | 1.35m/s (4,85km/h) |
| Dimension (LxWxh) | 700 x 670 x 1850 mm (700mm diameter) |
| Mechanical weight | 135kg |

| Application | |
|-----------------------------------|--------------------------------|
| Technology | 4-axis FOUP positioning system |
| Max pick-up/drop-off height | 921mm |
| Min pick-up/drop-off height | 921mm |
| System lifting and lowering speed | 1,8m/minute |
| Type of containers | Foup Ø300mm |
| Max weight per container | 15kg |
| Payload | 15 kg |

| Mobility | |
|--------------------|--|
| Navigation | Autonomous trajectory generation and tracking through localization using a safety laser scanner based on environmental mapping |
| Movement | Obstacle avoidance and bypass through trajectory calculation |
| Robot map creation | Scanned by moving the robot through its environment |
| Max rotation speed | 180°/s |



| Safety | |
|----------------------|---|
| Safety laser scanner | Located at the front, Class 1 PLd Safety by ISO-13849 Max range : 15 m Field of view : 240° |
| Low front laser | Located at the front, Class 1 Max range : 4m Field of view : 126° |
| Side lasers | On both sides of the mobile robot, Class 1 Max range : 4m Field of view : 270° |
| Emergency Stop | Two buttons placed on each side of the robot |
| Rear Sonar | 2 located at the rear, max range: 2 m |
| Front bumper | One located at the front, two pairs of sensors |
| Warning lights | Light discs on each side + upper LED strip |
| Speakers | 3.5", 80W max |

| Human-Machine Interface | |
|-------------------------|---|
| Touchscreen | 7" TFT LCD screen, 800x480 pixels |
| Manual Mode | Two push buttons to move the robot manually |

| Environnement | |
|-------------------------|---|
| Operating temperature | 5-40° C |
| Ambient humidity | 5 - 95% |
| Application environment | Indoor use only, limited dust, no corrosive gases |
| IP Class | IP20 |
| ESD | No |
| ISO Cleanroom | ISO4 |

| Floor specification | |
|-----------------------|---|
| Floor characteristics | Linoleum, epoxy or concrete (no water, no oil, no dust) |
| Floor flatness | FF25 |
| Traversable step | Max : 10 mm |
| Traversable gap | Max : 10 mm |
| Climb grade | Max : 5% |

| Battery | |
|-------------------|-----------------------|
| Voltage | 22-30 VDC LiFePO4 |
| Capacity | 72 Ah |
| Run time | ± 10 hours |
| Recharge time | ± 4 hours |
| Battery life time | 2 000 recharge cycles |
| Charging method | Automatic, manual |



Communication

| | |
|-------|------------------------|
| WI-FI | IEEE 802.11 a/b/g/ac/n |
|-------|------------------------|

Regulations

| | |
|---------------------------|-------------------------|
| Declaration of conformity | CE marking – ISO 3691-4 |
|---------------------------|-------------------------|

Options

| | |
|--|----------------------------------|
| | Optical transmitter |
| | Visual presence indicator (Spot) |
| | Wireless charger |

