



The Mobile Robot Company

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Technical Integration

How to connect the J1600 to fleet managers, warehouse systems, and other equipment through VDA 5050 and the REST API — and when no integration is needed at all.



System Integrator Technical Guide

Technical orientation for system integrators deploying the J1600 — platform architecture, software levels, integration interfaces, site prerequisites, and commissioning services.



Integration Overview

The J1600's integration options at every scale — from standalone out-of-the-box use with no IT project, through VDA 5050, REST API, and Fleet Manager under the Advanced software.



REST API Documentation

What the J1600 REST API is for, which software level includes it, how to get it installed, and where to request the detailed interface reference.



VDA 5050 Documentation

The J1600's VDA 5050 support — what the interoperability interface enables, how it fits multi-vendor fleets, what software level it requires, and how fleet setup is delivered.



Fleet Manager Guide

The J1600 Fleet Manager software — what it does, per-robot licensing at €6,500 list, how it relates to VDA 5050, and how fleet setup is commissioned.



External System Integration

Connecting the J1600 to warehouse systems, site software, and other equipment — when integration adds value, which interface to use, and who performs the work.



Example Workflows

Worked J1600 task patterns — boomerang, simple ABC, come-to-me, drop-and-wait, deliver-and-park, and multi-point flows — plus the standard delivery and charging workflows.



Integration Troubleshooting

Partner checklist for diagnosing J1600 integration issues — software-level prerequisites, connectivity checks, environment limits, and the escalation path to company support.

System Integrator Technical Guide

This guide orients system integrators who plan to deploy the [J1600 self-driving pallet jack](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>), either as a standalone unit or as part of a larger automation system. It summarizes the platform, the two software levels, the available integration interfaces, and the site conditions to verify before a project starts.

The platform at a glance

Area	What the J1600 provides
Navigation	3D LiDAR SLAM (simultaneous localization and mapping) on an industrial NVIDIA Jetson AI computer
Mapping	Continuous environmental learning while an operator drives; no tracks, wires, reflectors, or building modifications
Safety	Independent safety controller, two 2D safety LiDARs, 360-degree speed-dependent protective field, certified components
Operator interface	15-inch multi-touch HMI, LED start/resume button, three-position key switch, tiller
Connectivity	Wi-Fi optional for basic use; no mandatory IT integration
Integration interfaces	VDA 5050 and REST API (Advanced software), Fleet Manager

[The navigation stack and the safety stack are separate](https://info.mobilerobot.com/safety-compliance/safety-overview/navigation-sensors-vs-safety-sensors/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/navigation-sensors-vs-safety-sensors/>): the 3D LiDAR and RGB AI camera serve [navigation and obstacle avoidance](https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/) (<https://info.mobilerobot.com/products/j1600/navigation-and-obstacle-avoidance/>), while personnel protection uses two dedicated 2D safety LiDARs and certified components. See [how J1600 safety works](https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/) (<https://info.mobilerobot.com/safety-compliance/safety-overview/how-j1600-safety-works/>).

Decide whether integration is needed at all

The J1600 is designed to work out of the box. A single robot running [teach-and-repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>) tasks needs no warehouse management system (WMS), no fleet manager, and [no network connection](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>). Treat [systems integration as an option for scaling](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>), not a prerequisite — many deployments never need it. The [integration overview](https://info.mobilerobot.com/documentation/technical-integration/integration-overview/) (<https://info.mobilerobot.com/documentation/technical-integration/integration-overview/>), maps the options.

Software levels

One J1600 hardware platform supports [two software versions](https://info.mobilerobot.com/products/software/software-comparison/) (<https://info.mobilerobot.com/products/software/software-comparison/>):

	Standard software	Advanced software
Focus	Essential functions, maximum ease of use	Systems integration and fleet scale-up
Task creation	Configuration-free teach and repeat	Teach and repeat plus advanced mission planning
Interfaces	Touchscreen only	VDA 5050, REST API
Fleet	Single unit	Fleet Manager, multi-robot orchestration
Connectivity	Wi-Fi optional	Required for connected functions

The [Advanced software upgrade](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) costs €14,500. It is easiest to install at the factory when the robot is ordered; a partner can perform it later, but the customer cannot perform the upgrade themselves. Plan the software level during specification, not after delivery.

Integration interfaces

- [VDA 5050](https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/>) — full support for the interoperability interface that lets robots

from different vendors run under one compatible fleet layer.

- **REST API** (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>) — software interface for integrating the J1600 with other software and equipment.
- **Fleet Manager** (<https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/>) — per-robot software for orchestrated multi-robot deployments, €6,500 per robot.
- **External system integration** (<https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/>) — approaches for connecting the J1600 to WMS, equipment, and site software.

Site prerequisites to verify

Autonomous operation is an indoor, [level-floor application](https://info.mobilerobot.com/documentation/installation/floor-requirements/) (<https://info.mobilerobot.com/documentation/installation/floor-requirements/>). Verify these limits during the feasibility phase:

Parameter	Requirement
Gradeability, automatic mode	0° / 0% — level floors only
Floor flatness/levelness	TR34 FM3 (FF 25 / FL 20)
Maximum traversable bump	25 mm / 1 in
Maximum traversable gap	20 mm / 0.8 in
Operating temperature	5–40 °C / 41–104 °F
Relative humidity	20–80%, non-condensing
Ingress protection	IP21 — indoor use
Load carriers	Open-base, forkable, within 1,250 × 1,250 mm including overhang, load height up to 1,700 mm

Pallet pickup is always manual, and autonomous pallet delivery is at floor level. Ramps, dock plates, and slopes remain manual-mode tasks.

PRELIMINARY SPECIFICATIONS

The January 2026 [specifications](https://info.mobilerobot.com/products/j1600/technical-specifications/) (<https://info.mobilerobot.com/products/j1600/technical-specifications/>) are preliminary and subject to change. Confirm current figures against the latest product documentation before finalizing a design.

Commissioning services

A fixed-price [installation and commissioning package](https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/) (<https://info.mobilerobot.com/products/buying-and-deployment/installation-and-commissioning/>) (€10,000 end-user list) covers pre-installation feasibility, [risk assessment](https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/) (<https://info.mobilerobot.com/safety-compliance/safe-deployment/site-risk-assessment/>) and project planning, setup of up to 25 [drop points](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/) (<https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/>), task and safety validation, [operator training](https://info.mobilerobot.com/documentation/getting-started/operator-training/) (<https://info.mobilerobot.com/documentation/getting-started/operator-training/>), monitoring, acceptance testing, and handover over five days. Available add-ons include integration with other software and equipment, additional validated drop points, and Fleet Management System setup.

On-site engineering support costs €2,400 per day plus travel.

Getting help

Route technical questions through your local partner or hello@mobilerobot.com. The support portal accepts tickets and device-log uploads, and the robot's Help/Support menu provides a QR code for sending technical requests directly. Partners can consult [integration troubleshooting](https://info.mobilerobot.com/documentation/technical-integration/integration-troubleshooting/) (<https://info.mobilerobot.com/documentation/technical-integration/integration-troubleshooting/>).

Integration Overview

This page maps the J1600's integration options, from a single standalone robot to a multi-vendor fleet. Use it to decide which software level and interfaces a deployment needs.

Integration is optional

[The J1600](https://info.mobilerobot.com/products/j1600/overview/) works out of the box. Basic use requires [no Wi-Fi](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/), no warehouse management system (WMS), no fleet manager, and [no IT integration project](https://info.mobilerobot.com/applications/results/lower-integration-complexity/). An operator [maps the facility by driving](https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/), saves locations, and launches tasks from the touchscreen. Integration capabilities exist for scaling up — they are never a precondition for productive use.

The capability ladder

Level	Capabilities	Requirements
Manual functions	Pallet pick and drop up to 1.6 m; full manual tiller control	None
Basic automation	On-screen task start; saved locations; autonomous travel; floor-level drop; return-to-me; go-to-parking	Standard software
Advanced automation	Come-to-me; automatic charging; VDA 5050 fleet management; API integrations	Advanced software and options

[Come-to-me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) calls the robot to a location through a mobile app or web interface, which means the connected functions on the advanced rung need a network.

Standard and Advanced software

One hardware platform supports [two software versions](https://info.mobilerobot.com/products/software/software-comparison/) (<https://info.mobilerobot.com/products/software/software-comparison/>):

- **Standard software** (<https://info.mobilerobot.com/products/software/standard-software/>) is reduced to essential functions for maximum ease of use. It is built around configuration-free [teach and repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>) and is intended for single-unit deployments without systems integration.
- **Advanced software** (<https://info.mobilerobot.com/products/software/advanced-software/>) adds [VDA 5050](https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/>), interoperability, a [REST API](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>), [Fleet Manager](https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/>), advanced mission planning, and advanced integration with other software and equipment.

Upgrade path

The Advanced software upgrade is priced as a separate item:

Item	End-user list price
Advanced software upgrade	€14,500
Fleet Manager, per robot	€6,500

The upgrade is easiest to install at the factory when the robot is ordered. A partner may perform it later; the customer cannot perform the upgrade. If fleet operation or system integration is plausible within the robot's life, consider ordering the Advanced software with the robot.

Where to go next

- Planning a full project: [system integrator technical guide](https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/>)
- Connecting to a WMS or other equipment: [external system integration](https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/) (<https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/>)

- Multi-vendor fleets: [VDA 5050 documentation](https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/) (https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/) and [VDA 5050 explained](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/) (https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/).
- Typical task flows: [example workflows](https://info.mobilerobot.com/documentation/technical-integration/example-workflows/) (https://info.mobilerobot.com/documentation/technical-integration/example-workflows/).

REST API Documentation

The J1600 offers a REST API for [integrating the robot with other software and equipment](https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/) (<https://info.mobilerobot.com/documentation/technical-integration/external-system-integration/>). This page explains what the API is for, what it requires, and how to obtain the detailed interface reference. It is aimed at integrators and technical staff planning a connected deployment.

What the API is for

The REST API is the J1600's software interface for custom integrations: connecting the robot to site software and equipment beyond what the [touchscreen workflow](https://info.mobilerobot.com/documentation/technical-integration/example-workflows/) (<https://info.mobilerobot.com/documentation/technical-integration/example-workflows/>) covers. It is part of the advanced automation capability set, alongside [come-to-me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (<https://info.mobilerobot.com/applications/scenarios/come-to-me/>), automatic charging, and [VDA 5050](https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/>), fleet management.

The API is never required for basic use. A standalone J1600 runs [teach-and-repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>) tasks with [no network connection](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>) and [no integration project](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>).

Requirements

API access is included in the [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) package, together with VDA 5050 interoperability, [Fleet Manager](https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/>), advanced mission planning, and advanced system integration. The upgrade has a list price of €14,500.

The upgrade is easiest to install at the factory when the robot is ordered. A partner can install it on an existing robot later; the customer cannot perform the upgrade.

Choosing between the API and VDA 5050

Use [VDA 5050](https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/>) when the goal is fleet coordination under a compatible fleet-management layer, including fleets that mix robot vendors. Use the REST API for direct integration between the J1600 and other software or equipment. The two can coexist under the same Advanced software package.

Getting the interface reference

The detailed endpoint reference is available on request — contact your local partner or hello@mobilerobot.com for the current API documentation when scoping an integration.

Integration support

Integration with other software and equipment is available as an add-on to the [installation and commissioning package](https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/#commissioning-services) (<https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/#commissioning-services>). On-site engineering support has a list price of €2,400 per day plus travel. If an integration misbehaves after go-live, partners can follow [integration troubleshooting](https://info.mobilerobot.com/documentation/technical-integration/integration-troubleshooting/) (<https://info.mobilerobot.com/documentation/technical-integration/integration-troubleshooting/>).

VDA 5050 Documentation

The J1600 has full VDA 5050 support. This page covers what that means in practice for a deployment: what the interface enables, what it requires, and how a VDA 5050 fleet setup is delivered. For the standard itself, see [VDA 5050 explained](https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/) (<https://info.mobilerobot.com/documentation/concepts/vda-5050-explained/>).

What VDA 5050 enables on the J1600

VDA 5050 is the interoperability interface that lets mobile robots from different vendors work together in the same space under a compatible fleet-management layer. With VDA 5050 enabled, the J1600 can:

- operate as part of a fleet coordinated by a VDA 5050 fleet manager;
- coexist with robots from other vendors under the same fleet layer;
- scale from a single teach-and-repeat unit into an orchestrated multi-robot deployment without changing hardware.

The Mobile Robot Company works with established VDA 5050 fleet-management providers.

Requirements

VDA 5050 support is part of the [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) package (€14,500 end-user list), which also includes the [REST API](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>), [Fleet Manager](https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/>), and advanced mission planning. The upgrade is easiest to install at the factory when the robot is ordered; a partner can install it later, but customers cannot install it themselves.

Connected fleet operation requires a network. Basic standalone use of the J1600 does not — [Wi-Fi is optional out of the box](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/) (<https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/>).

Planning a VDA 5050 deployment

1. Order the robots with Advanced software, or have a partner upgrade existing units.
2. Confirm interface specifics — including the supported VDA 5050 version and the fleet-management products validated for your project — with The Mobile Robot Company or your partner during scoping.
3. Include Fleet Management System setup in the commissioning scope. It is an add-on to the [installation and commissioning package](https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/#commissioning-services) (<https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/#commissioning-services>).
4. Validate tasks and safety on site as part of commissioning before handover.

When VDA 5050 is the wrong tool

A single J1600 serving one flow needs no fleet layer: [teach and repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>) on the [Standard software](https://info.mobilerobot.com/products/software/standard-software/) (<https://info.mobilerobot.com/products/software/standard-software/>) covers it. For direct point integrations with site software or equipment rather than fleet coordination, use the [REST API](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>).

Fleet Manager Guide

Fleet Manager is The Mobile Robot Company's software for orchestrated multi-robot J1600 deployments. This page explains when a fleet manager is needed, how Fleet Manager is licensed, and how it is set up.

When you need a fleet manager

A single J1600 does not need one: the operator creates and launches tasks directly on the touchscreen. A fleet layer becomes relevant when an application grows — several robots sharing routes and zones, orchestrated missions across a site, or coordination with robots from other vendors. Fleet operation is part of the J1600's [progressive-scaling design](https://info.mobilerobot.com/documentation/technical-integration/integration-overview/) (<https://info.mobilerobot.com/documentation/technical-integration/integration-overview/>): start with one standalone unit, add fleet software when the application justifies it.

What Fleet Manager provides

- orchestration of multiple J1600 robots in one deployment;
- advanced mission planning beyond single-robot teach-and-repeat tasks;
- a scaling path that keeps the same hardware and the same [operator workflow](https://info.mobilerobot.com/documentation/technical-integration/example-workflows/) (<https://info.mobilerobot.com/documentation/technical-integration/example-workflows/>).

Fleet Manager belongs to the [Advanced software](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>), portfolio, alongside [VDA 5050](https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/>) interoperability and the [REST API](https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/) (<https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/>).

Licensing

Item	End-user list price
Fleet Manager software, per robot	€6,500
Advanced software upgrade	€14,500

Fleet Manager is licensed per robot. The Advanced software upgrade is easiest to install at the factory when a robot is ordered; a partner can perform it later, and customers cannot perform it themselves.

Fleet Manager or a third-party VDA 5050 fleet layer

The J1600 has full VDA 5050 support, and The Mobile Robot Company works with established VDA 5050 fleet-management providers. Sites that already run — or plan to run — a mixed-vendor fleet under a VDA 5050 layer can integrate the J1600 into it. Discuss which fleet approach fits your site with the company or your partner during scoping.

Setup and commissioning

Fleet Management System setup is available as an add-on to the [installation and commissioning package](https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/#commissioning-services) (<https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/#commissioning-services>), which also covers [drop-point creation](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/) (<https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/>), task and safety validation, operator training, and acceptance testing. For issues after go-live, partners can use [integration troubleshooting](https://info.mobilerobot.com/documentation/technical-integration/integration-troubleshooting/) (<https://info.mobilerobot.com/documentation/technical-integration/integration-troubleshooting/>).

External System Integration

This page covers connecting the J1600 to systems outside the robot: warehouse management systems (WMS), fleet layers, site software, and other equipment. It is for teams deciding whether, when, and how to integrate.

Integration is a choice, not a requirement

The J1600's [basic workflow](https://info.mobilerobot.com/products/j1600/how-it-works/) — map by driving, [save locations](https://info.mobilerobot.com/documentation/getting-started/saving-the-first-location/), launch tasks from the touchscreen — requires no WMS, no fleet manager, [no Wi-Fi](https://info.mobilerobot.com/documentation/installation/network-and-wi-fi-requirements/), and no IT project. Optional rather than mandatory systems integration is a [core design principle](https://info.mobilerobot.com/company/about/our-approach-to-automation/): a deployment can stay standalone for its entire life, or scale into a connected system when the application grows.

This matters for cost. Full automation of a pallet flow typically requires WMS-to-fleet-manager integration, precise load data, and tightly controlled processes. Keeping the operator in the loop lets the J1600 skip that layer for most deployments. See [human-in-the-loop automation](https://info.mobilerobot.com/documentation/concepts/human-in-the-loop-automation/).

Available integration routes

Route	Use it for	Requires
VDA 5050 (https://info.mobilerobot.com/documentation/technical-integration/vda-5050-documentation/)	Fleet coordination, including multi-vendor fleets under one compatible fleet layer	Advanced software
REST API (https://info.mobilerobot.com/documentation/technical-integration/rest-api-documentation/)	Direct integration with other software and equipment	Advanced software
Fleet Manager (https://info.mobilerobot.com/documentation/technical-integration/fleet-manager-guide/)	Orchestrated multi-J1600 deployments and advanced mission planning	Per-robot license

The [Advanced software upgrade](https://info.mobilerobot.com/products/software/advanced-software/) (<https://info.mobilerobot.com/products/software/advanced-software/>) (€14,500 end-user list) covers VDA 5050, the REST API, advanced mission planning, and advanced system integration with other software and equipment. It is easiest to install at the factory with the robot order; a partner can retrofit it, and customers cannot install it themselves.

Who performs the integration

Integration with other software and equipment is offered as an add-on to the five-day [installation and commissioning package](https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/) (<https://info.mobilerobot.com/documentation/technical-integration/system-integrator-technical-guide/>) (€10,000 end-user list), which also handles feasibility, drop points, task and safety validation, training, and acceptance testing. On-site engineering support lists at €2,400 per day plus travel. Partners and The Mobile Robot Company deliver this work; contact your partner or hello@mobilerobot.com to scope a project.

Typical scaling sequence

1. **Standalone start.** One robot, [Standard software](https://info.mobilerobot.com/products/software/standard-software/) (<https://info.mobilerobot.com/products/software/standard-software/>), [teach-and-repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>) tasks. Value from day one, [no integration](https://info.mobilerobot.com/applications/results/lower-integration-complexity/) (<https://info.mobilerobot.com/applications/results/lower-integration-complexity/>).

2. **Connected functions.** Add Wi-Fi to use [come-to-me](https://info.mobilerobot.com/applications/scenarios/come-to-me/) (https://info.mobilerobot.com/applications/scenarios/come-to-me/) (calling the robot from a mobile app or web interface) and automatic charging.
3. **Fleet and systems.** Upgrade to Advanced software for VDA 5050, the REST API, and Fleet Manager when several robots or external systems enter the picture.

For concrete task patterns at each stage, see [example workflows](https://info.mobilerobot.com/documentation/technical-integration/example-workflows/) (https://info.mobilerobot.com/documentation/technical-integration/example-workflows/).

Example Workflows

This page collects the J1600's standard task patterns and end-to-end workflows. Use it to match a material flow in your facility to a task type the robot already supports.

The standard delivery workflow

The most common task is [manual pickup, autonomous delivery](https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/) (<https://info.mobilerobot.com/applications/scenarios/manual-pickup-and-autonomous-delivery/>), floor-level drop, and [return to origin](https://info.mobilerobot.com/applications/scenarios/deliver-and-return/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-return/>):

1. Manually pick up a [supported pallet or load carrier](https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/) (<https://info.mobilerobot.com/products/j1600/pallet-and-load-compatibility/>).
2. Open task creation on the touchscreen.
3. Choose the task type and a saved drop destination.
4. Choose what happens after delivery: return to origin, go to another point or parking, or stop and wait.
5. Execute the task.
6. The robot asks to enter automatic mode; confirm with the physical start/resume button.
7. Step away when the interface instructs you to.
8. The J1600 [travels autonomously](https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/) (<https://info.mobilerobot.com/documentation/user-guides/autonomous-operation/>), avoids obstacles, drops the pallet at floor level, and performs the selected post-delivery action.

The route can be a few meters or well over 100 meters — the workflow is the same. Pallet pickup is always manual, and autonomous delivery is always at floor level.

Named task patterns

Pattern	Behavior	Software level
Boomerang	Deliver to a destination, then return to the origin/operator	Basic automation
Simple ABC	Deliver from A to B, then travel on to C	Basic automation
Drop and wait	Deliver, drop, and remain at the destination	Basic automation
Deliver and park	Complete the drop, then proceed to a defined parking location	Basic automation
Multi-point to multi-point	Combine saved points freely for cross-docking and changing flows	Basic automation
Come to me	Call the robot to a location from a mobile app or web interface	Advanced automation

Locations are created by driving to a point and tapping **Save location** — see [teach and repeat](https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/) (<https://info.mobilerobot.com/documentation/concepts/teach-and-repeat/>). Saved points recombine freely: you do not teach every A-to-B variation, and there is no software limit on the number of [saved locations](https://info.mobilerobot.com/documentation/user-guides/location-management/) (<https://info.mobilerobot.com/documentation/user-guides/location-management/>).

First-time setup workflow

1. Power on the J1600 and follow the on-screen tutorial.
2. [Drive manually through the facility](https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/) (<https://info.mobilerobot.com/documentation/getting-started/creating-the-first-map/>) with the tiller. The robot continuously learns and updates its 3D map.
3. Drive to each desired autonomous [floor-drop point](https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/) (<https://info.mobilerobot.com/documentation/installation/mapping-and-drop-point-setup/>).
4. Tap **Save location**, name the point, and repeat for every destination.

A worked example: drive to a bay, save it as "Pallet Bay 1", create a task with **Drop Pallet at Location**, choose [stop-and-wait](https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/) (<https://info.mobilerobot.com/applications/scenarios/deliver-and-wait/>), execute, confirm automatic mode, and step back.

Charging workflows

- **Manual charging** (<https://info.mobilerobot.com/documentation/user-guides/charging/>): plug in the charger during a break or when the machine is idle, as with a conventional electric pallet jack.
- **Automatic charging** (<https://info.mobilerobot.com/applications/scenarios/automatic-charging/>) (**advanced automation**): the robot drives to the station, positions itself, and the charging interface extends to the vehicle's charging plates. This enables opportunity charging whenever the robot is not busy.

Material-flow examples

- **Inbound receiving** (<https://info.mobilerobot.com/applications/use-cases/inbound-receiving/>): unload the truck manually, then send the pallet autonomously to inspection or storage.
- **Production supply** (<https://info.mobilerobot.com/applications/use-cases/production-supply/>): an operator picks or prepares a pallet; the J1600 delivers materials to the line on demand.
- **Cross-docking** (<https://info.mobilerobot.com/applications/use-cases/cross-docking/>): shuffle pallets across multiple origins and destinations by combining saved points — no bespoke task per pair.
- **Temporary storage** (<https://info.mobilerobot.com/applications/use-cases/temporary-storage/>): create short-lived storage points in minutes when demand changes.
- **Buffer and staging management** (<https://info.mobilerobot.com/applications/use-cases/buffer-and-staging-management/>): transport between lines, staging areas, and storage zones.
- **Receiving-storage-production-shipping** (<https://info.mobilerobot.com/applications/use-cases/production-to-shipping-transport/>): automate the long travel segments that connect standard warehouse zones.

For the environments these flows suit, see the [J1600 overview](https://info.mobilerobot.com/products/j1600/overview/) (<https://info.mobilerobot.com/products/j1600/overview/>); for integrating workflows with fleet or site software, see the [integration overview](https://info.mobilerobot.com/documentation/technical-integration/integration-overview/) (<https://info.mobilerobot.com/documentation/technical-integration/integration-overview/>).