

TRACE SMART LOCKER

**Secure package exchange for
autonomous last-mile deliveries**



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TRACE

inTegration & haRmonizAtion
of logistiCs opErations

**A smart delivery product
that connects the physical
locker with the TRACE
platform in real time.**

Designed as a controlled exchange point, the locker supports secure loading and pickup operations for urban and campus delivery scenarios.



Controlled access

PIN-based opening for each compartment.



Platform connected

Status updates are synchronized with TRACE.



Two-compartment design

Supports separate package handling flows.

SMART EXCHANGE POINT

Built for pilots where packages must move between operators, autonomous vehicles, and the final recipient.



Touchscreen operation



Real-time status visibility



Delivery progress tracking



Simple operator workflow

KEY VALUES

A compact and platform-connected locker for controlled package exchange.



Security

PIN generation controls access to the appropriate compartment.



Operational clarity

Loading, unloading, and completion are treated as distinct delivery states.



Synchronization

Locker events are reflected in the TRACE platform without manual reporting.



Pilot readiness

Suitable for demonstrations, campus scenarios, and safe exchange areas.

TRACE Smart Locker | Product overview

HOW IT WORKS



1 Select compartment

Operator uses the touchscreen interface.



2 Generate PIN

The selected compartment receives a secure access code.



3 Load / pickup package

The door is opened, the parcel is handled, and the door is closed.



4 Update TRACE

The platform receives the latest delivery status.

Result: a controlled physical handover with real-time digital visibility.

Designed for safe exchange areas and autonomous last-mile delivery demonstrations.

TECHNICAL HIGHLIGHTS

Core elements of the prototype



Raspberry Pi 5 + Raspberry Pi OS



Touchscreen user interface



Two solenoid-controlled compartments



Approx. 5–10 sec startup time



Kafka-based TRACE synchronization

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