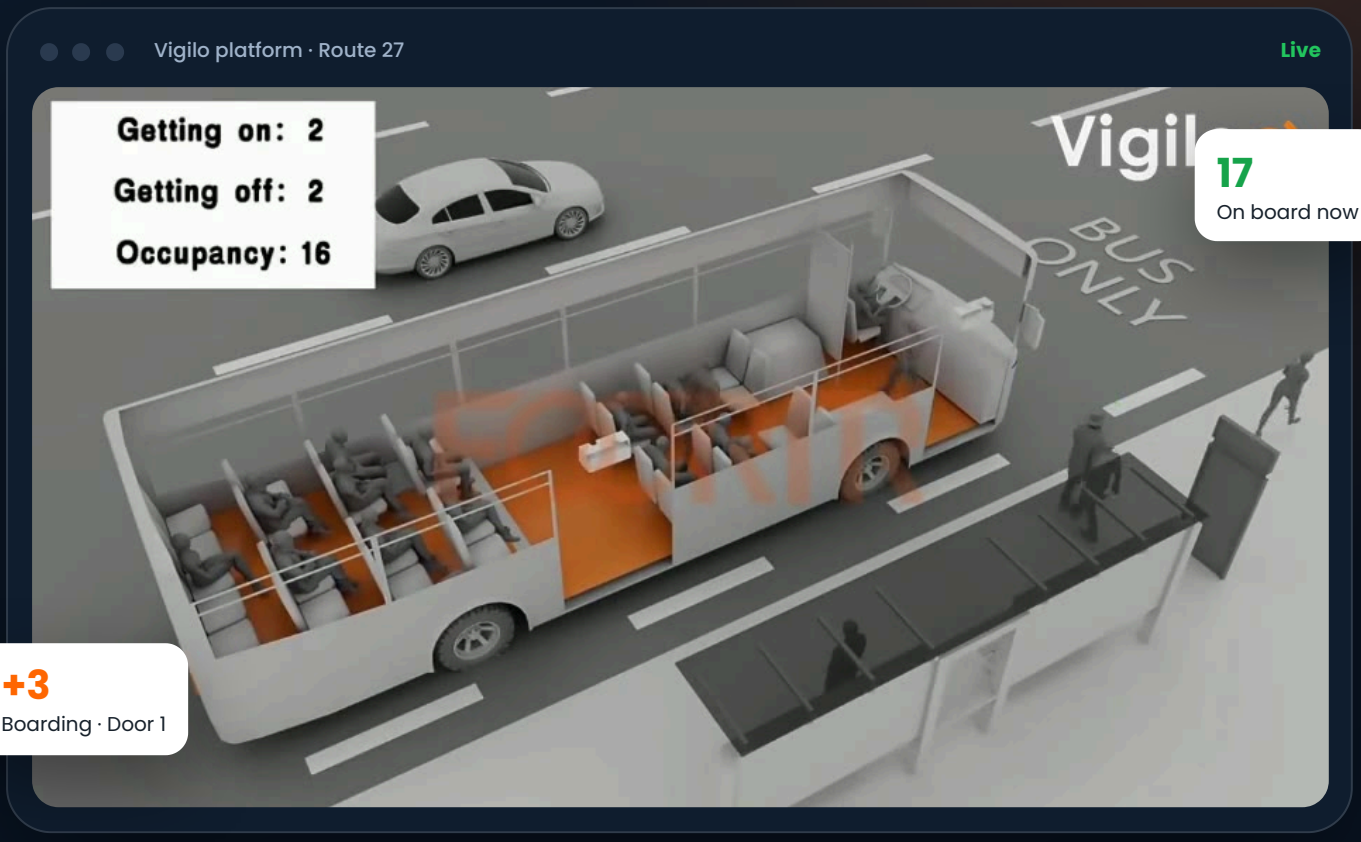
Vigilo

Passenger transport · Ecuador

# 3D Passenger Counter

Know how many passengers board, alight and ride at every stop of your buses. Plan frequencies better and control every fare of your revenue.

- Frequencies based on real data
- Revenue control
- Live occupancy + GPS




**98%**
maximum accuracy*

**3D**
binocular vision

**24 h**
day and night

**Live**
data + GPS position

HOW IT WORKS

# One sensor above every door. Zero effort for the driver.

The counter is installed in the ceiling, above each bus door. When the door opens it starts counting and, when it closes, it sends the result to the Vigilo platform together with the stop, the time and the GPS position.

**01**

### The door opens

The counter receives the door-open signal and starts counting automatically.

**02**

### It counts in 3D

The two cameras measure the height, volume and direction of each person: it knows whether they board or alight.

**03**

### It sends the data

Boardings, alightings and occupancy reach the Vigilo platform with the stop, the time and the GPS position.

## ACCURATE EVEN WHEN THE BUS IS FULL

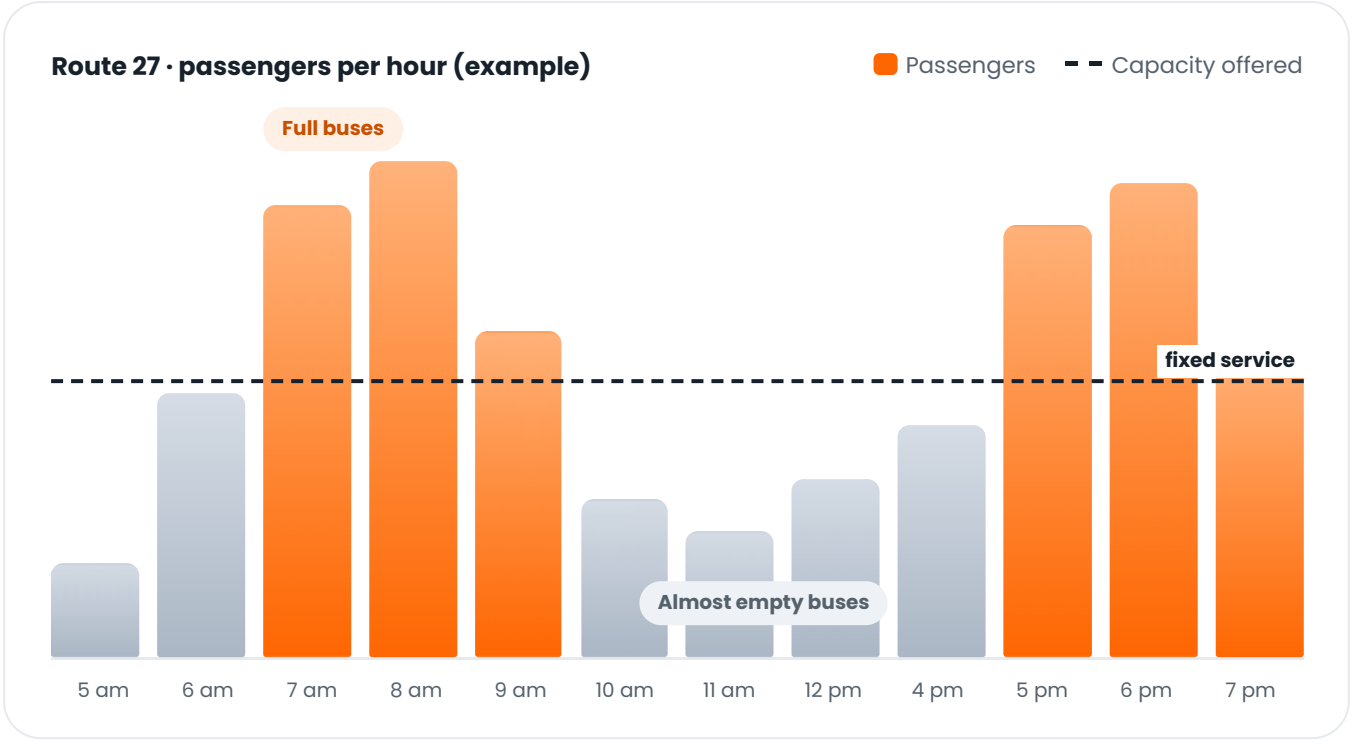
- ✓ **Binocular 3D vision:** Two cameras calculate depth: it tells people apart by height and path, not by color.
- ✓ **Filters luggage and strollers:** It ignores suitcases, bags and strollers, and lets you set a height limit so children are not counted if needed.
- ✓ **Stable on the move:** Image stabilization and lens angle correction for a steady reading.
- ✓ **People together or crossing:** It counts correctly even when people board in groups, sideways or cross at the door.
- ✓ **Day and night:** It works in direct sunlight and in the dark: the infrared light switches on by itself when needed.
- ✓ **One-click calibration:** It adjusts to the mounting height by itself and saves the settings. Quick, clean installation.

**95–98%** accuracy depending on the type of door, the installation height and the passenger flow. We advise you on the best position on every bus.

BENEFIT 1 · PLANNING

# Set better frequencies on every route

Stop scheduling runs by guesswork. The counter shows the real demand on each route by hour, by stop and by day of the week, so you can put the buses where the passengers are.




### Reinforce peak hours

More runs where the buses are full and people are left waiting at the stop.

### Trim off-peak hours

Fewer empty runs: save fuel, wear and driver hours.

### Stops that really pay

Find the stops with the most boardings and adjust the route and its timetable.

BENEFIT 2 · FINANCIAL CONTROL

# Keep tighter control of your revenue

Every passenger who boards is recorded. Compare the passengers counted with the fares sold or validated in your fare collection system and spot instantly where money is being lost.

### Daily reconciliation by bus (example)

| Bus | Driver | Passengers counted | Fares validated | Not validated | Evasion |
|---|---|---|---|---|---|
| Bus 104 | Driver A | 612 | 605 | 7 | 1.1% |
| Bus 117 | Driver B | 585 | 531 | 54 | 9.2% |
| Bus 122 | Driver C | 640 | 634 | 6 | 0.9% |
| Bus 130 | Driver D | 498 | 451 | 47 | 9.4% |

Illustrative example. Demonstration figures, not from a real customer.

**≈ 900**
fares / bus / month

If a bus carries 600 passengers a day and only 5% do not pay, that is 30 unpaid fares a day: **about 900 fares a month per bus**. Multiply it by your fleet and by the price of the fare.

### Detect fare evasion

Alerts when the passengers counted do not match the fares validated.

### Compare drivers

Ranking by bus, route and shift. Objective data, no arguments.

### Deterrent effect

When staff know that every passenger is counted, losses go down.

AND ALSO

# Much more than counting passengers

The counter data adds to everything the Vigilo platform already gives you: GPS position, routes, speed and alerts. One single screen to manage your fleet.

### Occupancy control

Live occupancy of every bus and alerts when it is overloaded. Safer and more comfortable for passengers.

### Ready-made reports

Reports by route, stop, driver and time slot, ready to export to Excel or PDF.

### Every stop on the map

Boardings and alightings with time and GPS position. Check that every bus runs its route and makes its stops.

### Profitability by route

Passengers per mile and per run: know which routes pay and which need rethinking.

### Data for the authorities

Reliable ridership figures for the city, the transit agency, contracts and funding.

### Better passenger service

Shorter waits at the stop and less crowded buses: happier passengers.

### School transport

Know how many students get on and off at each stop. Peace of mind for schools and families.

### API integration

Connect the data with your fare collection system, your accounting or your operations software.

**Combine it with Vigilo Online Cameras** to see what happens inside the bus and back up any revenue difference with images.

THE DEVICE

# Compact, rugged and built for the bus

Cameras and processor in one single unit. It connects to the vehicle and to the Vigilo platform. One counter is needed for each door used by passengers.




| | |
|---|---|
| **Technology** | Binocular 3D vision with built-in video processor |
| **Accuracy** | 95% to 98%* |
| **Mounting height** | 1.9 to 2.2 m |
| **Door width** | Up to 1.2 m per unit |
| **Lighting** | 0.001 to 100,000 lux, with automatic infrared |
| **Temperature** | -35 °C to +70 °C |
| **Power** | 12–36 V DC · average consumption 3.6 W |
| **Connections** | RJ45 · RS485 / RS232 · video output · door signal |
| **Integration** | API and protocol for third-party systems |
| **Dimensions** | 178 × 65 × 58 mm |

DESIGNED FOR

### City buses

Occupancy by stop and time slot to plan routes and frequencies.

### Intercity and charter

Passenger control on every service and reconciliation with ticket sales.

### School transport

Know how many students board and alight at each stop on the route.

### Shuttles and airports

Measure the real demand of each shuttle and adjust the fleet.

* Accuracy depends on the door type, the mounting height and the passenger flow. Images for illustration only: the model and shape of the device may vary.

# Want to know how many passengers each bus carries?

We will prepare a tailored proposal based on the number of vehicles and doors in your fleet.

**Request your proposal at vigilo.ec**

Scan the code to see the Passenger Counter on our website and request your proposal.

vigilo.ec/en/contador-pasajeros

PHONE
**099 325 0000**

WHATSAPP
**+593 99 325 0000**

EMAIL
**info@vigilo.ec**

WEBSITE
**www.vigilo.ec**

OFFICES
**Guayaquil: River Plaza, 2nd floor, office 210 · Quito: Diamond Business Building, 5th floor, office 7**

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