

PASSENGER COUNTER

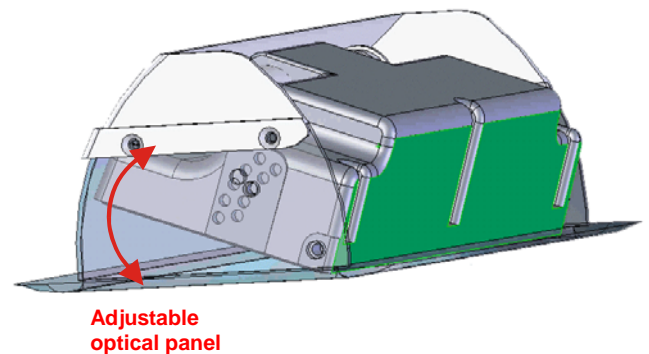
THE MOST ACCURATE SOLUTION FOR PEOPLE COUNTING OPERATIONS

Main Features

- Robust, lightweight and reliable
- Unobtrusive installation
- Easy integration and connection of multiple units
- Stereoscopic cameras
- Adjustable optical panel
- Built-in infrared illumination
- Reliable operations in any type of lighting condition (even in complete darkness)
- High precision counting accuracy (>97%)
- User friendly configuration software
- IP65 Environmental protection grade index
- Low power consumption
- Extended temperature range
- Dedicated opto-coupled I/O lines

Possible applications

- Passenger monitoring on buses and trains
- Optimizing customer services
- Optimizing use of resources
- Real-time service planning



General Description

The PCN-1001 Passenger Counter is a compact and autonomous device based on non-contact stereoscopic vision technology. It has been specifically designed for passenger counting above the doorways of buses and trains; it can also be used to count people as they enter or leave buildings or any area with restricted access.

The Passenger Counter can be easily mounted in the ceiling space above a doorway. The angle of the optical panel can be adjusted; therefore, it can be placed in different positions and on non-horizontal surfaces.

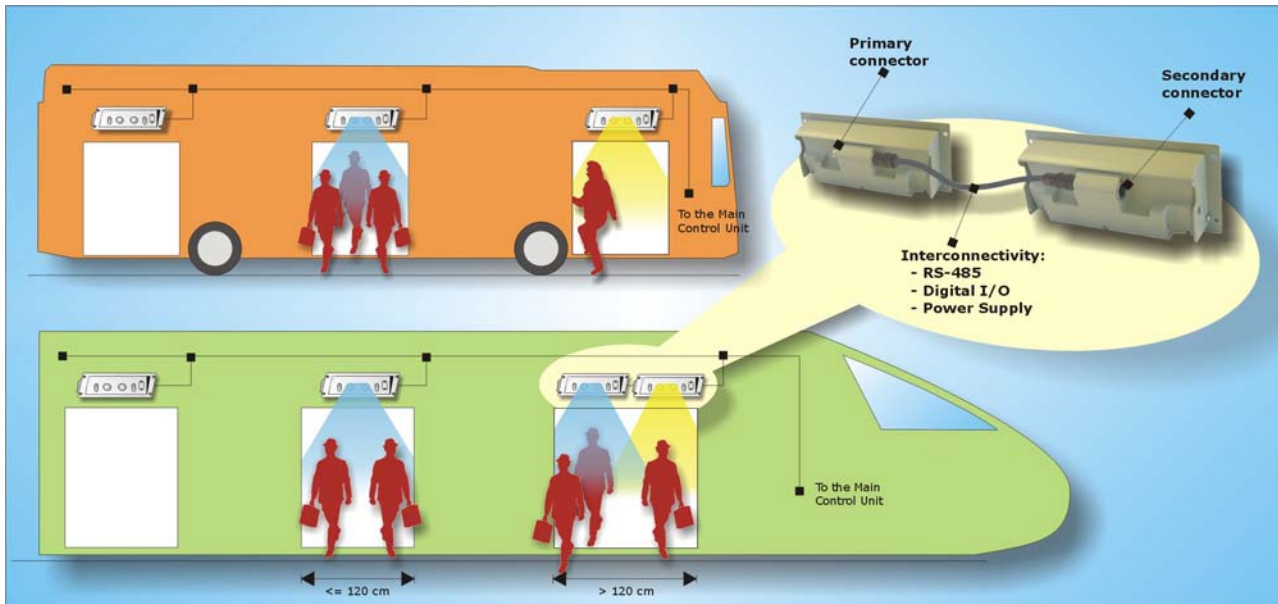
Stereoscopic cameras capture images of the area below the device and thanks to the integrated high luminosity infrared LEDs can operate in any type of lighting condition, even in complete darkness. The extended temperature range capability allows integrators to use the PCN-1001 in a wide range of climatic conditions. The Passenger Counter analyses the height, shape and direction of any objects that are passing the field of view. If it is determined that the object is a person entering or leaving, the incoming and outgoing counters are incremented accordingly, along with time and date information.

Data transfer is possible via an RS-485 serial bus, while the Integrated isolated digital I/O interfaces can be used to directly communicate with intelligent doors or flow control systems, guaranteeing correct functionality all times: for example, stop counting when the doors are closed. Installation, maintenance and debugging are easily achieved thanks to the readily accessible features under a protection cover on the optical panel.

The PCN-1001 Passenger Counter can be interfaced with other Eurotech systems (i.e. the Alphabox family) in order to create complete intelligent and fully customisable networks with advanced surveillance, communication and infotainment capabilities.

Example of installation onboard vehicles

Passenger Counters can be daisy-chained together using the RS485 serial interface to the Main Control Unit of the vehicle in order to monitor all doors at the same time. For monitoring gates wider than 120 cm, it is also possible to connect two or more Passenger Counters together, thus providing a wider detection area. The primary connector receives the power supply and the communication interfaces. When using more than one Passenger Counter to monitor a gate, the secondary connector on the primary Passenger Counter supplies power and data transfer capabilities (RS-485 and General-purpose digital I/O) to the secondary Passenger Counter.



Physical Characteristics

MECHANICAL CHARACTERISTICS:

- **External plate:**
230 x 100 x 3 mm
- **Built-in dimensions:**
Height: 82 mm
Width: 208.5 mm
Depth: 70 mm (Maximum with optical panel at 45°)
- **Weight:**
515 grams

POWER SUPPLY SPECIFICATIONS:

- **Power input:**
Battery 12 / 24 V dc
- **Power consumption:**
< 15 Watts

ENVIRONMENTAL SPECIFICATIONS:

- **RoHS:**
2002/95/CE Compliant
- **MTBF:**
>40000 hours
- **Temperature range (EN50155 class T1):**
Operative: -25 ~ +55°C
- **Relative humidity:**
10% ~ 90% non condensing
- **Vibrations:**
EN50155: 2001 cat.1 class B
- **EMC compliance:**
ECE/ONU Reg. 10
EN-50155
89/366/ECC (and 92/31/ECC)
72/23/ECC (modified into 93/68/ECC)