MADE IN FRANCE

FER**SIL**

GAPS
Opening and closing gap
filler authorization
STI PMR Standard

*GAPS system,
Railway platform
station presence
and level monitoring
system SIL2*

GAPS
SIL2 PLATFORM DETECTION SYSTEM

Clearsy System Engineering

CLEARSY
SYSTEM ENGINEERING

GAPS

SYSTEM DESCRIPTION

The platform detection is based on datas sent by lasers sensor to a CPU box which computes data to validate platform presence. It also measures its position regarding to the train. In case of platform presence a safety SIL2 output is enabled. All measures and system information are available on CAN or RS485 support.

SYSTEM ARCHITECTURE

The GAPS system consists of 1 CPU box and lasers. Each CPU box can manage up to 4 lasers. Several GAPS systems can be interconnected to provide more lasers in a particular detection zone.
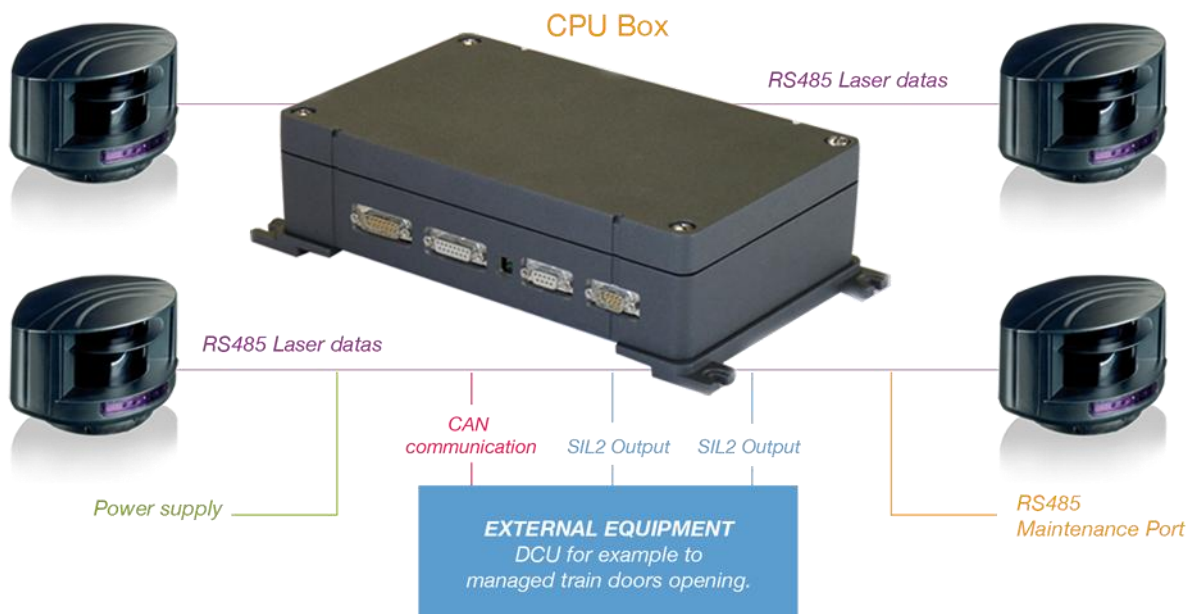
Laser Sensor dimensions : 125 x 93 x 70 mm

TECHNICAL FEATURES

- 72 VDC Power supply, other voltages on demand
- **SIL2 function**
- Based on standard off the shelf **class 1 laser** IP65
- Compliant with EN 50155, 50121, 50128, 50125
- Compliant with EN 60068-2-1, 61373, 50121-4, 50121-3-2
- SNCF approved
- Platform geometry (height, inclination…) programmable
- **Already in revenue service on Alstom Regiolis train**
- Working temperature -30°C - +60°C

INTEGRATION
AND **INTERFACE**

The LP2S System is designed to be adapted to various integration constraints. Actually it has to be configured (parameters configuration) at the first installation to be adapted to the laser position. After first installation the parameter are the same for all the future installation if lasers sensors are fitted at the same point. The CPU Box is designed to be installed on train. The Laser Sensor is IP65 and can be fitted up to (or next to) the train doors or on under body.

CPU Box

RS485 Laser datas

RS485 Laser datas

CAN communication

SIL2 Output   SIL2 Output

Power supply

RS485 Maintenance Port

EXTERNAL EQUIPMENT
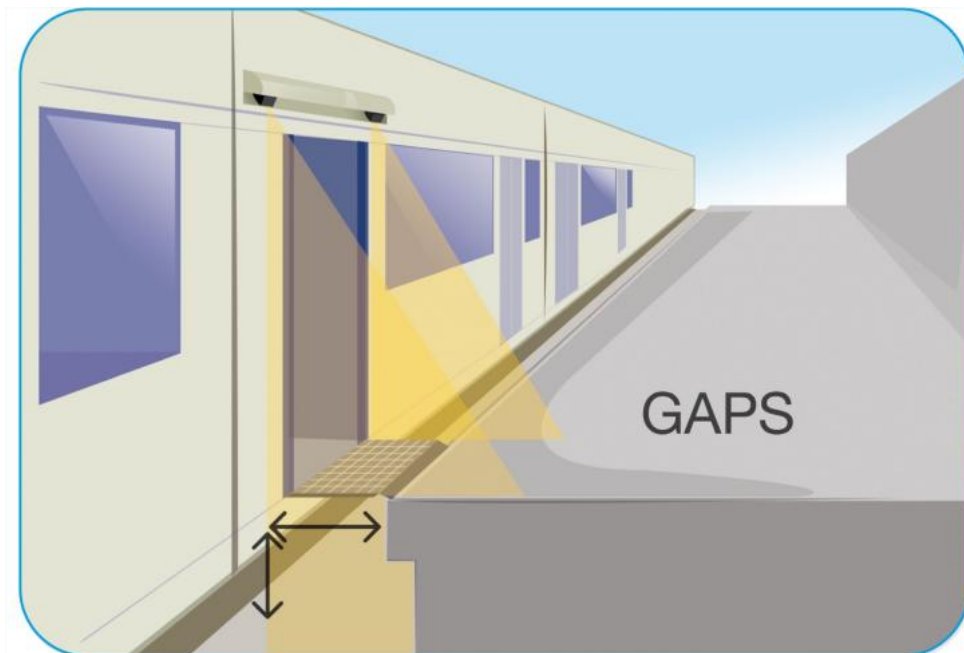DCU for example to managed train doors opening.

GAPS

The GAPS system provides safe platform detection and measure function.
The measurements are performed by onboard laser scanner(s) fitted next to the train door.

GAPS system is connected to DCU (Doors Control Unit) in order to command a gap car to platform filler. This system has been developed by ClearSy for Alstom who obtained a patent for the GAPS system in operation on Regiolis trains ordered by SNCF (1000 trains to equip within 15 years). ClearSy own the right from Alstom to commercialize and manufacture the original GAPS and its derivatives. Clearsy developed the GAPS system from prototype to industrialization. The GAPS safety case was written by Clearsy and certified by an independent railway safety organization: **CERTIFER.**
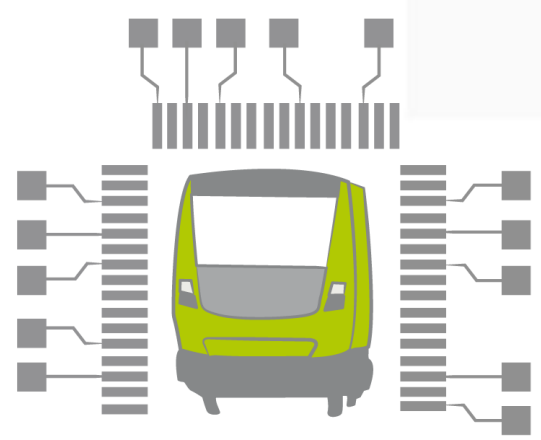

■ Lasers mounted next to the door

320 AVENUE ARCHIMÈDE - LES PLÉIADES II BAT A
13857 AIX-EN-PROVENCE CEDEX 3 – FRANCE

TÉL. +33 (0)4 42 37 12 70 - FAX : +33 (0)4 42 37 12 71
contact@fersil.fr / www.fersil-railway.com