



# DVL - Crosswind detection system

## A SIL 2 railway signalling system



### Technical features



- **A SIL2 certified system** in accordance to the following railway standards:
  - **NF EN 50126** - 01/2000
  - **NF EN 50128** - 10/2011
  - **NF EN 50129** - 05/2003
  - A certification process achieved by Certifer
- **Real time** data processing
- All critical components are **redundant** to increase availability
- No moving parts, anemometers using ultrasonic technology **removing preventive maintenance requirements**
- **Simplified maintenance**

# Functionalities

The crosswind detector system is divided in **3 subsystems**:

## SSSM

Acquisition subsystem



Acquisition subsystems are installed on the track side. 3 ultrasonic anemometers measure wind speed and wind direction. Data is then transmitted to the processing subsystem via a dedicated optical fibre cable.

## SSPT

Processing subsystem



The processing subsystem is the heart of the system. It processes the wind data to define speed restrictions if needed. The processing subsystems is designed around 2 processing units based on SCLE SFE's SIL4 generic product called BGS.

Those processing units are **plug and play** and hot swappable, **optimizing maintenance** processes.

## UCMT

Remote monitoring subsystem



Remote monitoring subsystem is connected to all the acquisition subsystems and processing subsystems installed on the high-speed line. It monitors the crosswind detector system to allow for an easier maintenance and inform the railway management system about the status of the system and the speed restrictions.

## References

**2016 - SNCF:** SEA high-speed line, 19 DVL installed

**2017 - ONCF:** Tanger / Kenitra high-speed line, 3 DVL installed

### SCLE SFE - Marseilles Agency

Parc des Aygalades Bât.10 - 35, bld du Capitaine Gèze  
13014 MARSEILLE - France  
Phone: +33 4 91 03 04 24 - Fax: +33 4 91 03 16 43  
erji@scle.fr - [www.scle-sfe.fr](http://www.scle-sfe.fr)

Commitment for a sustainable performance

