

## Add-on I

Extend the implementation of control SWC to support automatic driving modes switching based on the current vehicle speed and ambient light.

Two additional SWC shall be added to ECU:

- › CtSaSpeedometer
  - Sensor SWC
  - Provides information about current vehicle speed to Control SWC
  - Time triggered on 100ms
- › CtSaAmbientLight
  - Sensor SWC
  - Provides information about ambient light to Control SWC
  - Time triggered on 100ms

Ambient light sensor detects brightness level on a scale from 0 to 10.

When the brightness value is equal or above the threshold of 5, then the vehicle speed is ignored and the mode is set to **CITYMODE**.

The exception is a use case when the high beam switch is on, then the mode is set to **HIGHBEAM**.

Frontlights modes:

Vehicle speed	Ambient light	Mode
0 – 50 km/h	0-5	CITYMODE
50 – 120 km/h	0-5	COUNTRYMODE
120 – 250 km/h	0-5	MOTORWAYMODE
120 – 250 km/h	5-10	CITYMODE
High beam switch on	0-5	HIGHBEAM
High beam switch on	6-10	HIGHBEAM