

Front Collision Warning System

What is Front Collision Warning System

What:

A system that utilizes sensors to recognize a potential frontal collision situation.

Why:

To improve passenger safety by providing warnings to potentially tired or distracted drivers.

Benefits:

Decrease in accidents / injuries / deaths caused by tired or distracted drivers

How:

Utilization of sensors, cameras, and electronically controlled systems can interpret and react to changing conditions faster than a human driver in many situations reacts. System is “Passive” (Provide audio, visual or haptic feedback) to notify driver of a pending situation or can be “Active” (Intervention brake pressure build-up, seat belt pretension) as the situation dictates.

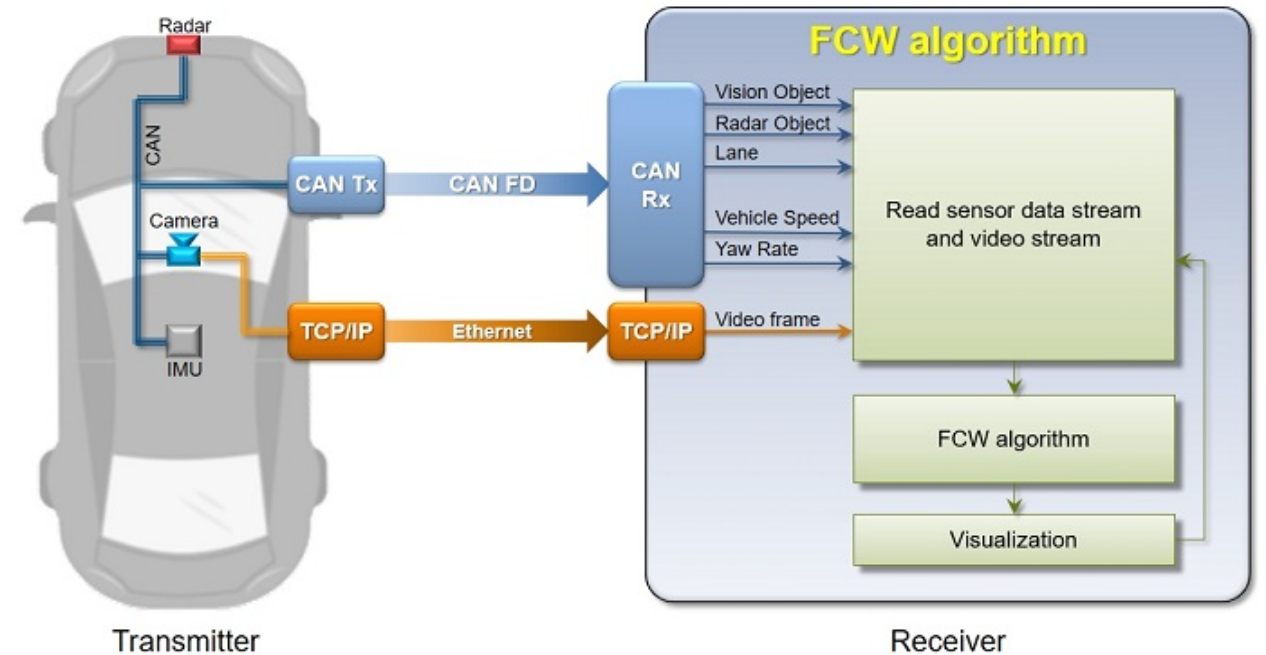
Front Collision Warning System Operation

Sensors and cameras detect the potential for frontal collision based on obstructions

System can provide driver notifications sufficient enough for driver intervention

System may pre-charge pressure in brake system in anticipation of emergency stop

System may pre-tension seat belts



Front Collision Warning System Components

Radar sensor

Module(s)

Brake System

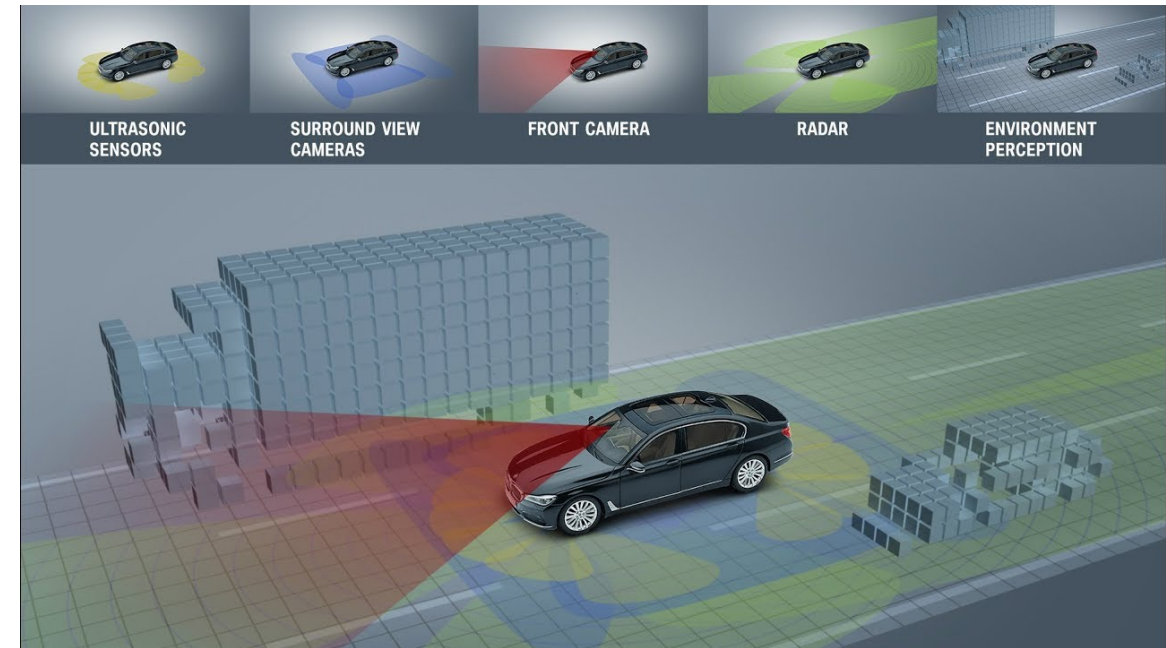
Supplemental Restraint System (SRS)

Engine Management

Control Switch

Visual Indicators

Audio



Front Collision Warning System Diagnosis

Visual inspection

- Damage bumpers

- Damage to sensors

Fault codes

- OEM

- SAE

Electrical testing

- Power

- Ground

- Signals

- BUS Communications

Front Collision Warning System Service / Calibration

Mechanical

Targets

Some sensors hard mounted, some may be adjustable

Non-related repairs and services can require calibration

Alignment

Collision

Self / Auto

Driving

