



Volvo Trucks. Driving Progress

# FACT SHEET

I-See



## I-See

I-See is working as a predictive cruise in combination with GPS technology supporting drivers to achieve fuel savings during the transport operation. The main application is the long haul segment, but can also be used in the regional haul and other transport applications where the cruise control can be engaged on a regular basis.

Best fuel saving accomplishment is achieved if the transport route is covered by frequent gradients going up and down with a high utilization of cruise control. During these conditions a fuel saving between 2.5% to 5% can occur.

When driving with Cruise Control or Adaptive Cruise Control the vehicle has information about approaching gradients, thereby controlling and adjusting progress (speed, braking, chosen gear etc) in order to optimize fuel consumption and driveability.

## Sales variant

### Pre-view topography

<b>PVT-BAS</b>	Basic topography information, learning by GPS positioning
<b>PVT-EXT</b>	Extended topography information, learning by GPS positioning and centrally stored data
<b>PVT-MAP</b>	Map based topography information using a high resolution commercial topography map

### Pre-view topography subscription

<b>PVTSS</b>	Preview topography service, 5 years prepaid subscription.
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## FEATURES AND BENEFITS

- Easy for the driver to achieve consistency in a fuel efficient driving style.
- Reduced fuel consumption.
- Better speed control.
- Provides very consistent vehicle behaviour over the route and time.
- Offers better stability and knowledge about the route and speed limits.
- Provides a smoother drive for low-loaded vehicles and low speed.

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I-See	PVT-BAS	PVT-EXT	PVT-MAP
The road topography is recorded, the first time a route is travelled, for the truck	•	•	•
All driven routes road topography, for all connected trucks, will be available for the truck	-	•	•
Uses high resolution commercial topography map, and downloaded it to the truck	-	-	•
Requires DRM-BE/DRM-E	•	•	•
Requires Pre-view topography subscription	-	-	•

- Available
- Not available



I-See can use recorded topography data from the own truck, topography data from other connected trucks and also data from a topography map.

## Three different versions of I-See

The I-See offer, comes in three different versions and the offer can vary depending on the sales area and emission level and the map based offer is mainly covering the European markets.

The vehicle communicates and shares data via the TGW (Telematics Gateway) link. The truck is equipped with TGW as standard if I-See is included in the specification.

## Map based version (PVT-MAP)

Top of the line is the map based version which uses GPS coordinates, in combination with a high resolution commercial topography map. As the truck drives forward, map data of the path ahead is downloaded to the truck from centrally stored map in cloud to define the appropriate vehicle speed for the road ahead.

If the road is not covered by the map, or the connection to the cloud or GPS signal has failed, enough data is locally stored for couple of km of drive. The truck then will fall back to the extended or basic service. Once the commercial map is back, the truck will go back to map based mode.

Currently, the system saves about 2 km of map data.

## Preview topography subscription

The map license is enabled for an initial period of 5 years of operation. After the initial period of 5 years the truck will go over to the extended service but it's possible to prolong the map based data with a conversion kit offered as an aftermarket kit

The initial subscription period may vary depending on vehicle model, TGW technology, and other factors. Subscription is subject to change or cancellation at any time by Volvo with advanced notice to customer. Volvo does not assume responsibility for technological obsolescence of the TGW or technical capabilities of the product, or for failure to use (covers any kind of use, non-compliant with Volvo instructions) or misuse of the product (refers to abuse / improper use, by reference to the purpose of the product or service), or for third party supplier services or products.

## Extended version (PVT-EXT)

The extended version of I-See uses GPS coordinates, shares topography data through a central data storage. Thus, it is enough that one connected vehicle has driven the route, for all connected vehicles to be able to utilize the information and optimize their driving when they then traveling the same route.

When the vehicle operates outside GSM network coverage the I-See functionality will still function but using locally stored topography data.

## Basic version (PVT-BAS)

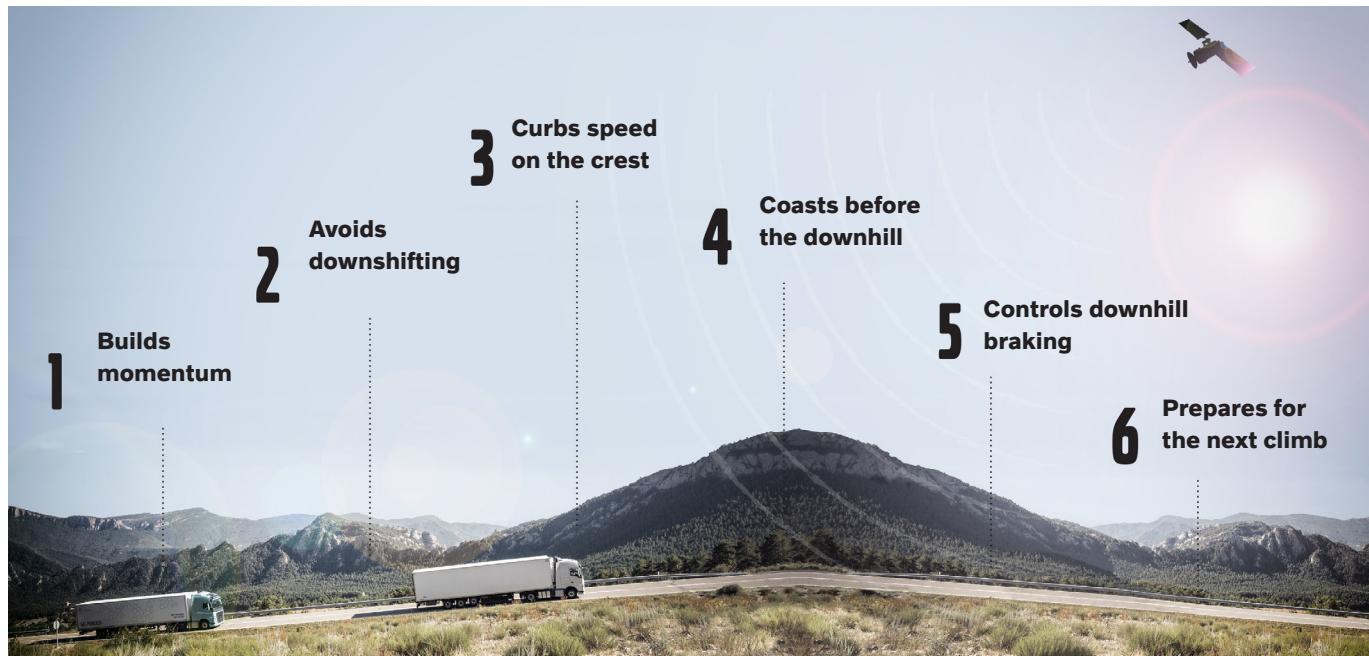
The basic version of I-See uses GPS coordinates, saved in the transmission's electronic control unit, to register the vehicle's position.

When driving with Cruise Control or Adaptive Cruise Control the vehicle has information about approaching gradients, thereby controlling and adjusting progress (speed, braking, chosen gear etc) in order to optimise fuel consumption and driveability.

I-See can be used when the vehicle is in economy mode or standard mode. The road topography is recorded the first time a road is travelled, when Cruise Control or Adaptive Cruise control is active.

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Example with map based I-See. I-See use GPS-positioning to secure topography data.

## The way I-See works

I-See provides very consistent vehicle behaviour over the route and time. I-See achieves fuel savings in several steps:

### 1. Builds momentum

I-See knows a hill is ahead, so the truck accelerates and remains at highest gear for longer time. This feature offers improved speed control.

### 2. Avoids downshifting

By preventing needless gear changes, I-See makes the uphill climb.

### 3. Curbs speed on the crest

When the downhill is approaching, I-See stops the truck from accelerating unnecessarily. I-See acts more fuel efficient at a crest going over a hill.

### 4. Coasts before the downhill

To save energy and minimize braking, I-See temporary disengages the driveline just before a downhill slope. This is starting point for curb speed.

### 5. Controls downhill braking

I-See knows where one slope ends and the next begins, and applies the brakes as needed, for maximum efficiency. This feature gives better over speed control.

### 6. Prepares for the next climb

When it's time to go uphill again, I-See lets the truck coast, building up speed and momentum for an effortless climb.

For more information. See the movie: "Volvo Trucks - I-See updated and improved" on Volvo Trucks Channel on YouTube.

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