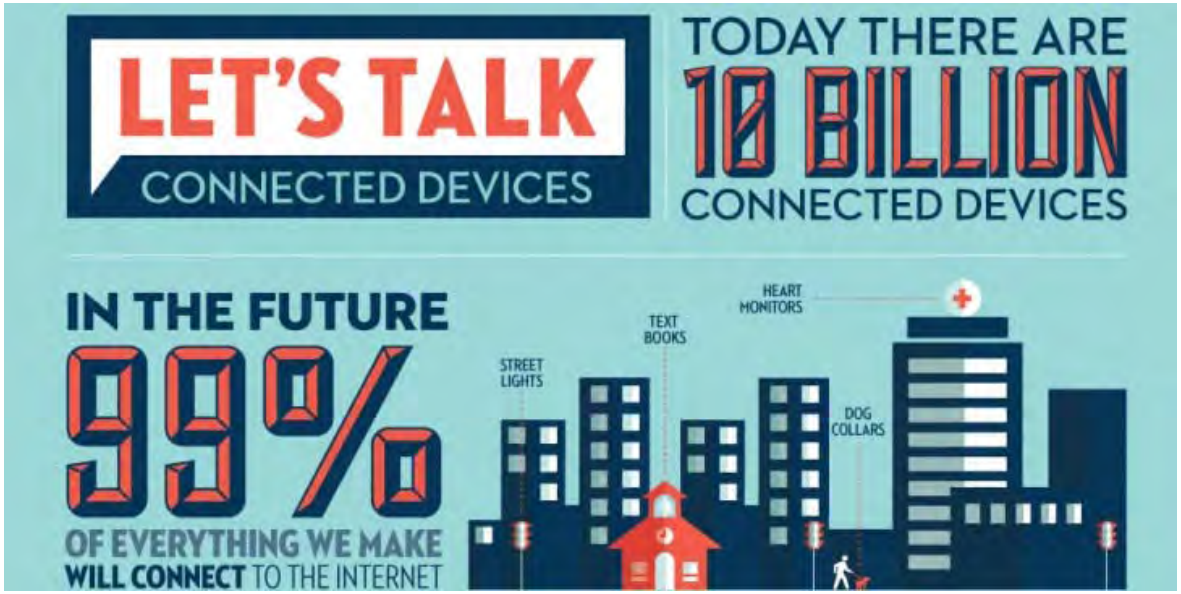
Porsche Communication Management

20 years later and all of these things fit in your pocket.

Connectivity is going mainstream

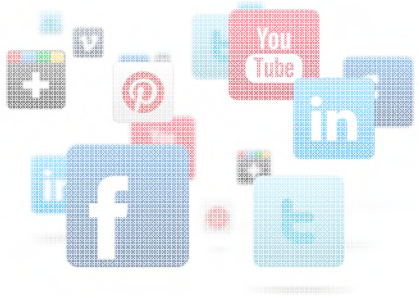


Types of connected car services, now and in the future

Navigation, POI search, Traffic&Weather

Emergency, Monitoring, Convenience Services

Music Streaming



Social Media Connections

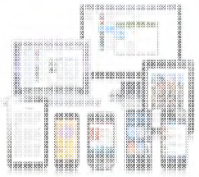
Vehicle Health Monitoring & Report

Just how does it all work?

Third party apps

Porsche Connected Car Customer Portal, Webshop

Cutomer account and product management



PCM, Connect Plus

Backend servers located in Germany

at&t

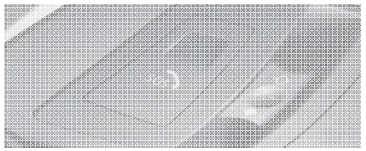
T-Mobile

at&t

verizon

Sprint

Porsche Connected Car Contact Center



Agenda

PCM with Connect Plus

Smartphone compartment not available in the US

The new PCM in the 991.2

7-inch screen
- Frameless glass surface
- Capacitive touchscreen
- Multi-touch gestures
- Proximity sensor

LTE module - wireless internet access
- PCM SIM card reader
- Wireless internet access with wifi hotspot
- Supports 4G data connectivity

Online Connectivity
- PCM Connect App
- Online Navigation with Real Time Traffic Information (RTTI)
- Apple Car Play

The new PCM benefits compared to PCM 3.1

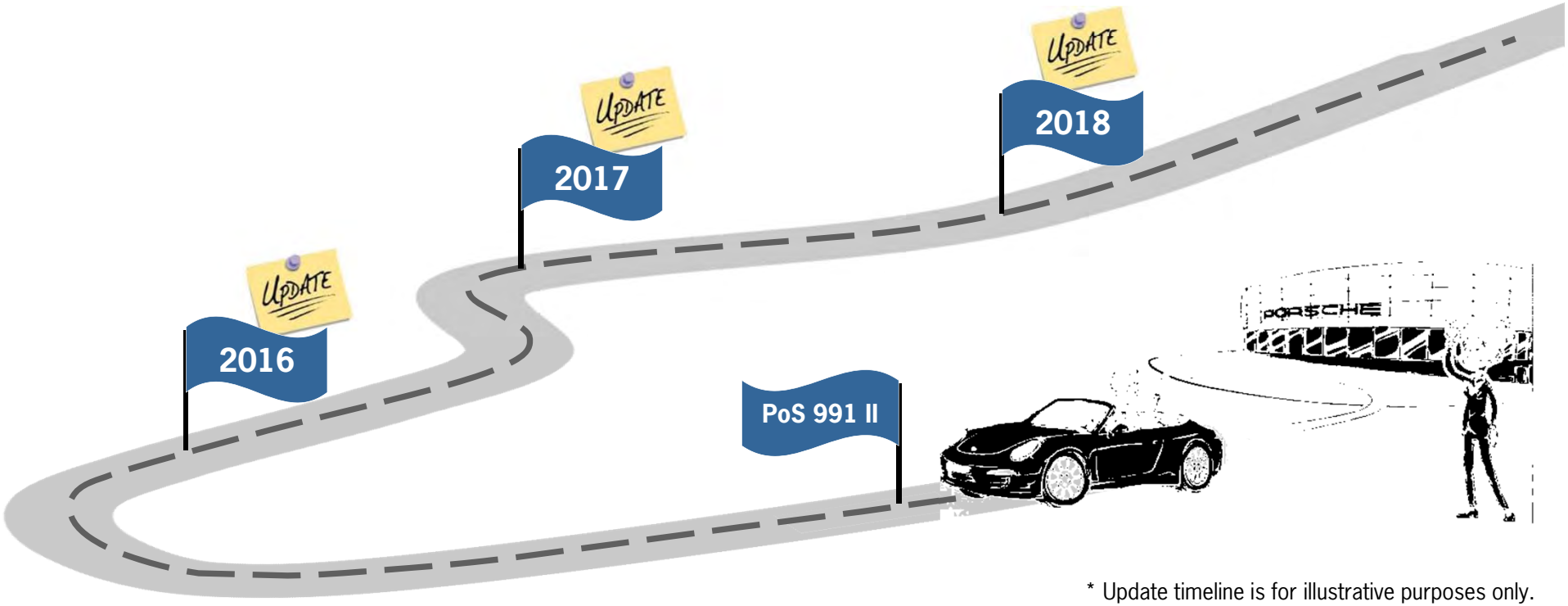
New PCM	Feature	PCM 3.1
✓	Full glass display	✗
✓	Capacitive touchscreen (with proximity sensor)	✗
✓	Freehand text entry	✗
✓	(2) SD – memory card reader	✗
✓	LTE telephone module with 4G data	✗
✓	WiFi Hotspot function	✗
✓	Online navigation with Real Time Traffic Information	✗
✓	Porsche Connect App compatible	✗
✓	Apple CarPlay	✗
✓	Services updatable	✗

The services offered in the new PCM will be steadily updated over time.

Update

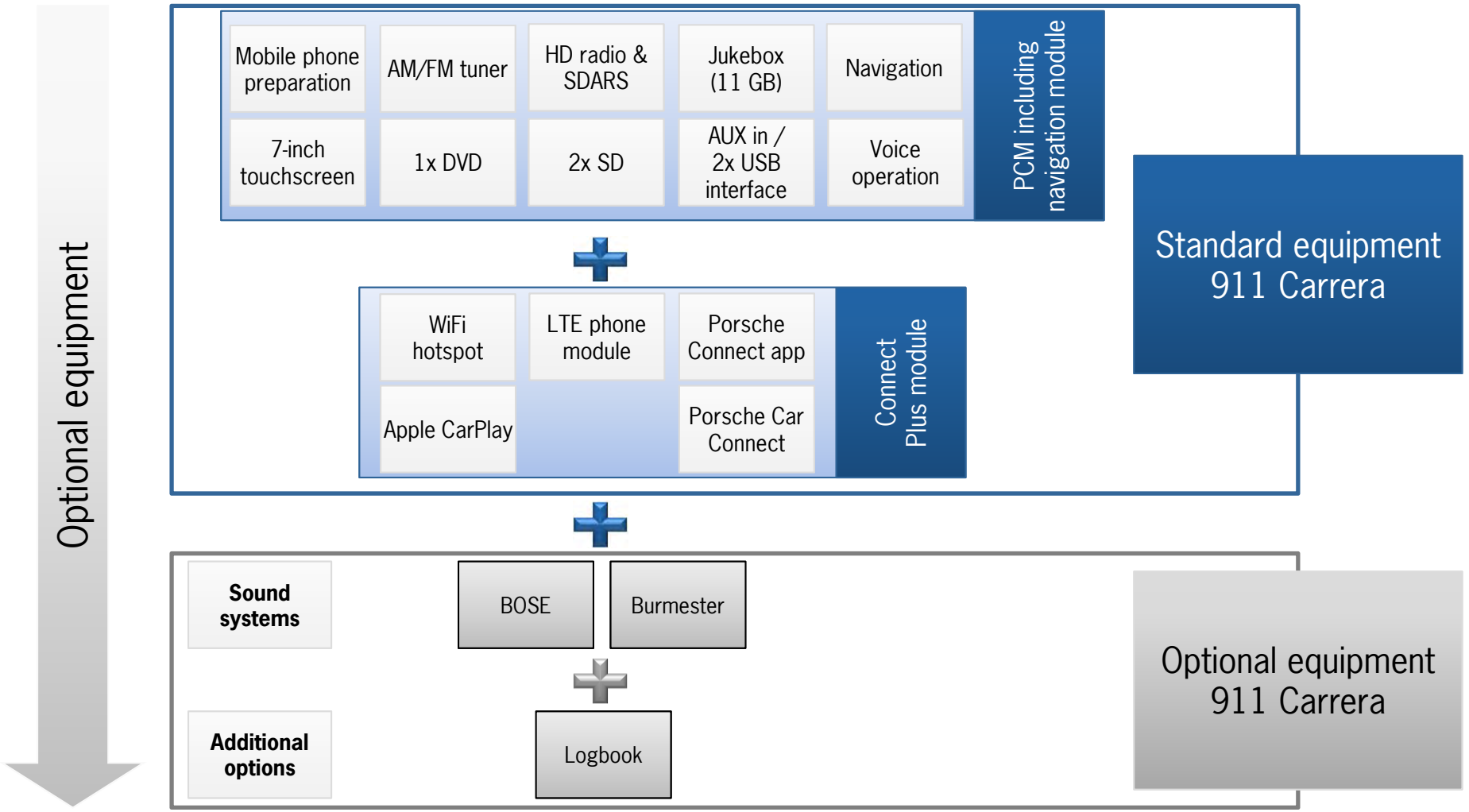
→ New services can be added over time

→ Existing services can be improved over time

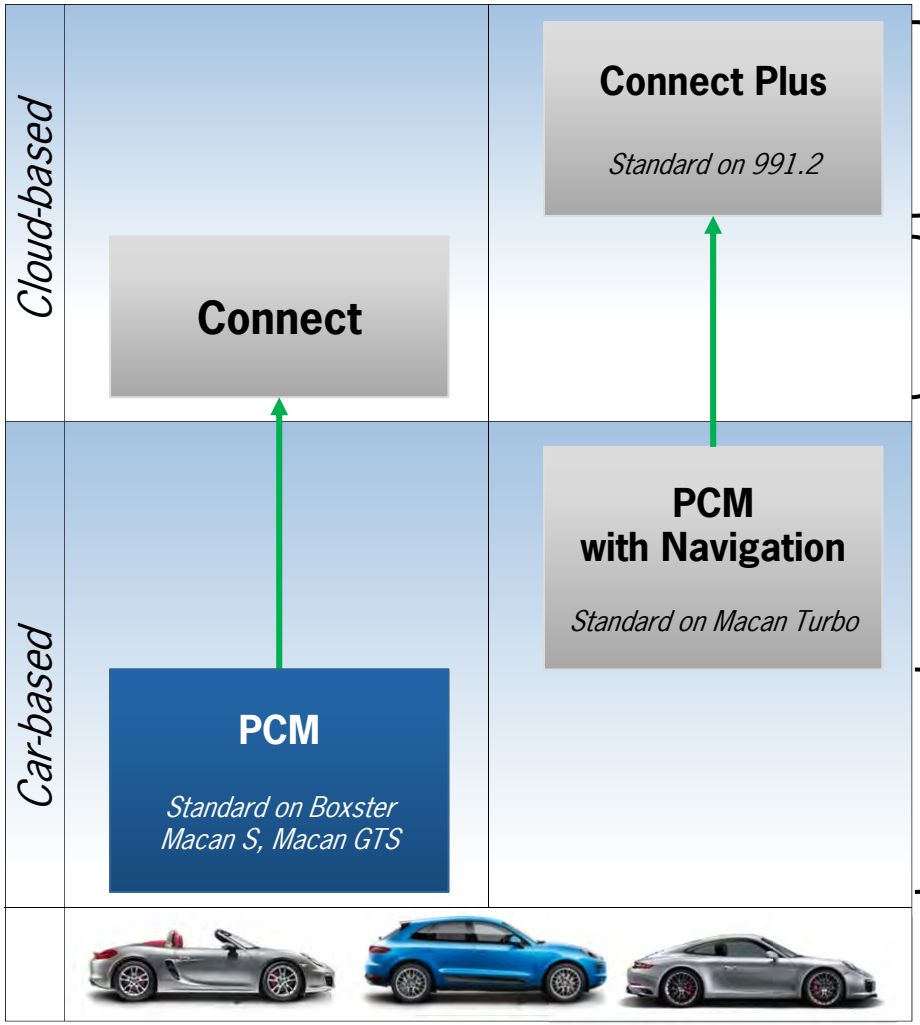


* Update timeline is for illustrative purposes only.
Exact timeline is not set

Audio and Communication offer for 991.2



Audio and Communication offer for Macan and Sportscars



Connect Plus
Available only for PCM with Navigation

- Apple CarPlay
- Porsche Car Connect:
  - Remote Services
  - Safety Services
- 4G LTE Module
  - WiFi Hotspot
- MapCare
  - 6 Navi Map Updates
- AT&T SIM Card data trial
  - 3 Months or 3 GB (whichever comes first)
- Google® StreetView
- Google® Earth
- Online destination search
- Traffic information

Connect
Option available only for PCM without navigation

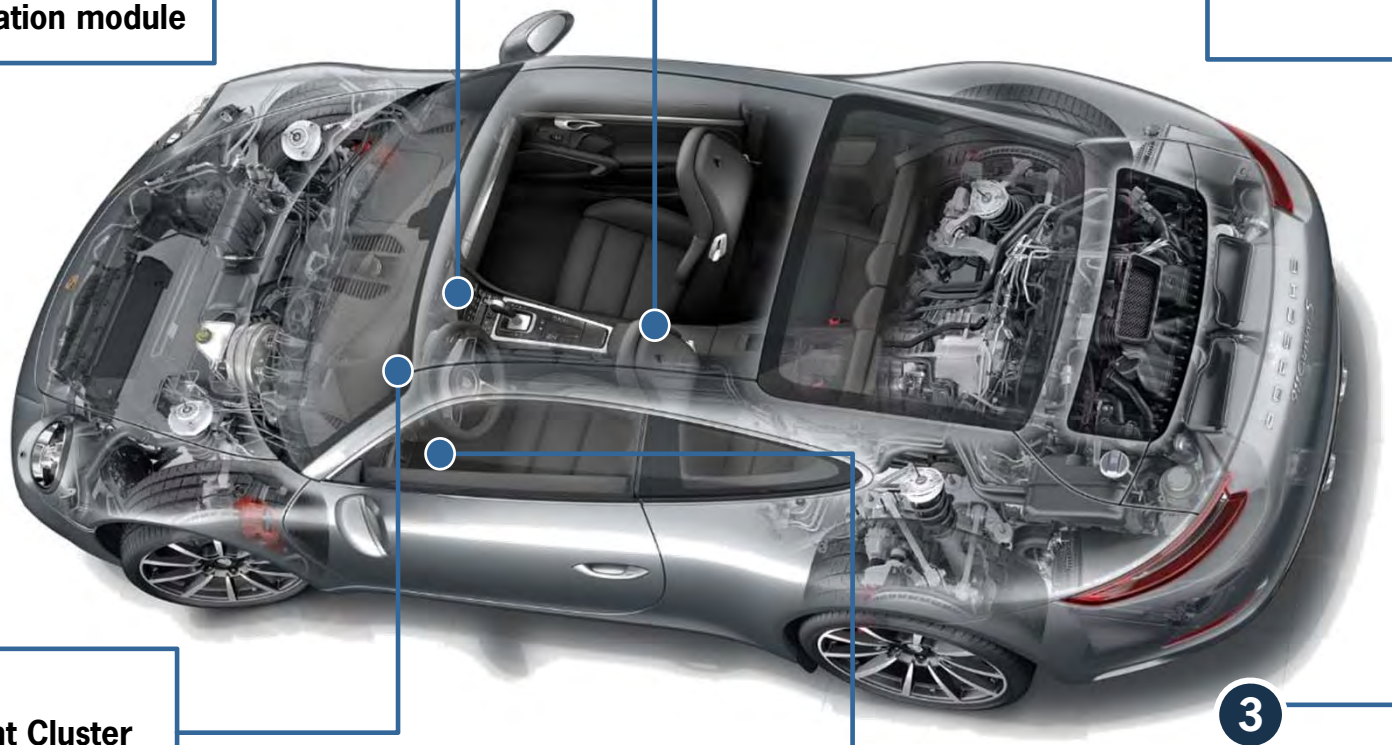
- Apple Car Play
- Porsche Car Connect:
  - Remote Services
  - Safety Services

PCM

- Touchscreen with multi-touch and gestures
- Bluetooth Mobile Phone Prep
- 11 GB Jukebox Storage
- SiriusXM Satellite Radio
- HD Radio
- 2 SD card slots
- 2 USB ports
- 1 Aux input
- Sound Package Plus audio system

Agenda

To enable online service, there are various hardware modules installed in the new 911 models.



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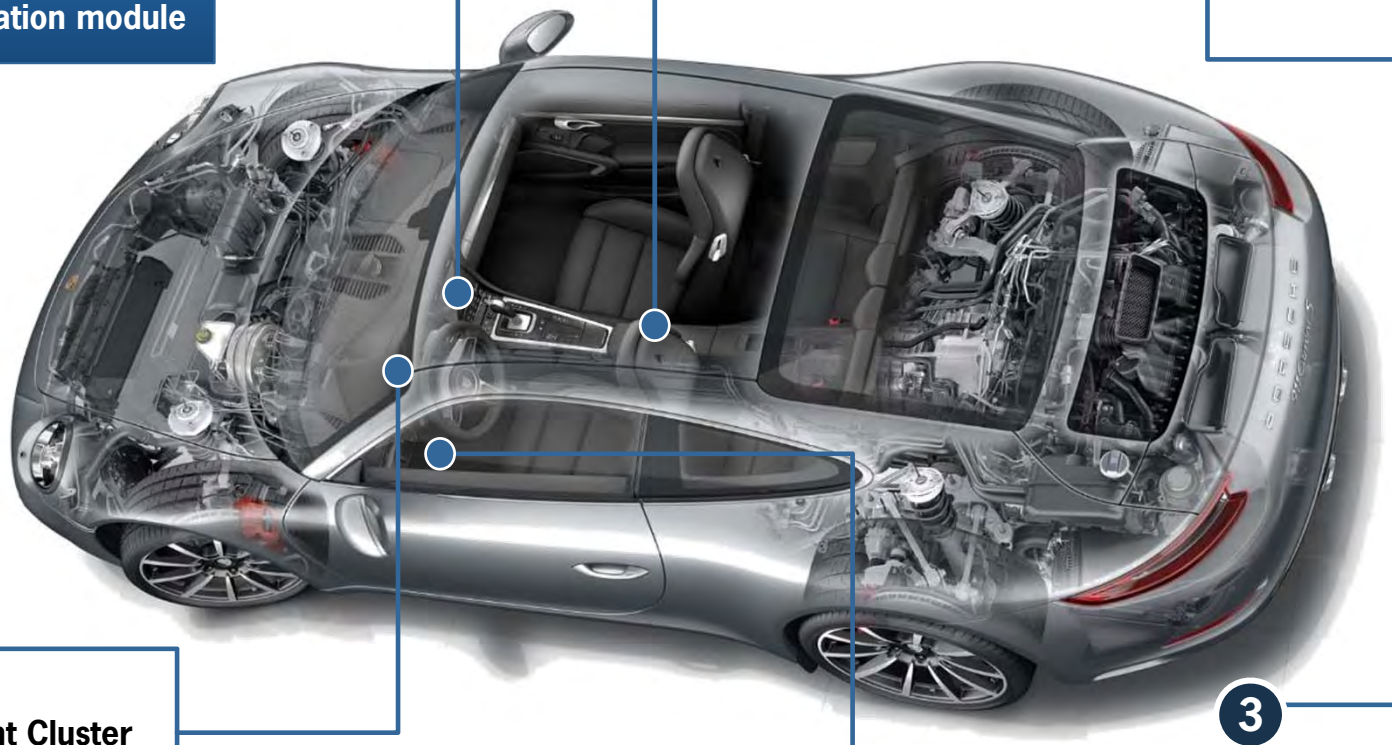


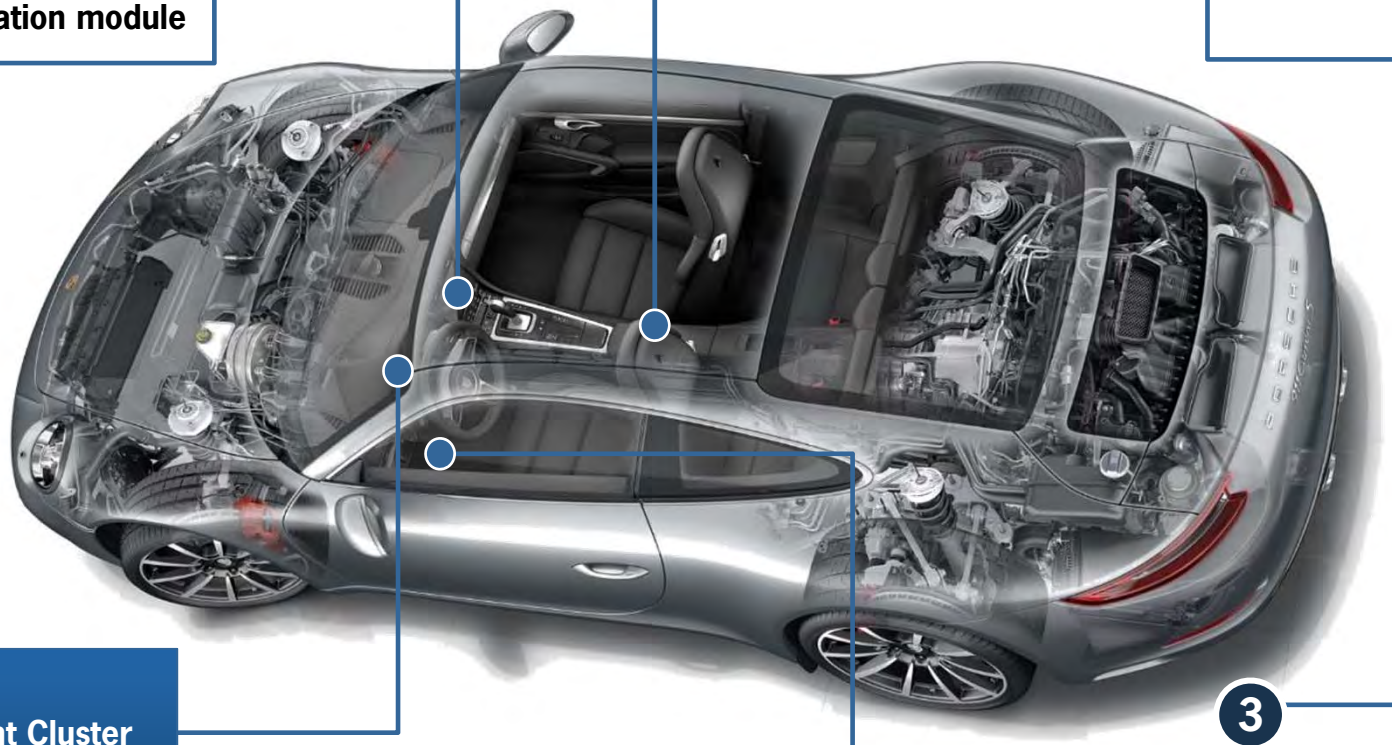
1. Porsche Communication Management (PCM) incl. Navigation module
2. Instrument Cluster
3. PVTS Electronic Control Unit
4. Media Interfaces

The new generation of Porsche Communication Management (PCM) incl. navigation module is standard in all new 911 models.

1 Porsche Communication Management (PCM) incl. navigation module

- **PCM incl. navigation module** with high-resolution 7-inch color touchscreen
- **LTE telephone module** provides online data connection via **SIM card** inserted in the PCM
- **Wireless internet access** (hotspot) for Wi-Fi devices
- **Connection manager** for internet connection, USB, Bluetooth
- **Latest design and operation functions**: Frameless glass surface**, multitouch gesture** control, and proximity sensors

To enable online service, there are various hardware modules installed in the new 911 models.

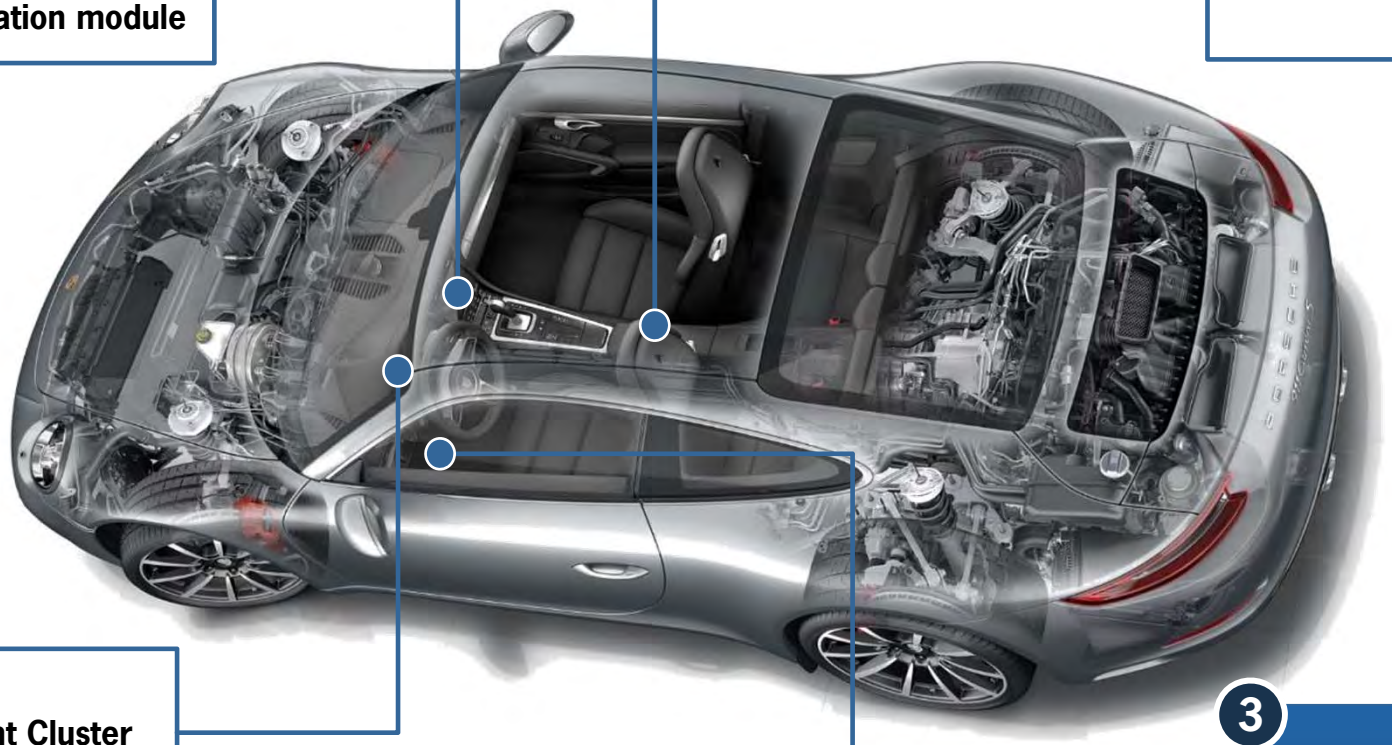


Additional operation and display of Connect services in the Instrument Cluster ensure better usability.

2 Instrument Cluster

- **Second display** in the instrument cluster for enhanced ease of use
- **Parallel depiction** of **Google Earth** and **Real Time Traffic Information** in the instrument cluster (and in the PCM)
- **Zoom** functionality is also available on the **4-inch TFT-display** in the instrument cluster
- While driving, the **autofocus mode** ensures the best possible experience

To enable online service, there are various hardware modules installed in the new 911 models.

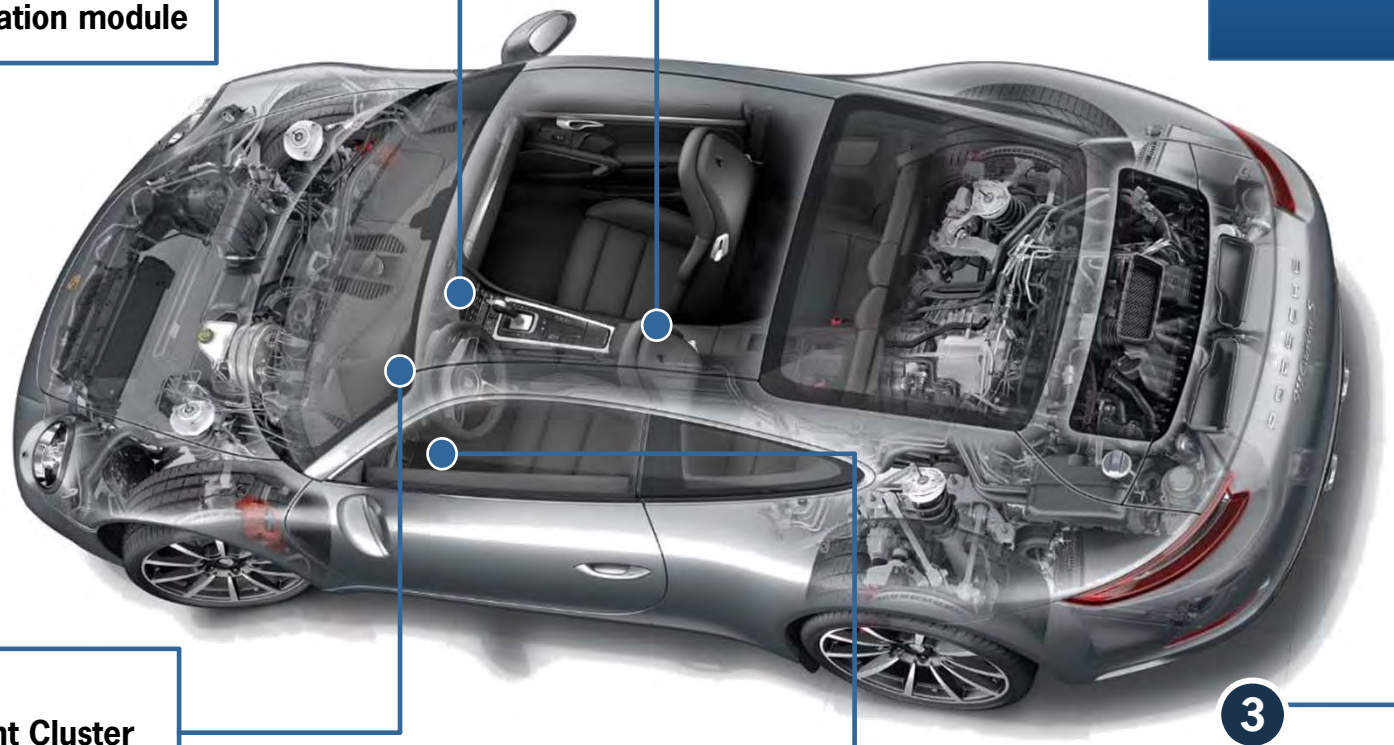


The Porsche Vehicle Tracking System (PVTS) Electronic Control Unit enables a remote smartphone connection to the vehicle.

3 PVTS Electronic Control Unit

- The **PVTS Electronic Control Unit** enables vehicle related services (via the **Porsche Car Connect** app on a smartphone)
- **Remote Services:**
  Vehicle Status, Sound Horn / Flash Lights, Carfinder incl. navigation, Fold Mirrors, Door Lock Control
- **Safety Services:**
  Crash Notification, Breakdown Call
- **Security Services:**
  Porsche Vehicle Tracking System

To enable online service, there are various hardware modules installed in the new 911 models.



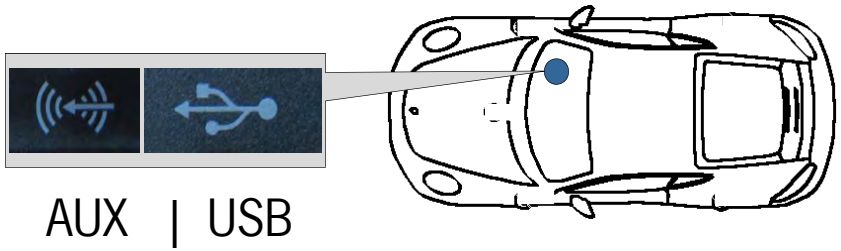
1 Porsche Communication Management (PCM) incl. Navigation module

2 Instrument Cluster

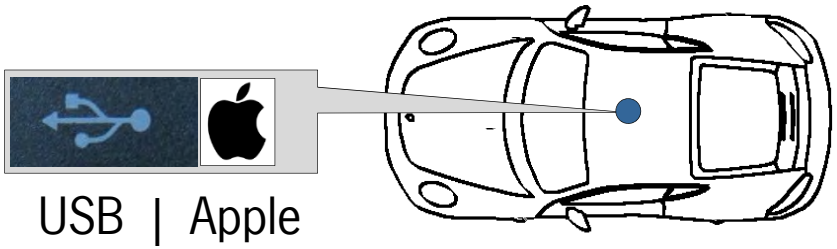
3 PVTS Electronic Control Unit

4 Media Interfaces

Two media interfaces allow for multiple connections



AUX | USB



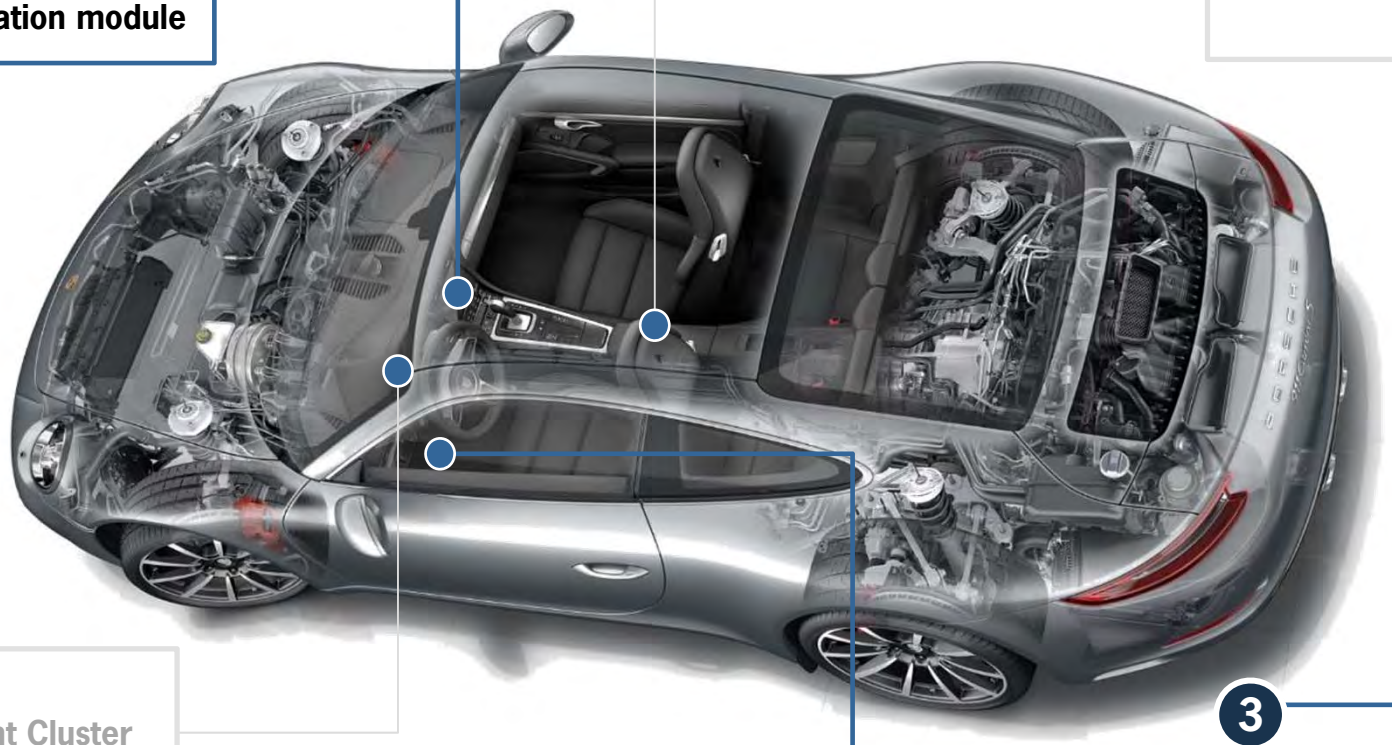
USB | Apple

4 Media Interfaces

- **Two media interfaces** provide different functionality:
- **Glove box** provides AUX and USB connectivity
- **Center Console** provides USB and Apple Car Play Connectivity

Agenda

Online services are enabled via different software components



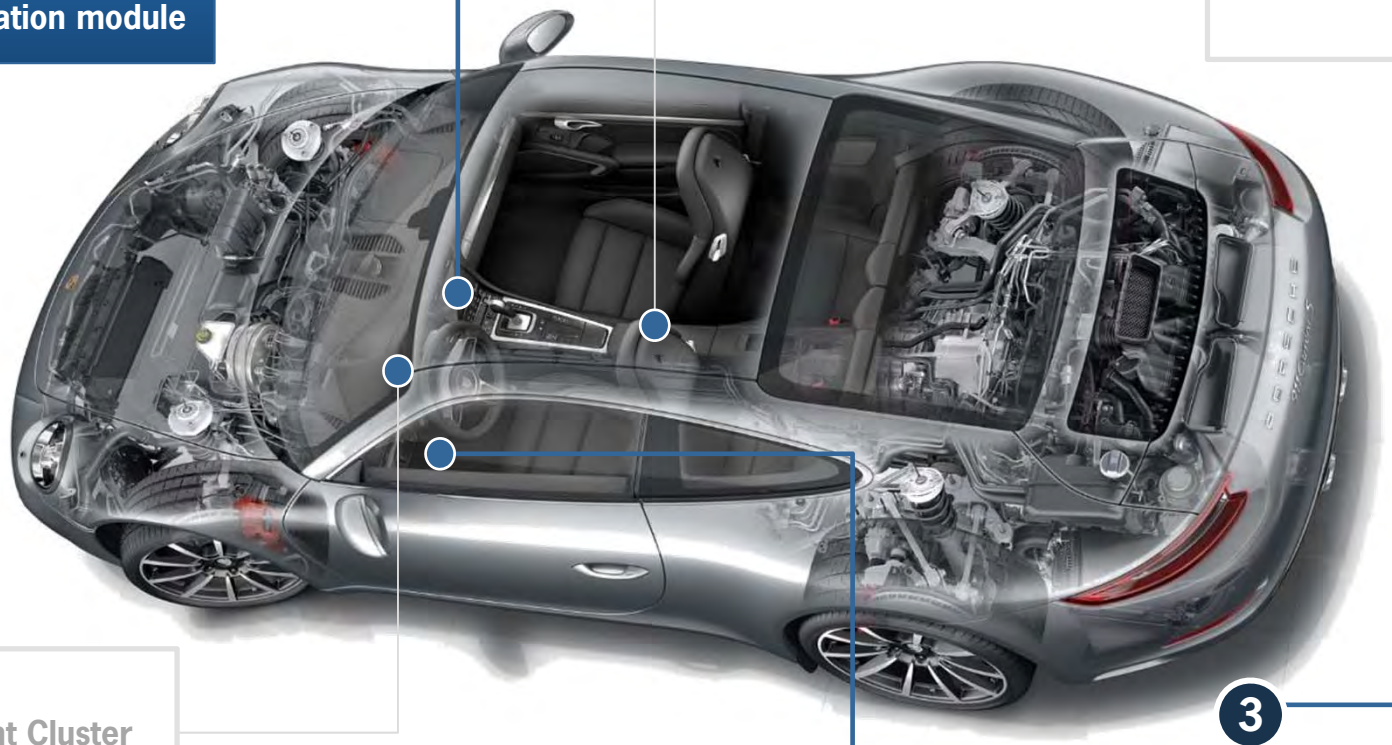
1 Porsche Communication Management (PCM) incl. Navigation module

2 Instrument Cluster

3 PVTS Electronic Control Unit

4 Media Interfaces

Online services are enabled via different software components



1 Porsche Communication Management (PCM) incl. Navigation module

2 Instrument Cluster

3 PVTS Electronic Control Unit

4 Media Interfaces

The PCM enables Online Navigation, PCM Connect App Services, and Apple CarPlay

Porsche Communication Management (PCM) incl. Navigation module

Online Navigation Services

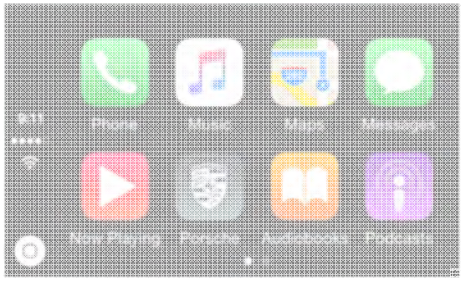
- Real Time Traffic Information
- POI Search
- Google Earth
- Google Street View

PCM Connect App Services

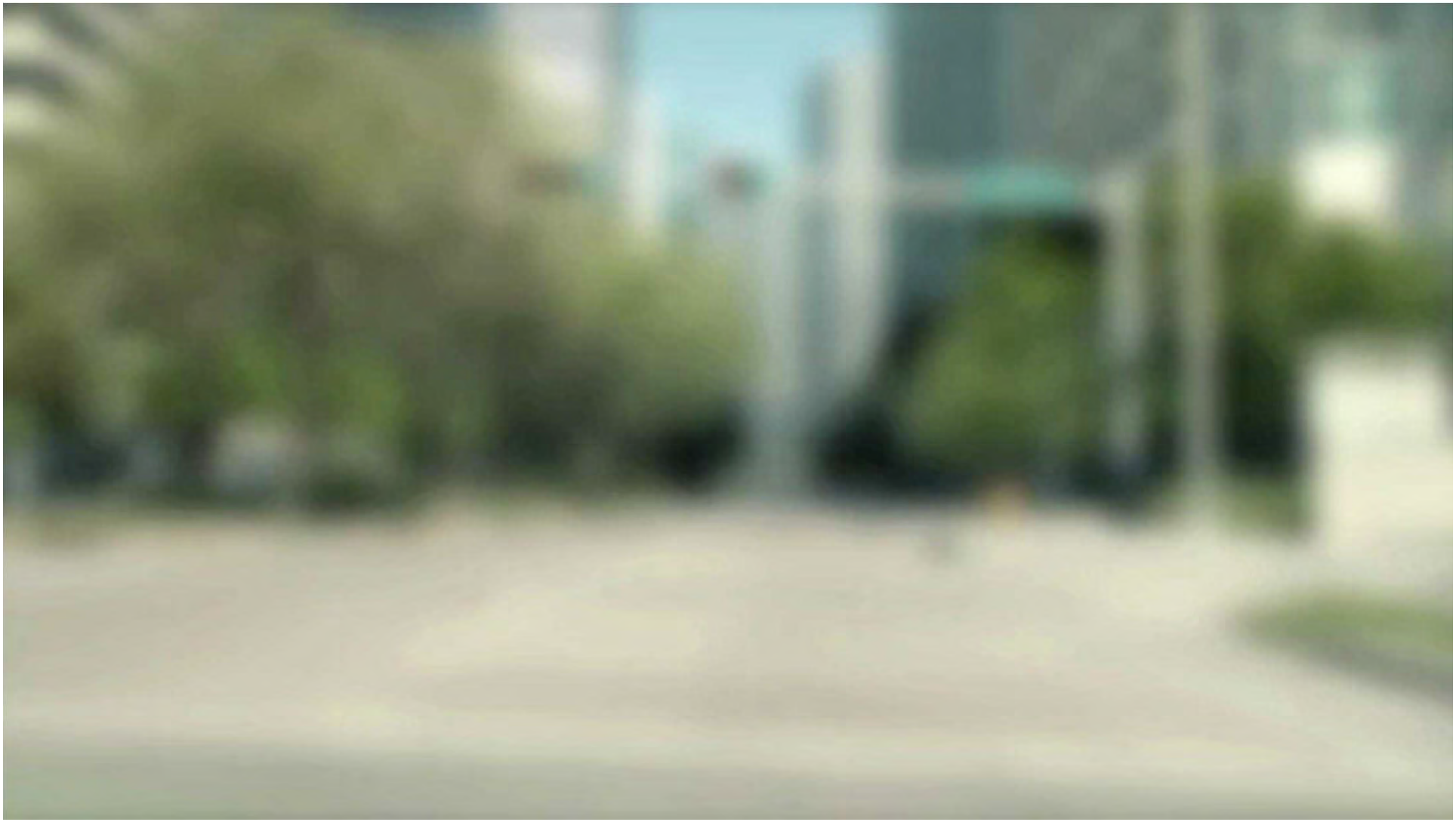
- My Destinations
- Calendar
- Internet Radio
- Flatrate music streaming
- Available on iOS and Android

Apple CarPlay Services

- Maps
- Telephone
- Music
- News
- Voice control
- Podcasts



Online Navigation

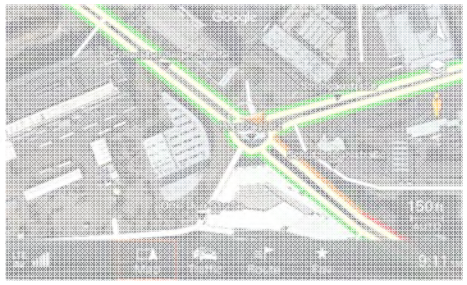


The PCM enables Online Navigation, PCM Connect App Services, and Apple CarPlay

Porsche Communication Management (PCM) incl. Navigation module

Online Navigation Services

- Real Time Traffic Information
- POI Search
- Google Earth
- Google Street View



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- My Destinations
- Calendar
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- Flatrate music streaming
- Available on iOS and Android

Apple CarPlay Services

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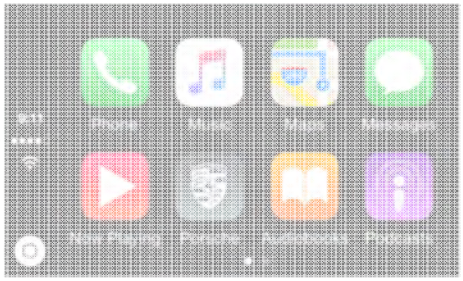
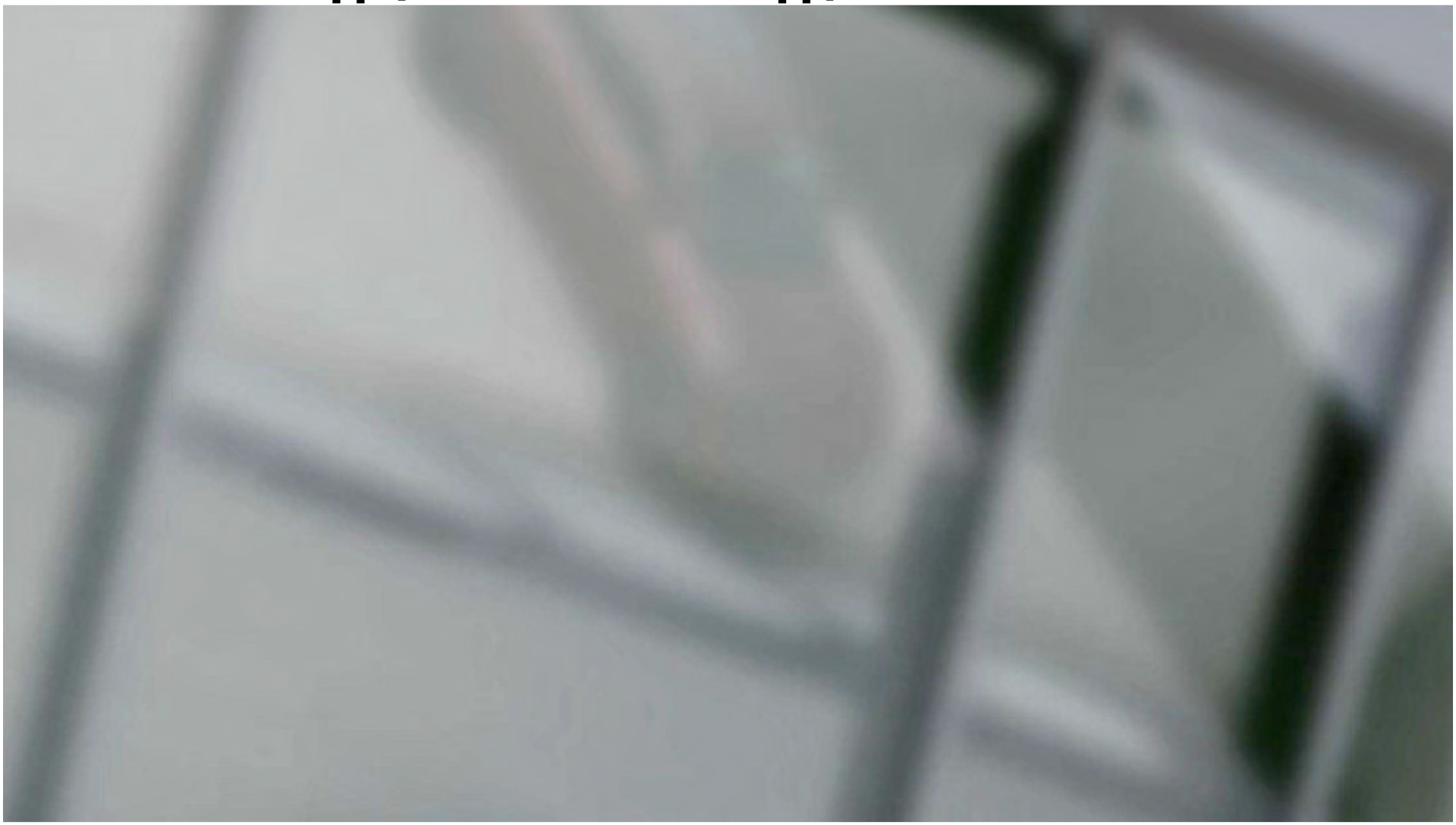
- Podcasts



PCM Connect App (Porsche Connect App)

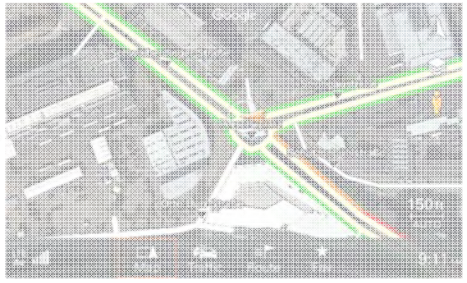


The PCM enables Online Navigation, PCM Connect App Services, and Apple CarPlay

Porsche Communication Management (PCM) incl. Navigation module

Online Navigation Services

- Real Time Traffic Information
- POI Search
- Google Earth
- Google Street View



PCM Connect App Services

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Apple CarPlay Services

- Maps
- Telephone
- Music
- News
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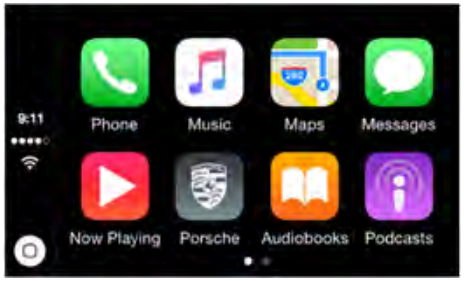
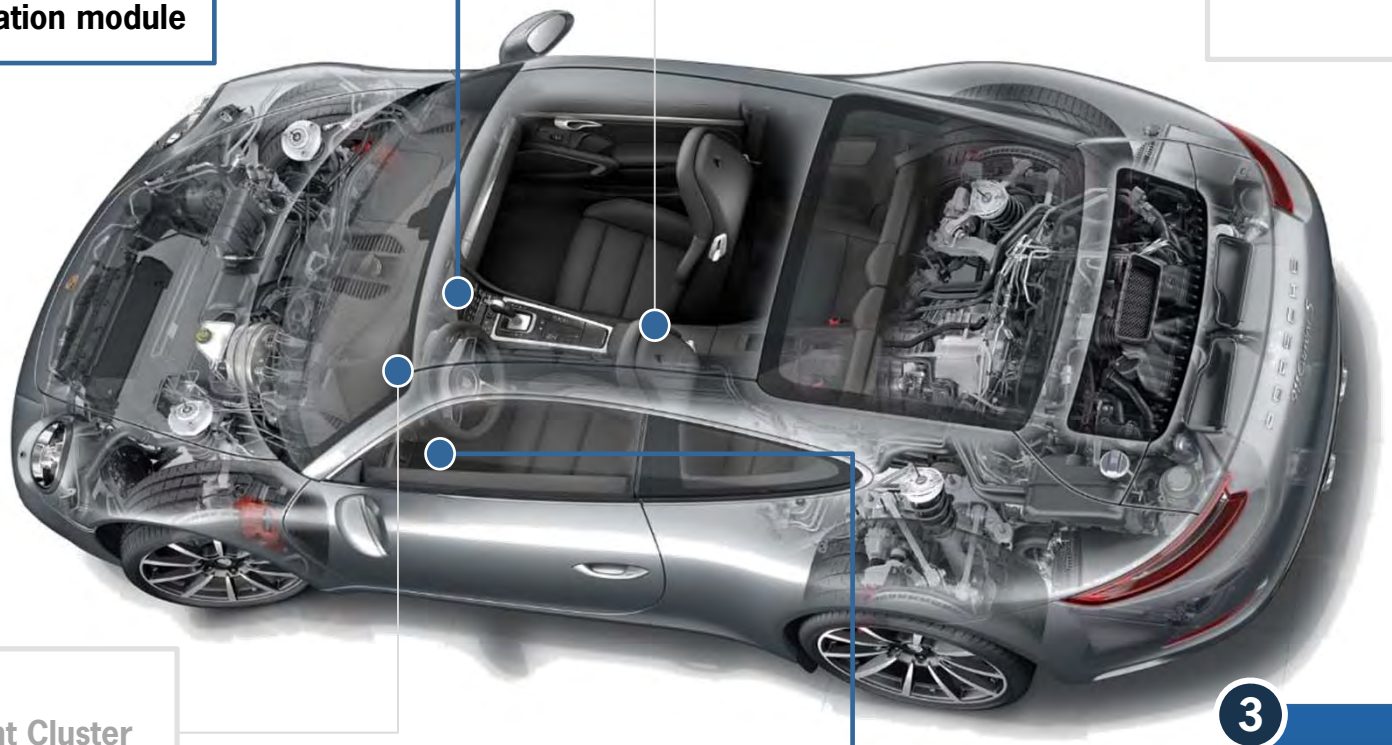


Apple CarPlay

Smartphone compartment not available in the US

Online services are enabled via different software components



1 Porsche Communication Management (PCM) incl. Navigation module

2 Instrument Cluster

3 PVTS Electronic Control Unit

4 Media Interfaces

The PVTS Control Unit enables Porsche Car Connect Services

PVTS Electronic Control Unit

Remote Services

- Remote vehicle status
- Remote horn & flashing
- Remote mirror folding
- Available on iOS and Android
- Remote locks*
- Car finder

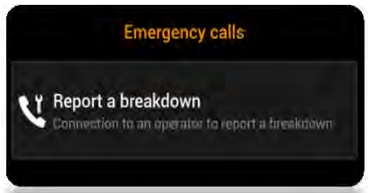
* Only in conjunction with Entry and Drive

E-Mobility Services

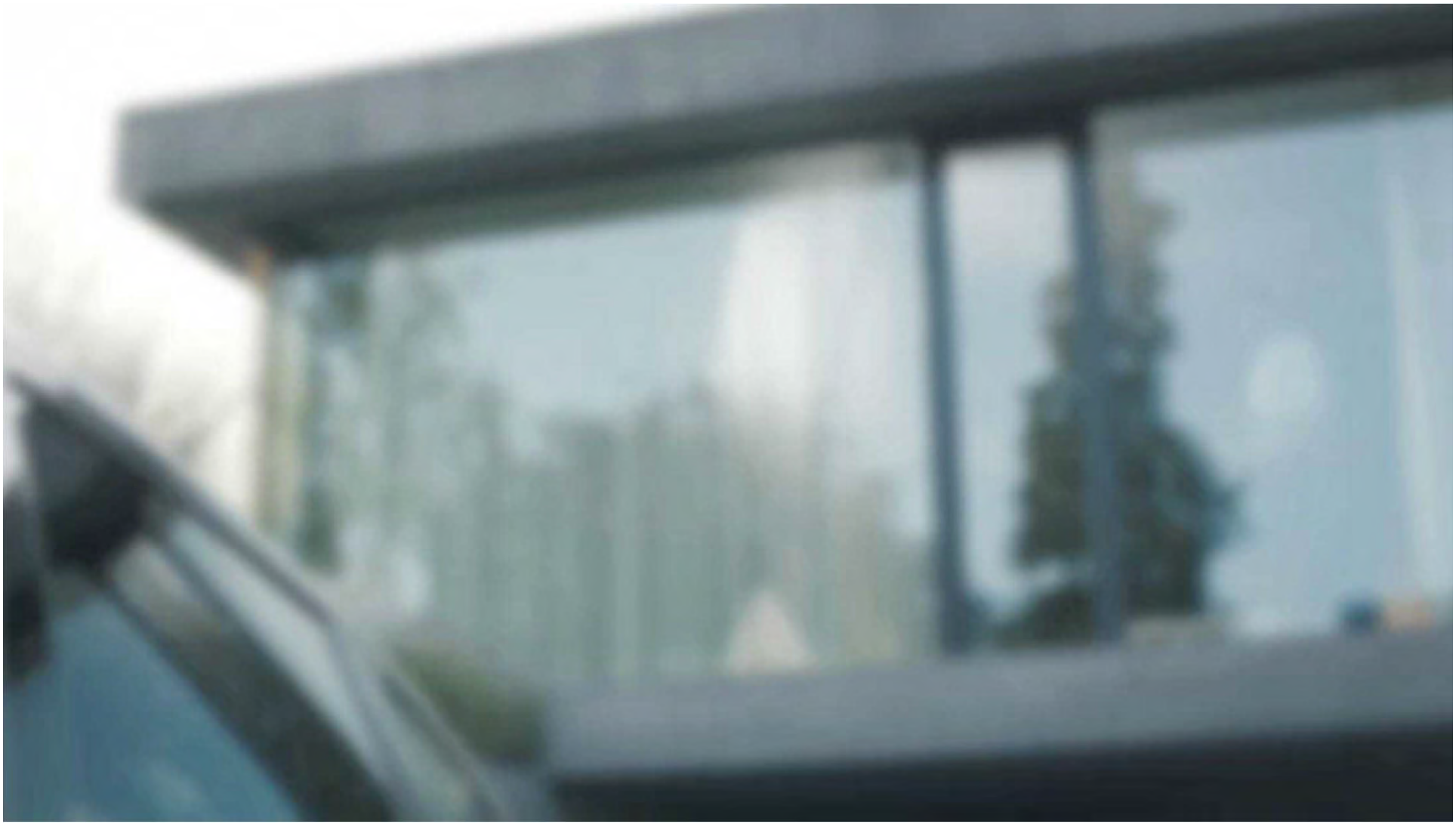
- Remote battery charging control
- Remote departure timer
- Remote climate control (Optional Pre-Conditioning)
- E-mobility Services not available with 991.2

Safety Services

- Crash Notification
- Breakdown call



Porsche Car Connect



Technical differences:
PCM Connect and Porsche Car Connect

PCM Connect

PCM Connect

Infotainment

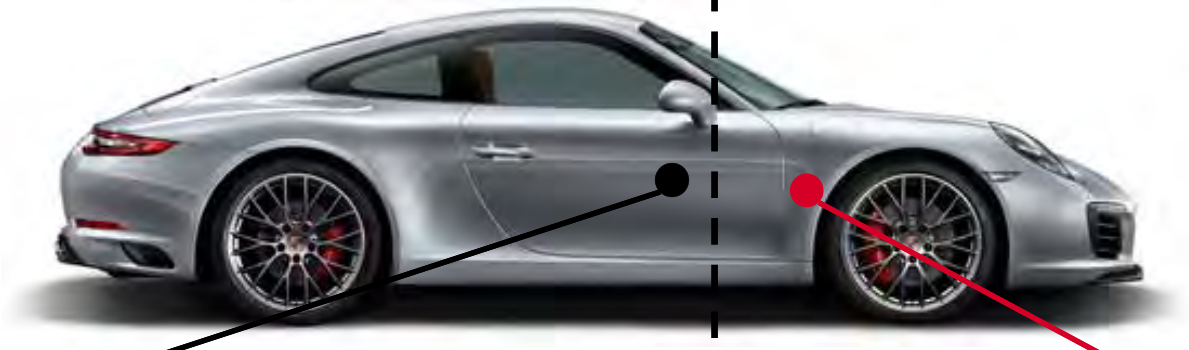
Navigation

Porsche Car Connect

Remote

Safety & Service

Car Connect



PORSCHE

Car-related Services

Vodafone

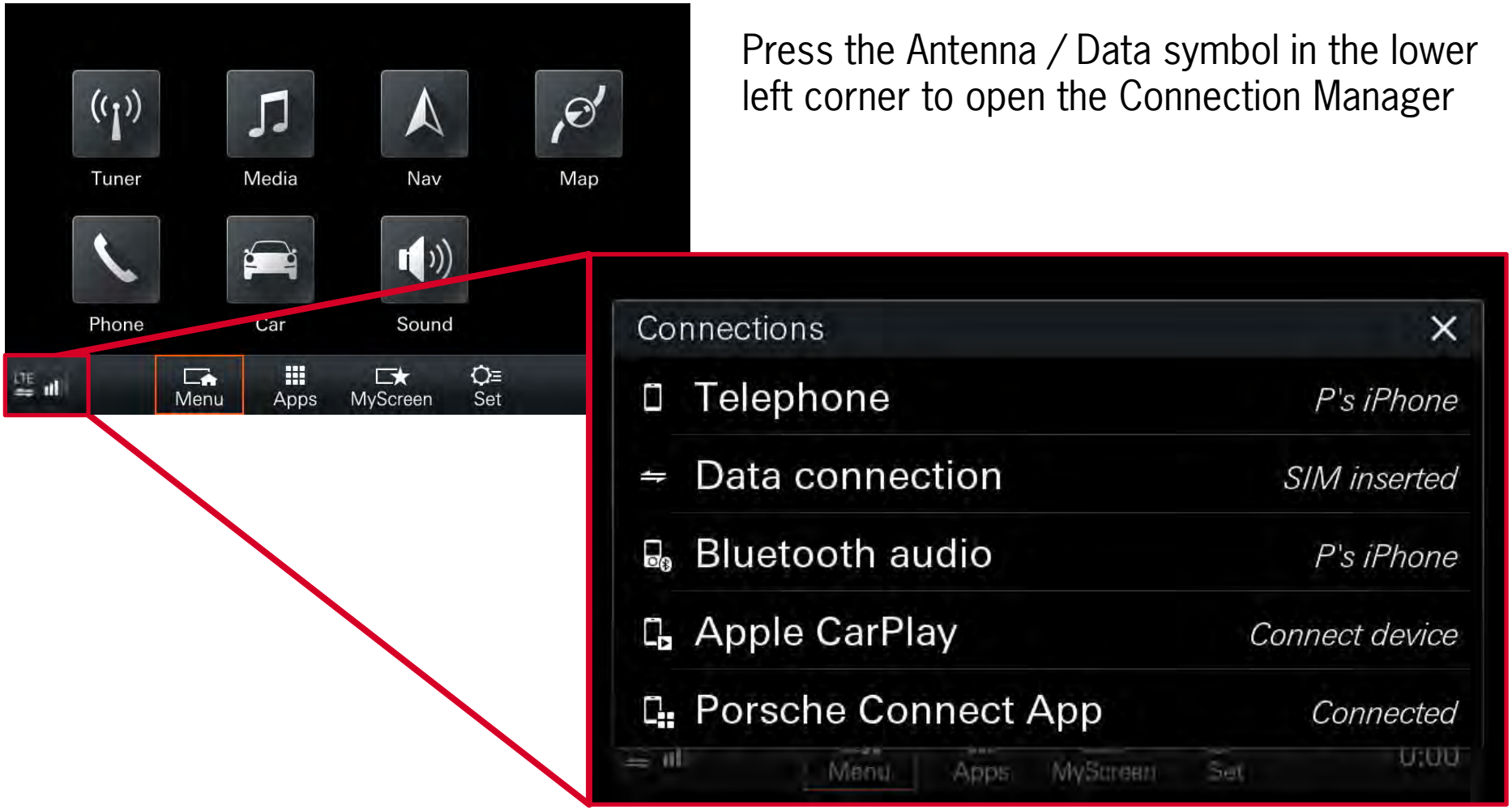
*additional **new components** within the PCM incl. LTE-Telephone module, WLAN and LTE-Antennas

Agenda

PCM and smartphone connectivity: There are multiple data connections

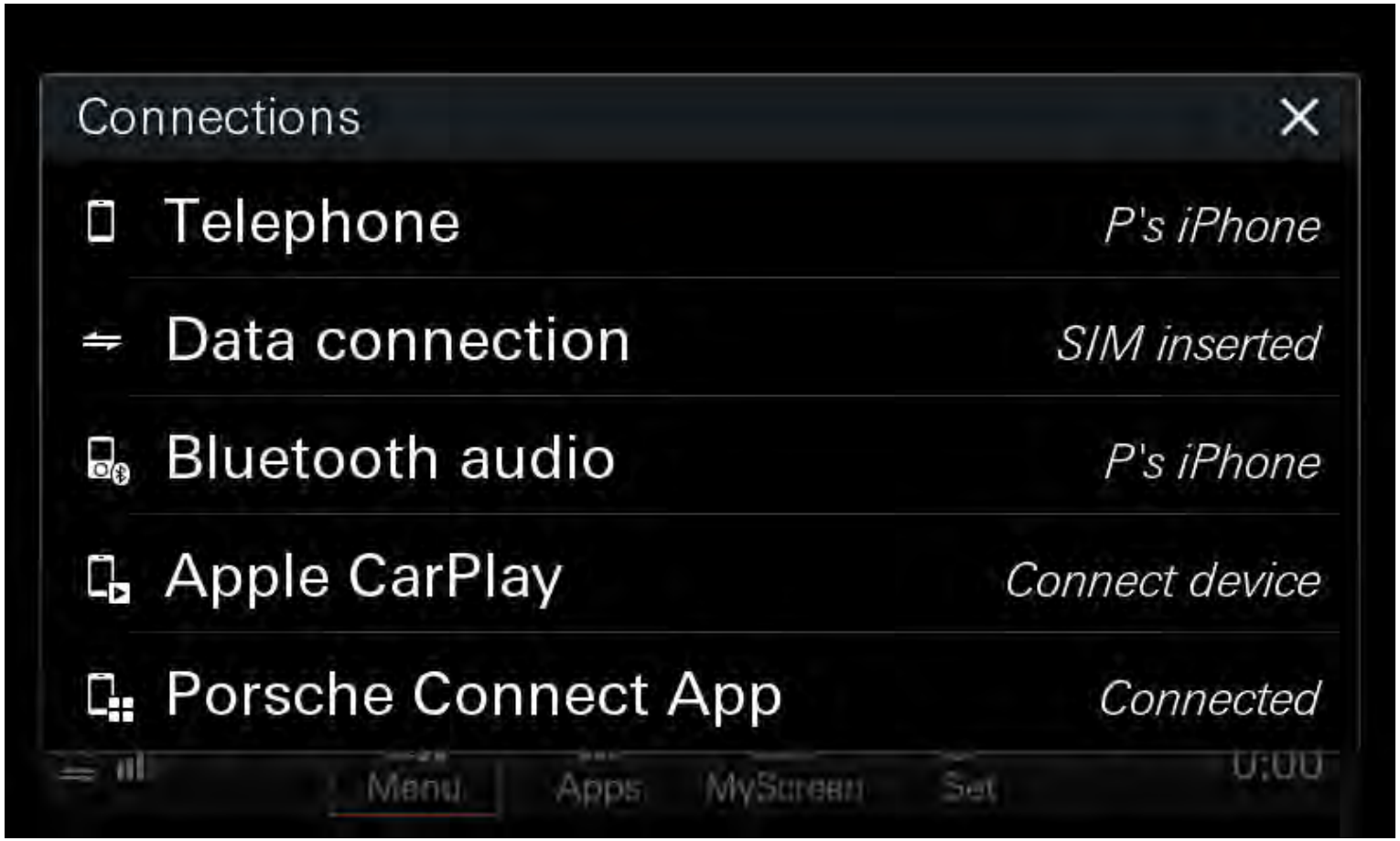
The Data Connection Manager will allow you to manage all connection types.

Data Connection Manager



Press the Antenna / Data symbol in the lower left corner to open the Connection Manager

Data Connection Manager



Bluetooth

SIM card

Bluetooth

USB

WiFi

Note: Porsche Connect App = PCM Connect App

Online Navigation Services and Real Time Traffic Information (RTTI): Connectivity via SIM card in the PCM

SIM card

The Online Navigation Services and Real Time Traffic Information (RTTI) require an internet connection. A SIM card with an active subscription will provide the best possible customer experience.

An AT&T SIM card with a 3 month/3 GB trial will be provided with the vehicle.

There are two possible options to establish a data connection in the 991.2

1 Customer inserts a SIM card

Recommendation Solution

2 Smartphone Tethering and personal Hotspot

Requires enabling Hotspot each trip

PCM Connect App:
Connectivity via WiFi connection

Navigation/POI Services: Saving favorite POIs/navigation destinations, Navigate to a geo-tagged picture

Calendar and Contacts: Use of calendar in the PCM

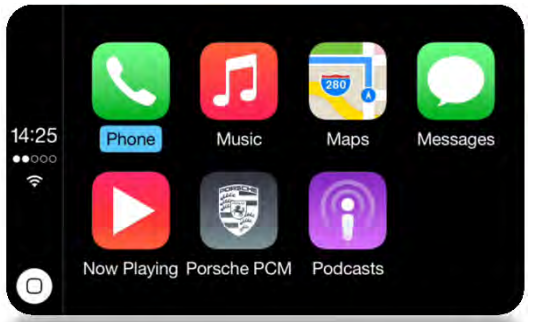
Music streaming: Internet Radio, Music streaming

Apple CarPlay:
Connectivity via a USB connection

iPhone 5 and newer

Lightning USB cable

Center Console
USB connection



Apple CarPlay on the PCM

The Apple CarPlay service is provided by Apple. The content provided is subject to change. Please visit Apple's website for up to date information regarding Apple CarPlay:

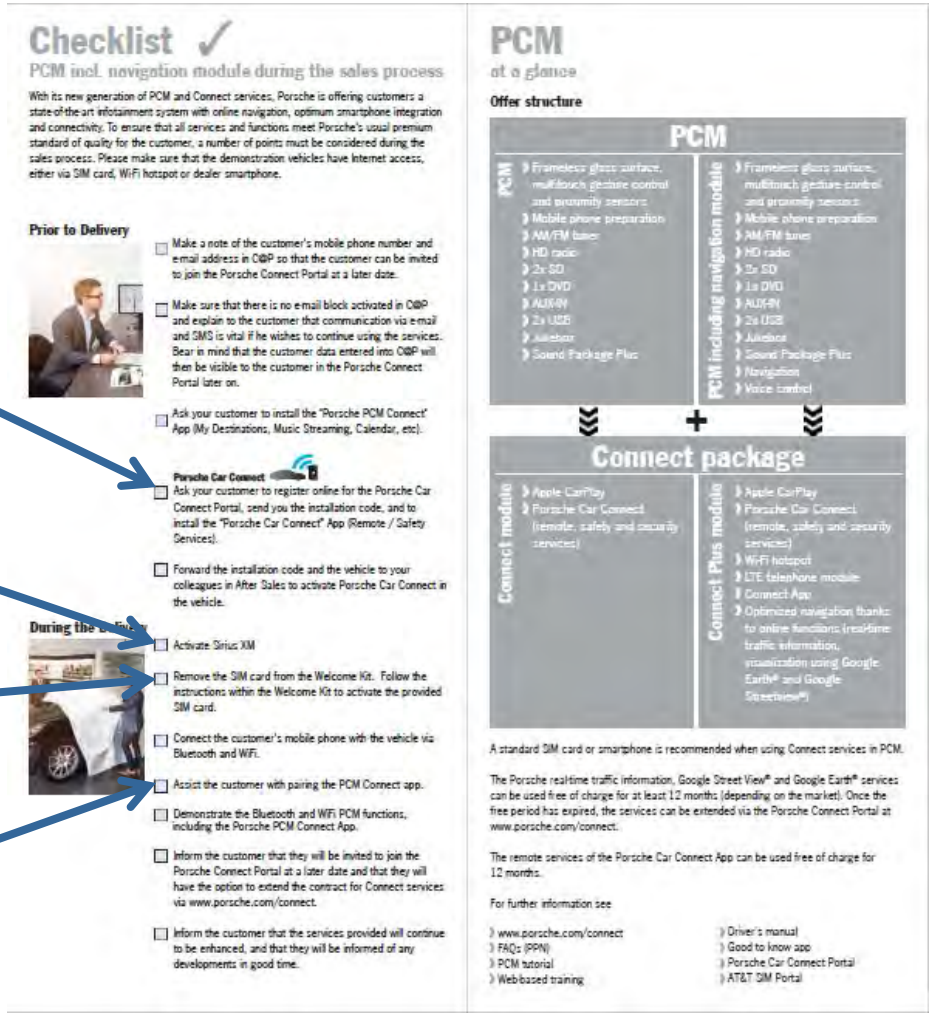
www.apple.com/ios/carplay

Agenda

There are 4 services that must be activated before delivery of the vehicle to the customer

The PCM Checklist will be available on PPN and provided with this presentation.

- Porsche Car Connect
- SiriusXM Radio
- AT&T SIM Card
- PCM Connect



Checklist ✓

PCM incl. navigation module during the sales process

With its new generation of PCM and Connect services, Porsche is offering customers a state-of-the-art infotainment system with online navigation, optimum smartphone integration and connectivity. To ensure that all services and functions meet Porsche's usual premium standard of quality for the customer, a number of points must be considered during the sales process. Please make sure that the demonstration vehicles have Internet access, either via SIM card, WiFi hotspot or dealer smartphone.

Prior to Delivery

- ☐ Make a note of the customer's mobile phone number and e-mail address in O@P so that the customer can be invited to join the Porsche Connect Portal at a later date.
- ☐ Make sure that there is no e-mail block activated in O@P and explain to the customer that communication via e-mail and SMS is vital if he wishes to continue using the services. Bear in mind that the customer data entered into O@P will then be visible to the customer in the Porsche Connect Portal later on.
- ☐ Ask your customer to install the "Porsche PCM Connect" App (My Destinations, Music Streaming, Calendar, etc).

Porsche Car Connect

- ☐ Ask your customer to register online for the Porsche Car Connect Portal, send you the installation code, and to install the "Porsche Car Connect" App (Remote / Safety Services).
- ☐ Forward the installation code and the vehicle to your colleagues in After Sales to activate Porsche Car Connect in the vehicle.

During the D[illegible]

- ☐ Activate SiriusXM
- ☐ Remove the SIM card from the Welcome Kit. Follow the instructions within the Welcome Kit to activate the provided SIM card.
- ☐ Connect the customer's mobile phone with the vehicle via Bluetooth and WiFi.
- ☐ Assist the customer with pairing the PCM Connect app.
- ☐ Demonstrate the Bluetooth and WiFi PCM functions, including the Porsche PCM Connect App.
- ☐ Inform the customer that they will be invited to join the Porsche Connect Portal at a later date and that they will have the option to extend the contract for Connect services via www.porsche.com/connect.
- ☐ Inform the customer that the services provided will continue to be enhanced, and that they will be informed of any developments in good time.

PCM

at a glance

Offer structure

PCM

PCM
- Frameless glass surface, multitouch gesture control and proximity sensors
- Mobile phone preparation
- AM/FM tuner
- HD radio
- 2x SD
- 1x DVD
- AUX-IN
- 2x USB
- Jukebox
- Sound Package Plus

PCM including navigation module
- Frameless glass surface, multitouch gesture control and proximity sensors
- Mobile phone preparation
- AM/FM tuner
- HD radio
- 2x SD
- 1x DVD
- AUX-IN
- 2x USB
- Jukebox
- Sound Package Plus
- Navigation
- Voice control

Connect package

Connect module
- Apple CarPlay
- Porsche Car Connect (remote, safety and security services)

Connect Plus module
- Apple CarPlay
- Porsche Car Connect (remote, safety and security services)
- WiFi hotspot
- LTE telephone module
- Connect App
- Optimized navigation thanks to online functions (real-time traffic information, visualization using Google Earth® and Google Streetview®)

A standard SIM card or smartphone is recommended when using Connect services in PCM.

The Porsche realtime traffic information, Google Street View® and Google Earth® services can be used free of charge for at least 12 months (depending on the market). Once the free period has expired, the services can be extended via the Porsche Connect Portal at www.porsche.com/connect.

The remote services of the Porsche Car Connect App can be used free of charge for 12 months.

For further information see

- www.porsche.com/connect
- FAQs (PPN)
- PCM tutorial
- Webbased training
- Driver's manual
- Good to know app
- Porsche Car Connect Portal
- AT&T SIM Portal

Porsche Car Connect

The Porsche Car Connect activation remains unchanged from the existing procedure.

Information is already available on PPN regarding the activation process.

- Overview
- Customer Web Portal (CWP)
- Installation of Porsche Car Connect
- Activation of Porsche Car Connect App
- Porsche Car Connect Service Costs
- Porsche Car Connect Operating Manual
- Auxiliary Cabin Conditioning
- Dealer Web Portal (DWP)
- Demonstration Account for Porsche Dealerships
- FAQs and Troubleshooting
- Support

Overview

Porsche Car Connect is a telematics system which provides Porsche owners the ability to interface with their vehicle from their smartphone app. It also provides additional safety features such as Airbag Deployment notification, vehicle theft detection and breakdown call capabilities.

The Porsche Car Connect smartphone app is now available for both Apple iOS and Android devices. Go to the Apple iTunes App Store for iOS devices and the Google Play Store for Android devices.

The Porsche webpage http://www.porsche.com/usa/carconnect/ provides the following description of PCC:

An optimized activation process is under review.

SiriusXM Radio

The SiriusXM Radio activation remains unchanged from the existing procedure.

Information is already available on PPN regarding the activation process.

XM Activation
- XM Activation Support

XM Radio
XM NavTraffic
- Benefits
- Market Coverage

XM Activation

Activating a Dealer/Factory Demo on the Web

To activate your complimentary, 1 year XM demonstration, please follow the steps below.

Step 1 Get your XM Radio ID by tuning to channel 0, one down from XM Preview. Please check your ID code carefully. The letters "I", "O", "S", and "F" are not used.

Step 2 Type the radio ID into the "*Radio ID (ESN or SID)" field at one of the link below, and click the "Send Activation Request" button. Upon completing Step 2, you have approximately 2 hours to complete Step 3.

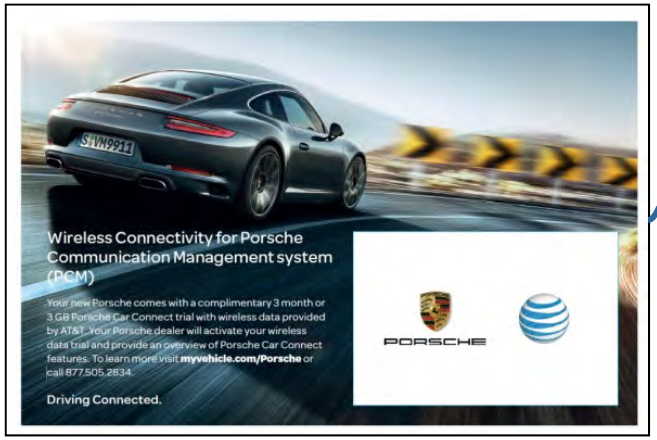
- https://care.siriusxm.com/retailrefresh_view.action

Step 3 Ensure your radio antenna has an unobstructed view of the sky (please make sure it isn't in a garage), and turn your radio on and service should be activated within 15 minutes. If your radio isn't working after that time, you can resend the signal.

Activating a Dealer/Factory Demo by Phone

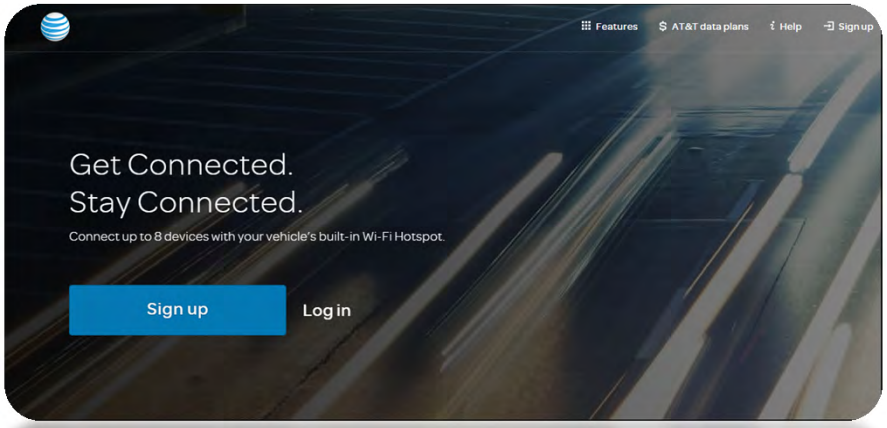
AT&T SIM Activation (Day 1)

Each vehicle equiped with Connect Plus will come with a 3GB / 3 Month Data Trial for customers to try our new connected car services



- Remove SIM from Welcome Information, insert the SIM into the PCM, Confirm Connectivity, and provide the AT&T Welcome Information to your customer.
- Customers will be contacted at the end of the trial and provided the opportunity to migrate to a normal individual account.
- Initial AT&T Welcome Information kits will be sent from PCNA to dealerships

AT&T SIM Activation (Future State)



* AT&T Registration Portal

In the future an AT&T web-portal will be utilized to register the customer's connectivity trial.

This will not only start the trial but allow for usage notifications and enable the ability to migrate from a trial account to an individual subscription.

You will be notified once this system is available.

Demonstration and Test SIMS:

Dealerships will be supplied with additional active AT&T SIM cards to facilitate customer demonstrations and workshop troubleshooting needs

The usage of these SIMs will be monitored and they are not to be used outside of normal product demonstrations and troubleshooting

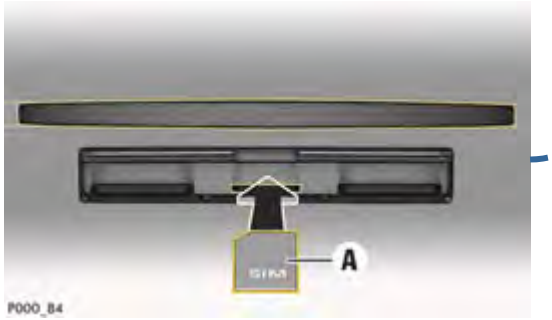
Excessive non-customer related usage may result in deactivation of your assigned SIMs

PCM Connect Activation (Day 1)

The PCM Connect Initialization procedure will be provided with this presentation, will be available on PPN, and will be provided as a Technical Information bulletin to AfterSales.

The main steps are:

1. Insert AT&T SIM
2. Verify Licenses
3. Restart PCM



Verifying licenses and restarting the PCM

Verifying the availability of licenses

1 **HOME** button > **Apps** menu > **OPT** button.

2 **Select Services information**.

✓ The contract duration of the relevant service is displayed.

Service information

Google Earth	up to 11/12/2016
Online search	up to 11/12/2016
Realtime traffic information	up to 11/12/2016
Google Street View	up to 11/12/2016

Restarting the PCM

In order to use the services, a **restart of the PCM** is required. Carry out the following steps for this purpose.

1 Remove the SIM card (if inserted) from the card reader. To do this, press on the inserted card and remove.

2 End route guidance (if active).

3 Close any open doors and/or lids before locking the vehicle. Wait for **at least 5 minutes**.

4 Unlock the vehicle and switch on the ignition.

✓ The PCM performs a complete restart (start and model logos appear in the PCM display). If this is not the case, the waiting period was too short.

PCM Connect Activation (Future State)

The PCM Connect Initialization procedure will no longer be required.

A Web portal will be created to activate and manage all of customer's connected services.

You will be notified once this system is available.

What is the future of connected cars?

What ideas do you have?