

Reference Manual



G30 LCI COMPLETE VEHICLE



Technical Training

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Technical training.
Product information.

G30 LCI Complete Vehicle.



BMW Service

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General information

Symbols used

The following symbol is used in this document to facilitate better comprehension or to draw attention to very important information:



Contains important safety information and information that needs to be observed strictly in order to guarantee the smooth operation of the system.

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BMW Group vehicles meet the requirements of the highest safety and quality standards. Changes in requirements for environmental protection, customer benefits and design render necessary continuous development of systems and components. Consequently, there may be discrepancies between the contents of this document and the vehicles available in the training course.

The information contained in the training course materials is solely intended for participants in this training course conducted by BMW Group Technical Training Centers, or BMW Group Contract Training Facilities.

This training manual or any attached publication is not intended to be a complete and all inclusive source for repair and maintenance data. It is only part of a training information system designed to assure that uniform procedures and information are presented to all participants.

For changes/additions to the technical data, repair procedures, please refer to the current information issued by BMW of North America, LLC, Technical Service Department.

This information is available by accessing TIS at www.bmwcenternet.com.

Additional sources of information

Further information on the individual topics can be found in the following:

- Owner's Manual
- Integrated Service Technical Application
- Aftersales Information Research (AIR)

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G30 LCI Complete Vehicle.

1. Introduction.

Starting in Summer 2020 the G30 will be offered within the framework of the Life Cycle Impulse (LCI).

There are new visual features primarily in the outer area. They give the LCI more presence in comparison to its predecessor. Changes to the usual luxurious passenger compartment can only be found in the details.

Technological highlights of the LCI include the Full Adaptive LED headlights and the full LED tail lights. It uses a new MGUH head unit and the user interface has changed over to BMW Operating System 7.



BMW G30 LCI

1.1. Models of the BMW 5 Series

The following table provides an overview of the available model ranges:

Model
BMW 530i
BMW 530i xDrive
BMW 540i
BMW 540i xDrive
BMW 550i xDrive
BMW 530e
BMW 530e xDrive

1.2. Dimensions

The external dimensions of the G30 LCI have not changed.

G30 LCI Complete Vehicle.

2. Body.

2.1. Exterior equipment

Only the following lines are offered:

- Sport
- Luxury
- M Sport

2.1.1. Front

Change

These changes concern all models of the BMW 5 Series.

- Larger kidney grille
- New front aprons with larger air inlets
- New headlight design
- Latest generation of the air flap control
- Compliance with the latest pedestrian protection requirements



Comparison of front of G30 before and after LCI

TG20-0150

G30 LCI Complete Vehicle.

2. Body.

2.1.2. Rear

Change

- New multipart bumper design
- New LED tail lights



Comparison of rear of G30 before and after LCI

Index	Explanation
1	G30
2	G30 LCI

G30 LCI Complete Vehicle.

2. Body.

2.2. Interior equipment

2.2.1. Overview of the interior

The proven interior design of the G30 has been incorporated almost in its entirety into the LCI.

With the LCI the front and rear basic seats are upgraded with Sensatec 2.0 with perforation and contrast stitching. Sport seats or multifunctional seats are available as optional equipment.

The BMW Live Cockpit Plus, the leather sports steering wheel, as well as the Park Distance Control, are included in the standard equipment for the LCI.



TG20-0156

Overview of interior G30 LCI

G30 LCI Complete Vehicle.

3. Drive.

3.1. Engines

The drive of the G30 LCI has been fitted with the latest generation of modular engines.

3.1.1. Engine variants

The LCI covers 4-, 6- and 8-cylinder engines.

The table below presents the technical data of the gasoline engines:

Models	Engine identification	Power output [hp]	Torque [lb-ft]
530i	B48B20O1	248	258
540i	B58B30M1	335	331
M550i	N63B44T3	523	553

G30 LCI Complete Vehicle.

4. Chassis and Suspension.

4.1. Dynamic Stability Control (DSC)

The G30 LCI is fitted with the newly developed brake system with the virtual integration platform (VIP). The virtual integration platform (VIP) is a virtual control unit with its own control unit address in the DSC unit. There are 2 control units in the DSC unit: the Virtual Integration Platform (VIP) and the Dynamic Stability Control (DSC).

With the introduction of the DSC/VIP, a completely new braking concept is available to BMW customers which has a significant effect on driving dynamics.

4.1.1. Features

The brake system is distinguished by the following driving characteristics in particular:

- Outstanding driving dynamics and vehicle control due to the dynamics and precision of the vehicle stabilization.
- More sporty character and feeling of safety due to brake pedal feel, short travel and effective modulation.
- Enhanced active safety thanks to shorter stopping distances in combination with assistance systems.
- Due to the fast pressure build-up, much faster and more precise interventions can be achieved compared to previous brake systems.

G30 LCI Complete Vehicle.

5. General Vehicle Electronics.

5.1. Change

With the introduction of the LCI measures in the G30, the existing Boardnet 2020 has been converted to the service pack 2018. The new functions are as follows:

- Remote Software Upgrade (RSU)
- Comfort Access 2.0
- BMW Digital Key

Remote Software Upgrade enables the software in customer vehicles to be remotely updated. A Remote Software Upgrade is a service in combination with the back end of ConnectedDrive which facilitates the following:

- Updating of functions and information in customer vehicles
- Fast and convenient updating of defective software in customer vehicles
- Rapid elimination of possible security flaws in the software

Further information on the service pack 2018 can be found in the “ST1856 General Vehicle Electronics 2018” reference manual.

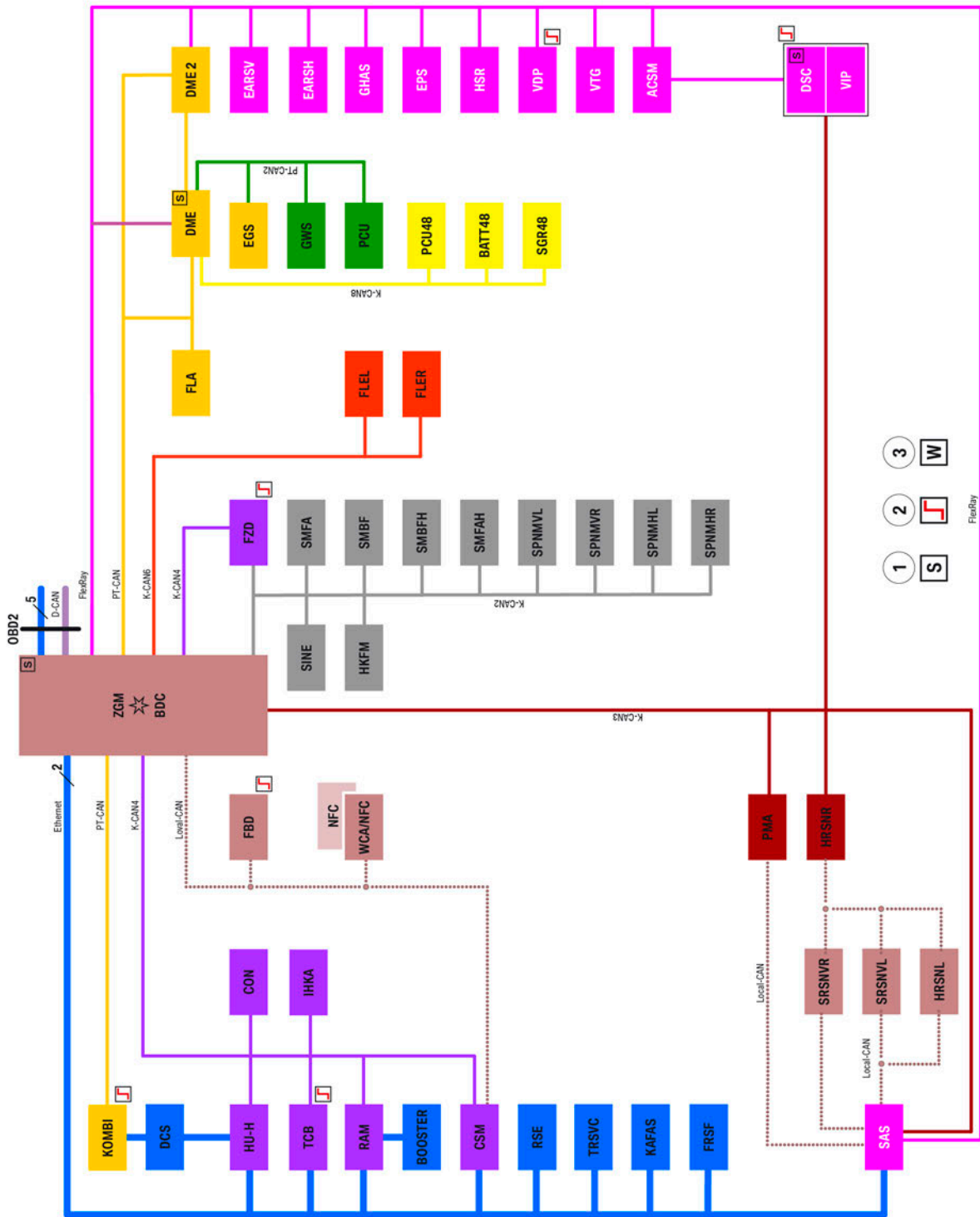
With the introduction of the LCI measures in the G30, the existing 12 V electrical system has been extended with a 48V electrical system. This is equipped on all vehicles with a B58 engine.

Further information on the 48V electrical system can be found in the “ST2007 48-Volt Electrical System” reference manual.

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5. General Vehicle Electronics.

5.2. Bus overview



TG20-0149_2

Bus overview G30 LCI

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5. General Vehicle Electronics.

Index	Explanation
ACSM	Advanced Crash Safety Module
BATT48	Lithium-ion battery 48 V
BDC	Body Domain Controller
Booster	Booster
CSM	Car Sharing Module
CON	Controller
DCS	Driver Camera System
DME	Digital Motor Electronics
DME2	Digital Engine Electronics 2
DSC	Dynamic Stability Control
EARSH	Electric active roll stabilization rear
EARSV	Electrical dynamic drive, front
EGS	Electronic transmission control
ELV	Electronic steering lock
EPS	Electromechanical Power Steering
FBD	Remote control receiver
FLA	High-beam assistant
FLEL	Frontal Light Electronics Left
FLER	Frontal Light Electronics Right
FRSF	Front radar sensor long range
FZD	Roof function center
GHAS	Regulated rear axle differential lock
GWS	Gear selector switch
HU-H	Head Unit High
HKFM	Tailgate function module
HRSNL	Rear radar sensor short range left
HRSNR	Rear radar sensor short range right
HSR	Rear axle slip angle control
IHKA	Integrated automatic heating and air conditioning
KAFAS	Camera-based driver assistance systems
KOMBI	Instrument cluster
NFC	Near Field Communication
PCU	Power Control Unit
PCU48	48 volt power control unit
PMA	Parking Assistant

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5. General Vehicle Electronics.

Index	Explanation
RAM	Receiver Audio Module
RSE	Rear Seat Entertainment
SAS	Optional equipment system
SGR48	48 volt starter motor generator
SMBF	Front passenger seat module
SMFA	Driver's seat module
SMBFH	Seat module, front passenger's side, rear
SMFAH	Seat module, driver's side, rear
SPNMHL	Seat pneumatics module back left
SPNMHR	Seat pneumatics module back right
SPNMVL	Seat pneumatics module front left
SPNMVR	Seat pneumatics module front right
SRSNVL	Side radar sensor short range front left
SRSNVR	Side radar sensor short range front right
TCB	Telematic Communication Box
TRSVC	Top rear side view camera
VDP	Vertical Dynamic Platform
VIP	Virtual Integration Platform
VTG	Transfer box
WCA/NFC	Wireless charging station with control electronics for Near Field Communication
ZGM	Central gateway module
1	Start-up node control units for starting and synchronizing the FlexRay bus system
2	Control units authorized to perform wake-up function
3	Control units also connected at terminal 15WUP

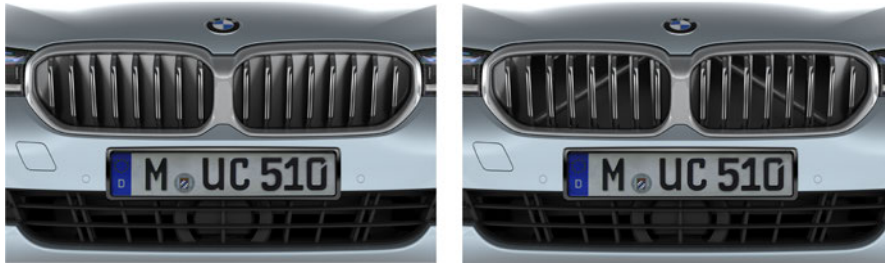
G30 LCI Complete Vehicle.

5. General Vehicle Electronics.

5.3. Diagnostics

An active air-flap control for top and bottom with on-board diagnosis is used for the first time on the G30 LCI. This leads to a CO₂ reduction and lower consumption thanks to the active aerodynamics. The upper and lower flaps are controlled by an electrical actuator.

In the event of a cooling requirement, first the lower flap is opened, a partial opening of 15° or 30° is also possible depending on the cooling requirement. The brake ventilation ducts can also be closed by the lower flaps.



Air flaps with on-board diagnosis in the G30 LCI

The function of the flap must be checked in accordance with the respective legal requirements.

The function is emission-relevant and the OBD of the air-flap control can be performed.

Blockages or mechanical damage can be detected with help of the OBD. A diagnostic is run after each engine start. If the diagnostic detects a fault occurring twice consecutively, the fault is indicated in the vehicle by the emissions warning light.

G30 LCI Complete Vehicle.

5. General Vehicle Electronics.

5.4. Exterior lights

5.4.1. Headlight

The G30 LCI only features Adaptive LED headlights. The basic version without icon lights is discontinued.

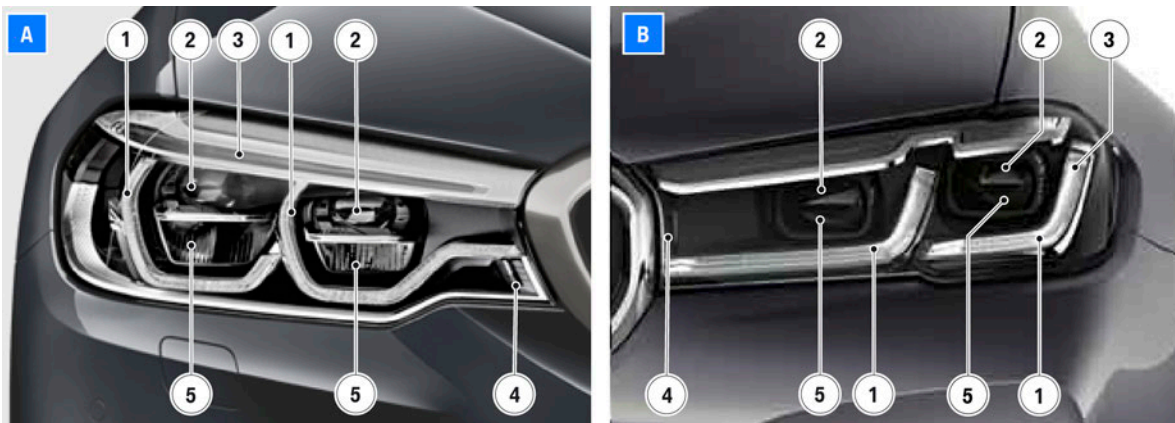
The design has been revised. The turn indicator is now always positioned above the low-beam and high-beam headlight.

Alongside the modified design, the technology remains unchanged. A headlight cleaning system is discontinued.

The following equipment specifications are offered:

- Adaptive Full LED Headlights (Standard)

Features



Design comparison between G30 and G30 LCI

Index	Explanation
A	G30
B	G30 LCI
1	Side lights, daytime driving lights
2	Low-beam headlight
3	Turn indicator
4	Cornering light
5	High beam

G30 LCI Complete Vehicle.

5. General Vehicle Electronics.

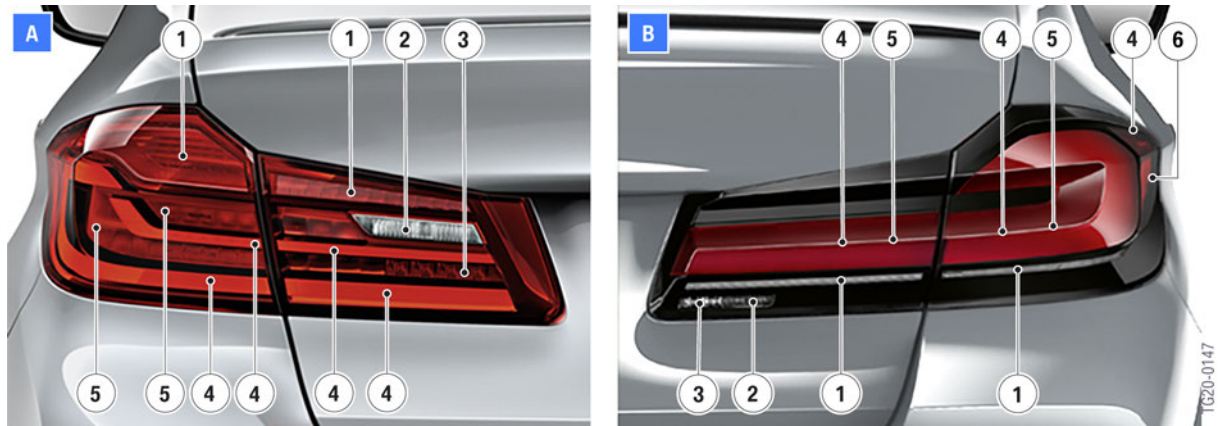
5.4.2. Rear lights

In addition to a new design, the rear lights of the LCI have full-LED technology, including the rear fog lights.

The rear lights and brake lights are assembled in the same lighting chamber.

The turn indicator extends across both light units in the tailgate and the side part.

Features



Design comparison of the tail lights between G30 and G30 LCI

Index	Explanation
A	G30
B	G30 LCI
1	Turn indicator
2	Reversing light
3	Rear fog light
4	Tail light
5	Brake light
6	Clearance light

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6. Driver Assistance Systems.

With the Life Cycle Impulse, the diverse range of assistance systems of the G30 is updated and extended even further. The G30 LCI features the service pack 2018 . With the development of many more innovations, we continue along the road to highly automated driving. Many of the systems and functions presented in this reference manual are also being added in other models with the service pack 2018. This generally concerns vehicles with the optional equipment "Driving Assistant Professional" (OE 5AU).

6.1. Further information

This reference manual presents the new features and modifications to the assistance systems in the G30 LCI. The following product information items provide basic descriptions of the new features as well as familiar assistance systems for specific systems:

Reference manual	Information on	
ST1858 Driver Assistance Systems 2018 (new features)	<ul style="list-style-type: none"> • KAFAS-Mid-Camera • KAFAS-High-Camera • Driver Camera System (DCS) • Collision/Pedestrian Warning • Lane Departure Warning • Emergency Stop Assistant 	<ul style="list-style-type: none"> • Extended Traffic Jam Assistant • Intersection Collision Warning • Active Cruise Control with Stop&Go function • Automatic Parking (PMA) • Back-up Assistant • Evasion Aid
ST1831 G05 Driver Assistance Systems (new features)	<ul style="list-style-type: none"> • Daytime Pedestrian Warning • Intersection Collision Warning • Lane Departure Warning 	<ul style="list-style-type: none"> • Automatic Lane Change • Cruise Control • Automatic Parking (PMA) • Back-up Assistant
ST1604 G30 Driver Assistance Systems (already known)	<ul style="list-style-type: none"> • Intelligent Safety • Collision Warning • Lane Departure Warning • Blind Spot Detection • Side Collision Avoidance • Intersection Warning • Road Sign Recognition • Proactive Driving Assistant • Fatigue and Focus Alert • BMW Night Vision (No longer offered for LCI) • Surround View Cameras 	<ul style="list-style-type: none"> • Park Distance Control (PDC) • Cross Traffic Alert • Parking Maneuver Assistant (PMA) • Remote Control Parking • Cruise Control • Speed Limit Warning • Lateral Guidance Assistants • Lane Keeping & Traffic Jam Assistants • Active Lane Keeping Assistant • Evasion Aid

G30 LCI Complete Vehicle.

6. Driver Assistance Systems.

6.2. Overview

6.2.1. Offer structure "Driving"

The purpose of the following tables is to provide an overview of the dependencies between the offer structure and assistance systems used as well as their system components. They also list all assistance systems available in the G30 LCI. This overview presents the information status at the series launch for the G30 LCI.

Standard equipment

Active Guard (SA 5AV)

- Front Collision Mitigation
- Daytime Pedestrian Detection



Dynamic Cruise Control (SA 544)

- Manual Speed Limiter
- Manual Speed Limit Assist

Active Driving Assistant (OE 5AS)

- Lane change warning
- Rear cross traffic Alert
- Collision/Pedestrian Warning
- Active Lane Keeping Assistant
- Speed Limit Info
- Speed Limit Assistant



G30 LCI Complete Vehicle.

6. Driver Assistance Systems.

Optional equipment

The following optional equipment is available in the G30 LCI:

- Active Driving Assistant Professional (SA 5AU), contains Active Driving Assistant (SA 5AS) and Active Cruise Control with Stop&Go function (SA 5DF)
- Extended Traffic Jam Assistant (SA 5AR), only in conjunction with the optional equipment Active Driving Assistant Professional (SA 5AU).

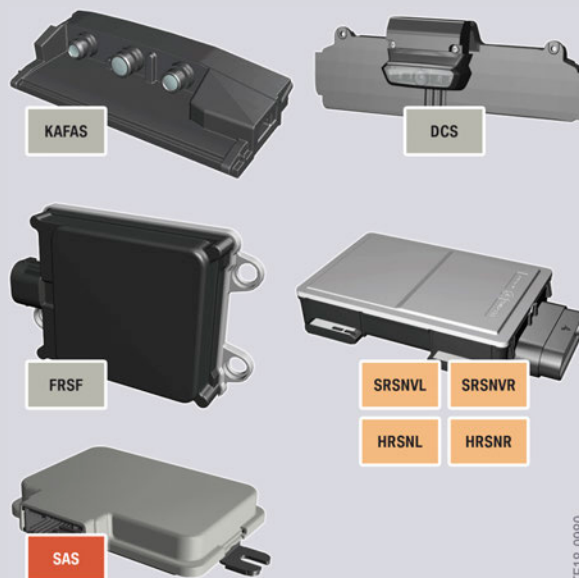
Active cruise control with Stop&Go function (SA 5DF)

- Active Cruise Control with Stop&Go function (up to 130 mph)
- Frontal Collision Mitigation
- Daytime Pedestrian Warning
- Speed Limit Info
- Speed Limit Assistant
- Distance Information



Active Driving Assistant Professional (OE 5AU)

- Extended Traffic Jam Assistant
- Active Lane Keeping Assistant with Active Side Collision Protection
- Active Cruise Control with Stop&Go function (up to 130 mph)
- Front Cross Traffic Alert
- Speed Limit Assistant
- Intersection Collision Warning
- Emergency Stop Assistant
- Lane Change Assistant



G30 LCI Complete Vehicle.

6. Driver Assistance Systems.

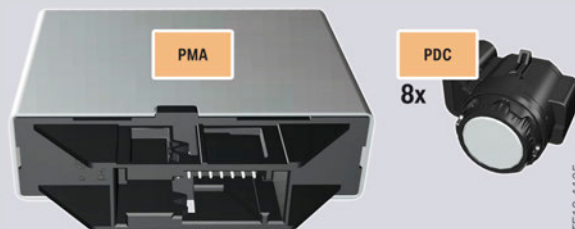
6.2.2. Offer structure "Parking"

Optional equipment

The optional equipment Parking Assistant Plus (SA 5DN) is available with the new G30 LCI. The optional equipment BMW Drive Recorder (SA 6DR) is also available for the first time in the G30. However, this is coupled to the optional equipment Parking Assistant Plus (SA 5DN) in the Executive Package (SA ZEC).

Park Distance Control (Standard)

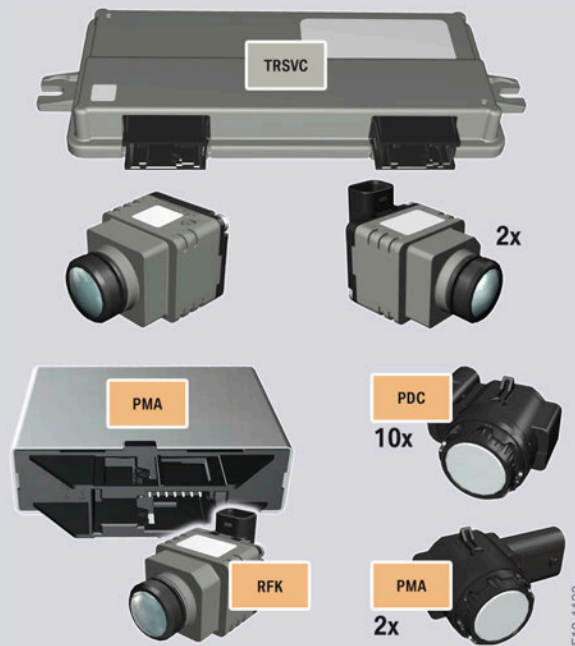
- Front and Rear
- Auto PDC



Vehicles not equipped with the Parking Maneuver Assistant (PMA) but with the Park Distance Control (PDC) have a separate control unit, which is recognized as the PMA control unit by diagnosis tester and is also referred to by this name in the bus diagram. In other words, there is no longer a difference in the naming of the PDC and PMA control unit. There are nevertheless differences between the control units with regard to the hardware version and the software is adapted accordingly.

Parking Assistant (OE 5DN)

- Automatic Parking (PMA) with parallel and perpendicular parking and leaving parking space
- Back-up Assistant
- Active Park Distance Control (PDC)
- Side protection
- Rear view camera
- Surround View
- Panorama View (GPS-based)
- Remote 3D View (only with Remote Services (SA 6AP))

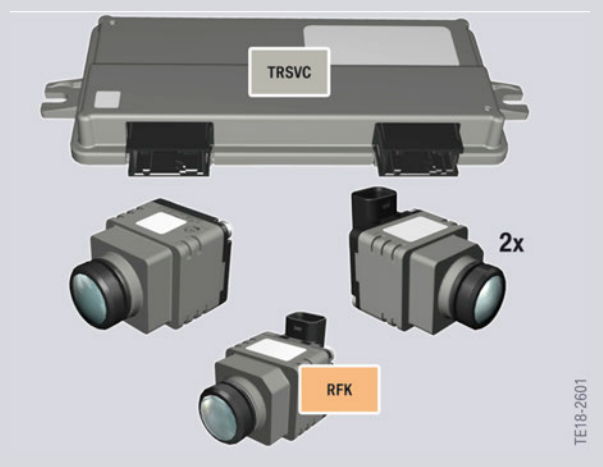


G30 LCI Complete Vehicle.

6. Driver Assistance Systems.

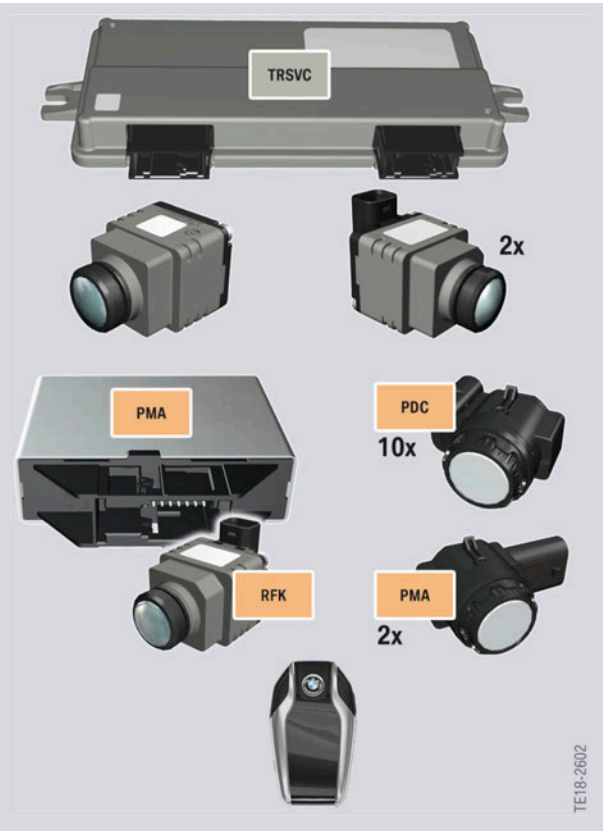
BMW Drive Recorder (SA 6DR) (only with SA 5DN)

- Event Recorder
- Crash Recorder



Parking Assistant (OE 5DV) (only with SA 5DN)

- Remote controlled maneuvering in and out of a parking space with the BMW display key



G30 LCI Complete Vehicle.

6. Driver Assistance Systems.

6.2.3. Innovations

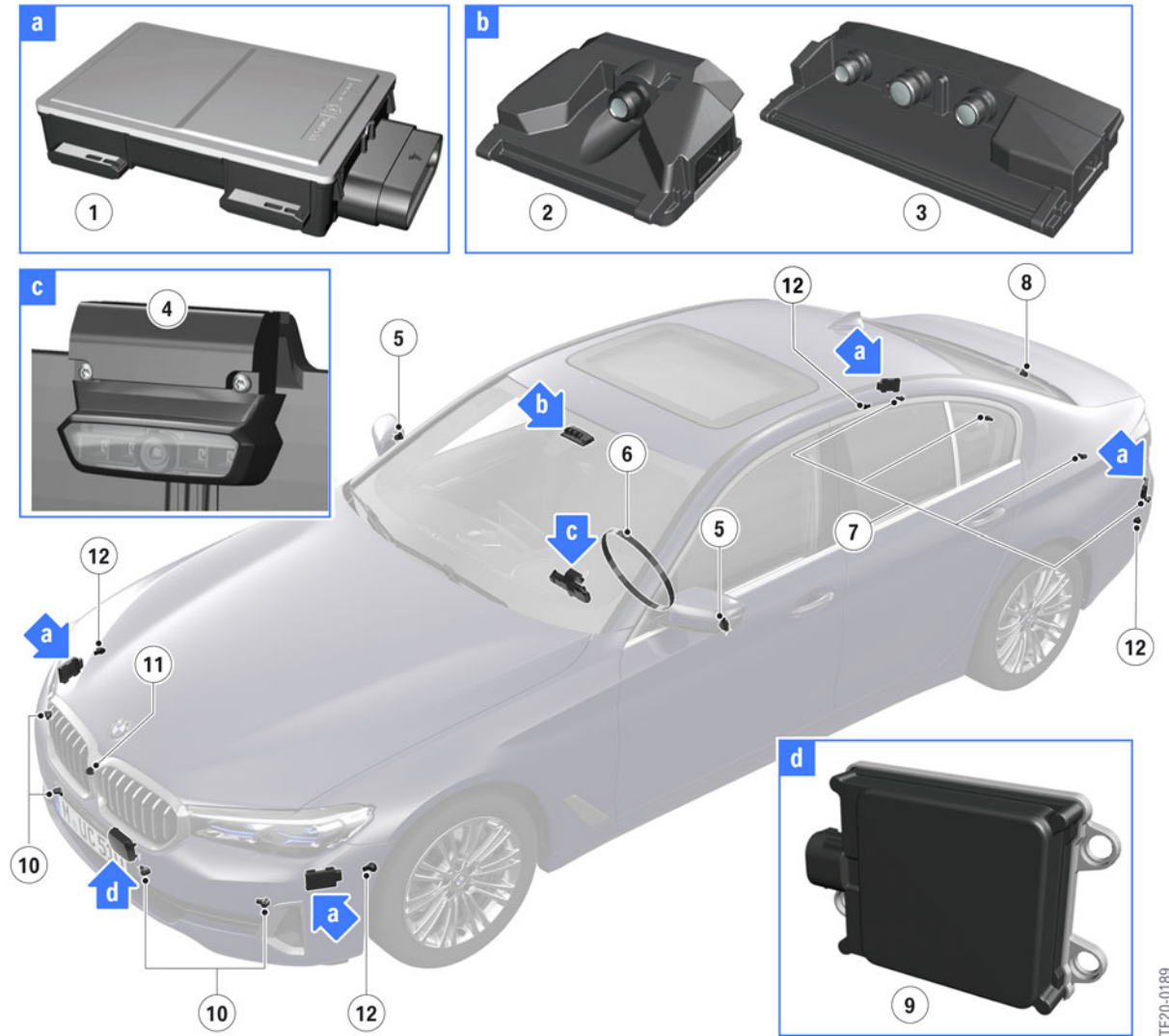
- The instrument cluster has a camera which points at the driver (Driver Camera System DCS).
- Active Driving Assistant Plus (SA 5AT) is now Driving Assistant Professional (SA 5AU).
- There is a new MODE button in the assistance systems control panel on the multifunction steering wheel.
- LED displays on the steering wheel (only with Active Driving Assistant Professional SA 5AU).
- The Daytime Pedestrian Warning now also warns of the presence of cyclists (SA 5AU and SA 5DF).
- With the Speed Limit Assistant, the speed limit ahead can be automatically adopted by the cruise control system when the customer accepts the recommendation.
- The Evasion Aid now also takes pedestrians into account.
- The Intersection Collision Warning has been extended to include a city braking function.
- The Night Vision camera is no longer built into the LCI.
- The optional equipment Active Driving Assistant Professional (SA 5AU) now includes in the Emergency Stop Assistant and Lane Change Assistant.
- For the first time, Automatic Parking now supports maneuvering out of parallel parking spaces.
- The parking assistance button no longer needs to be held pressed when parking with the Automatic Parking.
- The BMW Drive Recorder (SA 6DR) is available as optional equipment.
- The remote-controlled parking function (SA 5DV) can be activated with the engine running.

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6. Driver Assistance Systems.

6.2.4. Sensor installation locations

Depending on the vehicle equipment, the sensors shown are used. New or revised sensors are illustrated enlarged.



TE20-0189

G30 LCI overview of assistance system sensors

Index	Explanation
1	Side radar sensors (HRSNR, HRSNL, SRSNVR, SRSNVL)
2	KAFAS-Mid-Camera
3	KAFAS-High-Camera
4	Driver Camera System (DCS)
5	Side view camera
6	Capacitive sensor mat on steering wheel rim
7	Ultrasonic sensors for Park Distance Control (PDC), rear

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6. Driver Assistance Systems.

Index	Explanation
8	Rear view camera (TRSVIC)
9	Front radar sensor long range (FRSF)
10	Ultrasonic sensors for Park Distance Control (PDC), front
11	Front camera
12	Ultrasonic sensors for Parking Maneuver Assistant (PMA)

6.3. Operating elements

When driving, the assistance systems are operated by means of 4 operating elements:

- Light operating unit
- Control panel on the multifunction steering wheel
- Intelligent Safety button
- Buttons in the center console



G30 LCI assistance system operating elements

G30 LCI Complete Vehicle.

6. Driver Assistance Systems.

Index	Explanation
1	Light operating unit
2	Control panel for assistance systems on the multifunction steering wheel
3	Intelligent Safety button
4	Panorama View button
5	Parking assistance button

The settings within the Intelligent Safety menu are made via the Controller. This chapter only deals with the operating elements relevant to the assistance systems.

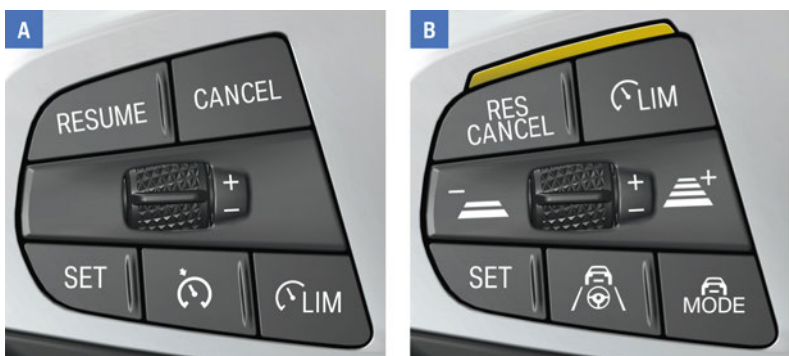
6.3.1. Light operating unit

The light operating unit is still fitted with a mechanical rotary switch. The BMW Night Vision function is omitted in the G30 LCI.



G30 LCI light operating unit

6.3.2. Multifunction steering wheel



G30 LCI assistance systems control panel on the multifunction steering wheel

Index	Explanation
A	Operating panel standard equipment
B	Operating panel for "Active Driving Assistant Professional" optional equipment (SA 5AU)

G30 LCI Complete Vehicle.

6. Driver Assistance Systems.

A detailed explanation of the individual buttons and their function can be found in the "ST1831 G05 Driver Assistance Systems" reference manual.

With the Active Driving Assistant Professional optional equipment (SA 5AU), the number of assistance systems exceeds the number of buttons on the multifunction steering wheel. That is why the control of the assistance systems has been changed. The assistance system is selected using the MODE button. The selection is then confirmed with the Assist button (to the left).

With the optional equipment Active Driving Assistant Professional (SA 5AU) there is an LED above the left and right control panel respectively. The two LEDs supplement the displays on the instrument cluster and the instructions on the central information display.

- Green: The assistance system is active and is carrying out the lateral guidance (market-specific).
- Yellow: Interruption of assistance system is imminent.
- Red: The assistance system is deactivated.



G30 LCI settings menu LED light elements on the CID

Index	Explanation
1	Menu "Checkback signals at the steering wheel"
2	Light-emitting elements at the multifunction steering wheel (switch on and off)

The LEDs can be deactivated via the iDrive menu:

- "Settings"
- "Driver assistance"
- "Checkback signals at the steering wheel"
- "Light-emitting elements"

6.3.3. Intelligent Safety button

The Intelligent Safety button, already known from the G30, has been adopted without change. It facilitates central operation of the assistance systems. The systems can be switched on or off directly and the Intelligent Safety menu can also be used to personalize the settings via the Intelligent Safety button.

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6. Driver Assistance Systems.

6.3.4. Parking assistance button

The parking assistance button no longer needs to be pressed while parking with the Parking Maneuver Assistant (PMA). It is sufficient to activate this once.

6.4. New range of functions of Active Cruise Control (ACC)

6.4.1. Adaptive distance adjustment

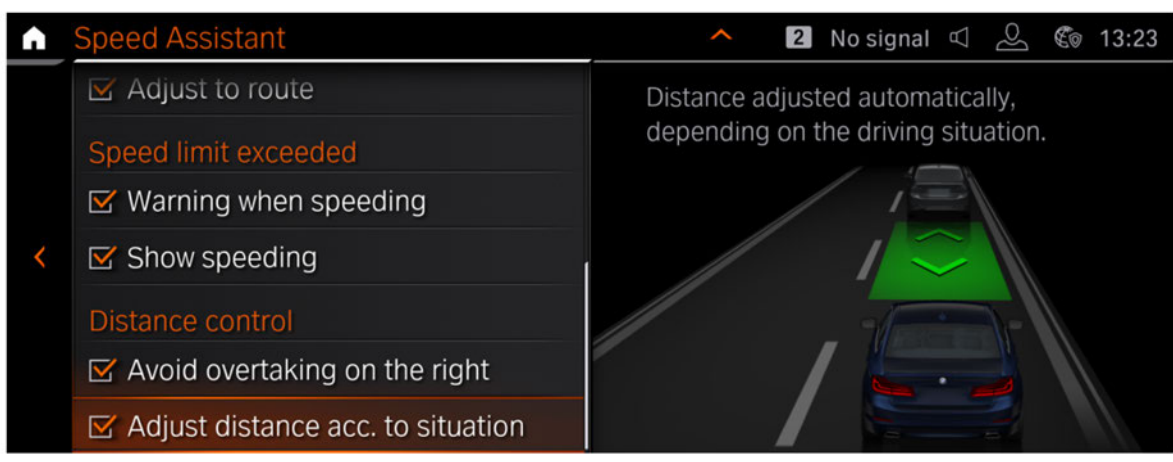
Another new feature is the adaptive distance adjustment to the vehicle ahead with activated ACC. Here the distance is automatically adapted to the driving situation. Here are some examples:

- The distance is automatically **reduced** when the system detects a dynamic driver. This is detected by frequent pressing of the accelerator pedal when the Cruise Control is activated.
- If there are many vehicles driving at a similar speed in the neighboring lane, there is a risk of tailgating. The distance is also **reduced** slightly in this situation.
- If the system detects a nervous or unsteady driver in the vehicle in front, poor weather or poor visibility, the distance is **increased** for safety reasons.

The following rules are observed for changing the distance:

If the distance is set, e.g., to distance 1, it will always remain less than distance 2 with the automatic increase. If the distance is set to distance 3, it will always remain greater than distance 2 with the automatic reduction (with maximum adjustment). Distance 1 is a special case. Here the distance can only be increased because it is already very close to the minimum legal distance.

In order to experience the adaptive distance adjustment, the driver must activate it in the speed assist menu.



Activation of the adaptive distance adjustment

G30 LCI Complete Vehicle.

6. Driver Assistance Systems.

6.5. Lane change with active route guidance

6.5.1. Functional principle

The "lane change with active route guidance" is a new subfunction of the navigation. The driver is actively assisted so they no longer miss any exit ramps or highway junctions on highways. If during an active navigation the vehicle detects that one or several lane changes are required in order to exit the highway, the function helps the driver to find a suitable gap in the neighboring lane. When the gap is detected, the speed is automatically adapted and the driver is prompted to change lane (if active: with the Lane Change Assistant).

6.5.2. Functional sequence

Step 1:

At the latest 2 miles before the exit ramp the function shows the driver that he is not in the optimal lane in order to follow the selected route.

Step 2:

Shortly thereafter the availability of the function "Lane change with active route guidance" is displayed.



Availability of the function

Step 3:

Depending on the traffic density, the number of required lane changes and the driving speed, the vehicle starts to orient itself towards a detected gap in the neighboring lane.

Step 4:

At the gap the request to make the lane change then appears:

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6. Driver Assistance Systems.



Request to make the lane change in Assisted Driving View

In the case of a large gap "Activate lane change. Observe traffic" is displayed (Lane Change Assistant). With a smaller gap "Perform lane change manually" is displayed (manual lane change).

Step 5:

Immediately after the text message a haptic steering wheel response can be displayed as additional driver information depending on the situation.

Steps 1-5 are repeated until the vehicle is in the exit lane. Apart from highway exits, the function also reacts to highway junctions and terminating driving lanes.

6.5.3. Functional prerequisites

These prerequisites must be fulfilled so that the function also carries out its job:

- The vehicle is on a highway.
- The vehicle is travelling at a speed of at least 37 mph.
- The Cruise Control with Stop&Go function is active.
- The steering and lane control assistant is active.
- The Lane Change Assistant is activated.
- The navigation is activated.

If one of these prerequisites is not met, the function cannot be carried out.

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6. Driver Assistance Systems.

6.5.4. Additional Information

"Lane change with active route guidance" is designed for drivers with inadequate local knowledge. This explains why the vehicle is moved relatively early in the direction of the exit ramp. The primary aim is not to miss the exit ramp and not to reach the exit ramp as fast as possible. A more defensive driving style is chosen here.

If there is a high traffic volume, the function may not be able to find any appropriate gaps in the traffic. The driver is then notified that he must follow the route without assistance.

In poor weather conditions, such as snow on the road, there may be functional limitations during the gap search.

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7. Infotainment.

With the Life Cycle Impulse (LCI), the G30 receives the electric service pack 2018, in the infotainment area the Head Unit High 3 is changed over to the **Head Unit High 3_Flash (HU-H3_F)**. The new head unit has a flash memory and also a reduction in the number of versions.

The performance capacity therefore corresponds to the current status of the technology. The highlights include the processor, RAM and flash memory. Thanks to a processor with 2.4 GHz and 4 cores, the Head Unit High 3 therefore has an 8 GByte RAM and 128 GByte flash memory.

To offer the customer access to technical developments as quickly as possible, the components and control units have been restructured and given a modular design. As with the G12, the G30 LCI also has the external Receiver Audio Module (RAM).

7.1. Head Unit High 3 (HU-H3_F)

7.1.1. Hardware/Interfaces

The Head Unit High 3_F is still housed in the 1.5" DIN housing in the G30 LCI.

Front view

The front view of the Head Unit High 3 Flash (HU-3_F) corresponds almost exactly to the Head Unit High 3. For service there is no apparent distinction between the Head Unit High 3 Flash (HU-3_F) and the Head Unit High 3 from the housing.



Front view: Head Unit High 3 / Head Unit High 3 Flash (HU-3_F)

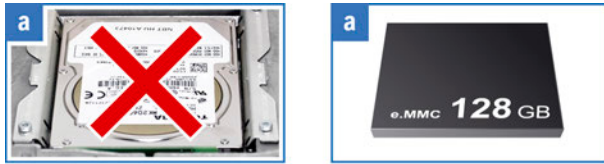
Rear view

Upon closer examination, it is also apparent that the connections are identical. The rear view of the HU-3_F is almost identical to the Head Unit High 3. The following graphic shows the rear view of the Head Unit High 3 / HU-3_F with the corresponding connections.

As the name of the **Head Unit High 3 Flash (HU-3_F)** suggests, the new head unit generation is a **"flash version"**, which, in contrast to the Head Unit High 3, does **not have a hard disk**.

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7. Infotainment.



Head Unit High 3 Flash (HU-3_F) (with eMMC flash memory)

The eMMC memory is used for the HU-3_F. This new type of memory combines NAND storage cells and a controller with the fast MMC interface, thus enabling simpler integration.

The following graphic shows you an example of an eMMC flash memory.



Example: eMMC flash memory

With the deletion of the hard disk, the music collection storage is no longer offered with the introduction of the HU-3_F.

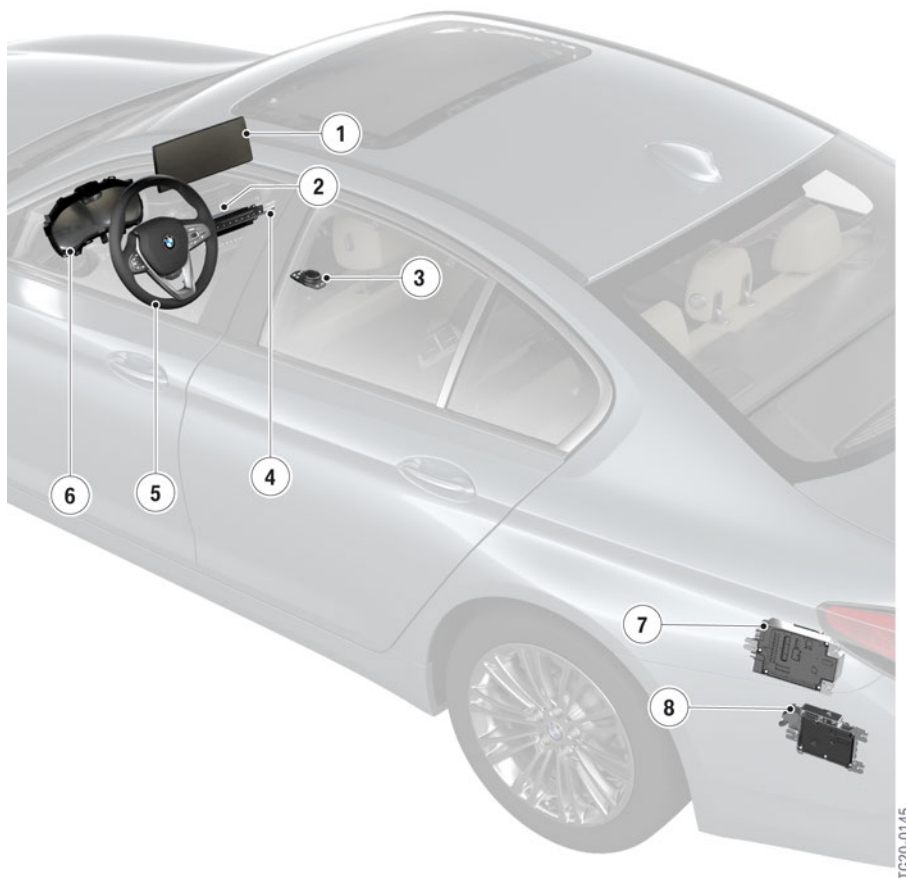
Further information on the HU-3_F can be obtained from the "ST1857 Infotainment 2018" reference manual.

7.1.2. System components

Here you can find an overview of the system components of the head unit high 3.

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7. Infotainment.



G30 LCI system components Head Unit High 3 _F

Index	Explanation
1	Central Information Display (CID)
2	Head unit
3	Controller (CON)
4	Audio operating unit
5	Multifunction steering wheel (MFL)
6	Instrument cluster (KOMBI)
7	Receiver Audio Module (RAM)
8	Booster

7.1.3. USB port

USB connections are located in the front center console between the cup holders and the storage compartment under the center armrest.

The connection in center console is a USB type A and delivers 1.5 A charging current.

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7. Infotainment.

The connection under the center armrest is USB type C and delivers 3 A charging current.

The data transfer is performed with the standard USB 2.0.

7.2. Receiver Audio Module (RAM)

The Receiver Audio Module RAM was used for the first time in the G05.

Depending on the equipment, the following functions are integrated in the RAM:

- AM/FM tuner
- Antenna diversity
- Audio amplifier (stereo system, hi-fi system).

Further information on the RAM can be found in the "ST1857 Infotainment 2018" reference manual.

7.3. Booster

The Booster has been used in the G30 since the middle of 2019 and is an additional audio amplifier in the vehicle for the higher quality audio systems and for the external sound system.

Further information on the booster can be found in the "ST1857 Infotainment 2018" reference manual.

7.4. Navigation system

With regard to the navigation hardware, the navigation system as usual consists of the fixed central information display CID with touch function and a resolution of 1920x720p, the Head Unit High 3 Flash and the iDrive controller. In the G30 LCI the Live Cockpit Plus comes with the 10.25" central information display as standard. The Controller with its button assignments corresponds to the familiar model from the G30.

Further information, such as new features of the system, can be found in the "ST1857 Infotainment 2018" reference manual.

7.5. Rear seat entertainment system

The concept of the rear seat entertainment system is retained. With the life cycle measure, the following changes are incorporated into the rear seat entertainment experience optional equipment (SA 6FR):

- 10.2" monitor with a resolution of 1080p in the backrests of the front seats
- RSE Head Unit 3 with 2.4 GHz processor and 4 cores
- 8 GB RAM
- 32 GB flash memory

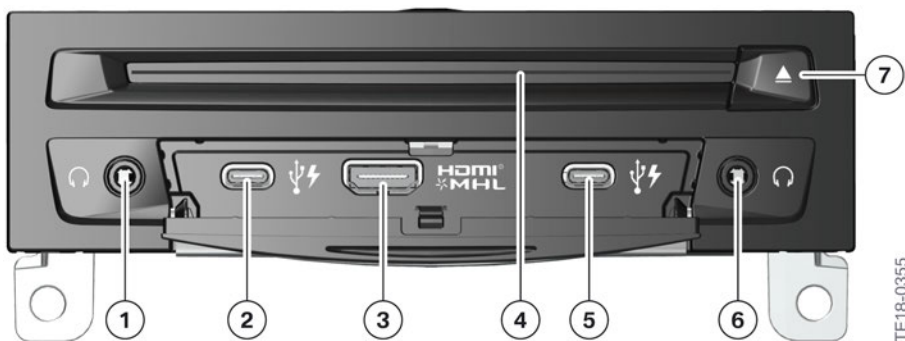
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7. Infotainment.

- 2 type C USB ports, each with 3 A charging current and data transfer in accordance with standard USB 2.0
- Resolution of the zone separation
- Access to sources in the front head unit (CD, DVD, USB and Bluetooth audio).

7.5.1. RSE Head Unit High 3

Front view



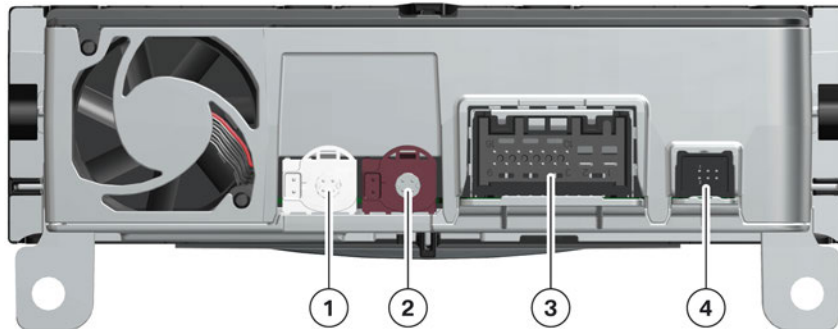
Front view of RSE HU-H3

Index	Explanation
1	Headphones socket, left
2	USB port, type C, left
3	HDMI/MHL connection
4	Blu-ray drive
5	USB port, type C, right
6	Headphones socket, right
7	Eject button for Blu-ray drive

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7. Infotainment.

Rear view



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Rear view of RSE HU-H3

Index	Explanation
1	APIX connection for rear compartment display, right
2	APIX connection for rear compartment display, left
3	Main connector
4	Ethernet connection

Further information on the rear seat entertainment system, such as functions and operation, can be found in the "ST1857 Infotainment 2018" reference manual.

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8. Displays and Controls.

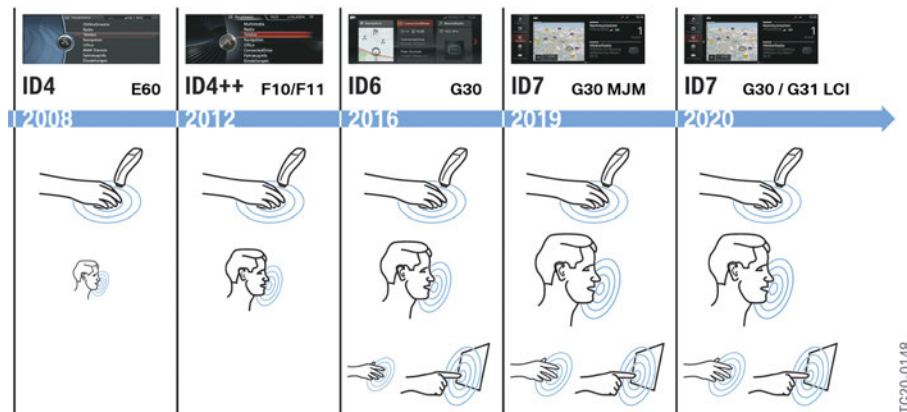
With the Life Cycle Impulse (LCI), the display and operating concept of the G30 has been retained and specifically further developed in detail. The major change is the introduction of the 7th generation BMW iDrive (BMW Operating System 7).

As the fundamental display elements and their operation are already known from the G30, only the changes are examined here. Additional information can be found in the "ST1855 Displays and Controls 2018" reference manual.

8.1. Operating elements

8.1.1. Overview

The latest generations of the operating elements are increasingly designed around several operating options. The key operating options for the BMW Operating System 7 include the touch control of the central information display (CID), the option of a natural voice input and the gesture control. The Controller with touch operation is also the central operating element in vehicles with BMW Operating System 7.



Overview of operation of the previous generations

8.1.2. Multifunction steering wheel

For years the multifunction steering wheel has been offering a comfortable way of operating some systems. New, additional buttons and simplified operator prompting were added to the function keys on both sides. The leather sports steering wheel comes as standard with the LCI.

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8. Displays and Controls.



Multimedia buttons on multifunction steering wheel

Index	Explanation
1	Buttons for assistance systems
2	Shift paddles
3	Buttons for multimedia
4	Steering wheel heating

Further information on the operation of the multimedia systems via the multifunction steering wheel can be found in the "ST1855 Displays and Controls 2018" reference manual.

8.1.3. Gesture control

The current gesture control is integrated in the G30 LCI and further information on the individual gestures can be found in the "ST1855 Displays and Controls 2018" reference manual.

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8. Displays and Controls.

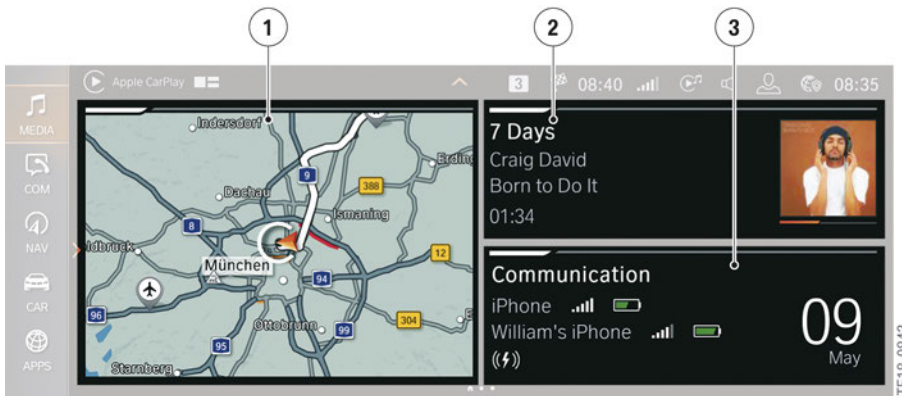
8.1.4. BMW display key

The BMW display key can be charged in the wireless charging station. This is now located in the center console.

8.2. iDrive 7th Generation

BMW Operating System 7 offers a completely new display and operating structure. The tiles as they were used for ID5 or ID6 are no longer present with the BMW Operating System 7. The displays in the main menu can be customized even more by the driver.

Up to 4 contents can be displayed on the main page. There is also the option, however, to display content bigger, spread across half a page.



Main page of central information display

Index	Explanation
1	Navigation widget
2	Radio/Media widget
3	Communication widget

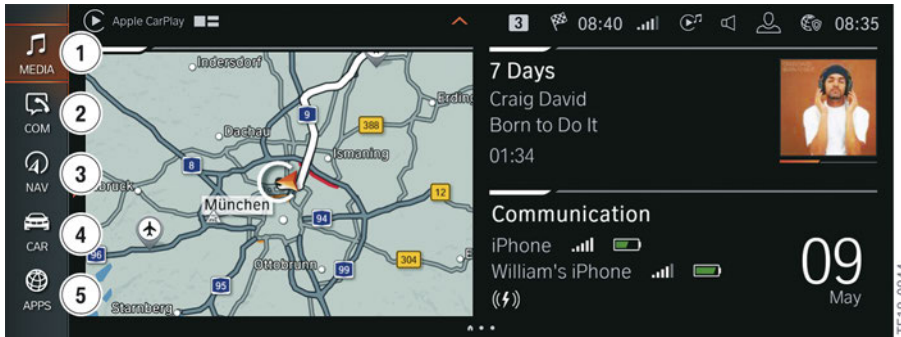
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8. Displays and Controls.

8.2.1. Main menu bar

The individual menus are displayed in the toolbar in the left area of the main menu.

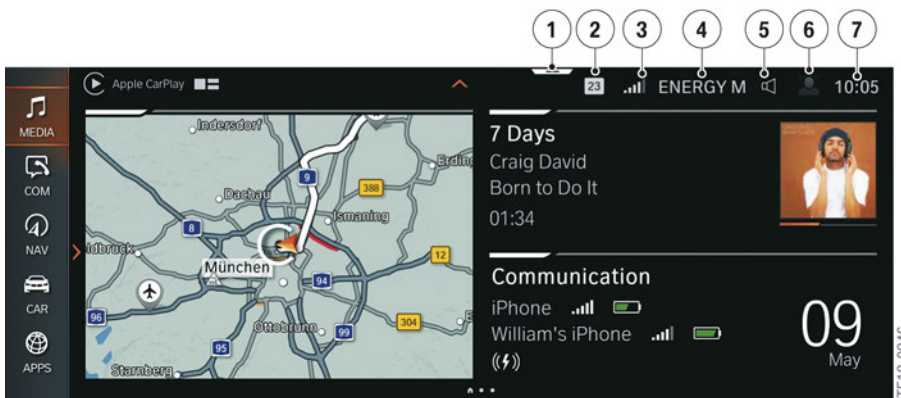
There is a total of 5 menus in the toolbar.



Menus on central information display

Index	Explanation
1	Media
2	Communication
3	Navigation
4	My Vehicle
5	Apps

There is direct access to some CID menus. However, this can only be effected with a touch input on the central information display (CID). In the following example, you see which menus can be accessed directly and what settings can be configured there.



Displays on central information display

Index	Display	Direct opening
1	Display bar	A description of the display bar will be provided separately
2	Messages	Read current pending or unread messages
3	Signal strength of mobile phone	Communication setting

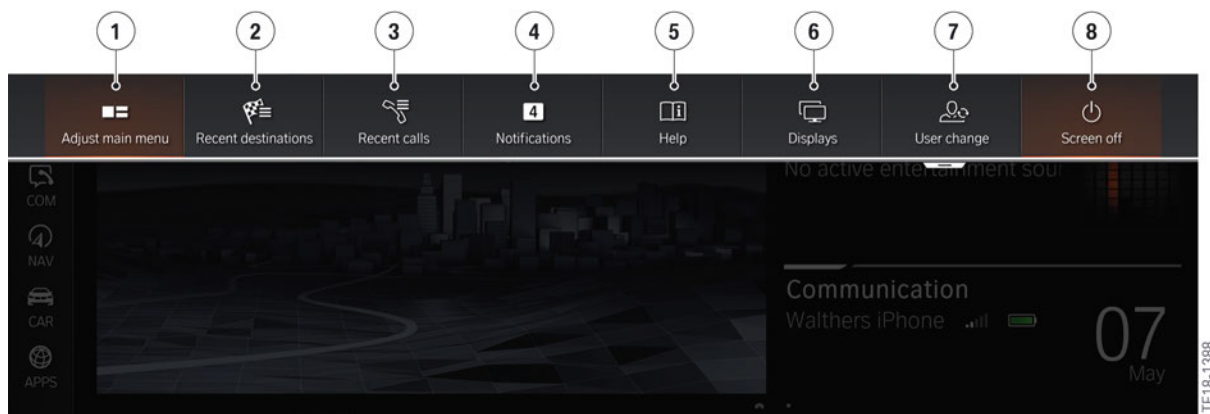
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8. Displays and Controls.

Index	Display	Direct opening
4	Entertainment source	Media setting
5	Volume control	Sound ON/OFF
6	Profile picture	Driver profiles
7	Time	Time and date setting

8.2.2. Display bar

If the display bar is dragged down by touch, a window is opened via which certain menus or settings can be called up. The content is predefined and cannot be personalized. However, the content may vary depending on which functions are currently carried out in the vehicle. For instance, with active route guidance the point "Recent destinations" is no longer displayed.



Display bar

Index	Explanation
1	Configuration of main menu
2	Recent destinations
3	Last calls
4	Current or unread messages
5	Help
6	Display settings
7	Select driver profiles
8	Display OFF

For the BMW Operating System 7 there is no longer a favorites view (last 20 selected menus).

Further information on the BMW Operating System 7, the operation and the submenus can be found in the "ST1855 Displays and Controls 2018" reference manual.

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8. Displays and Controls.

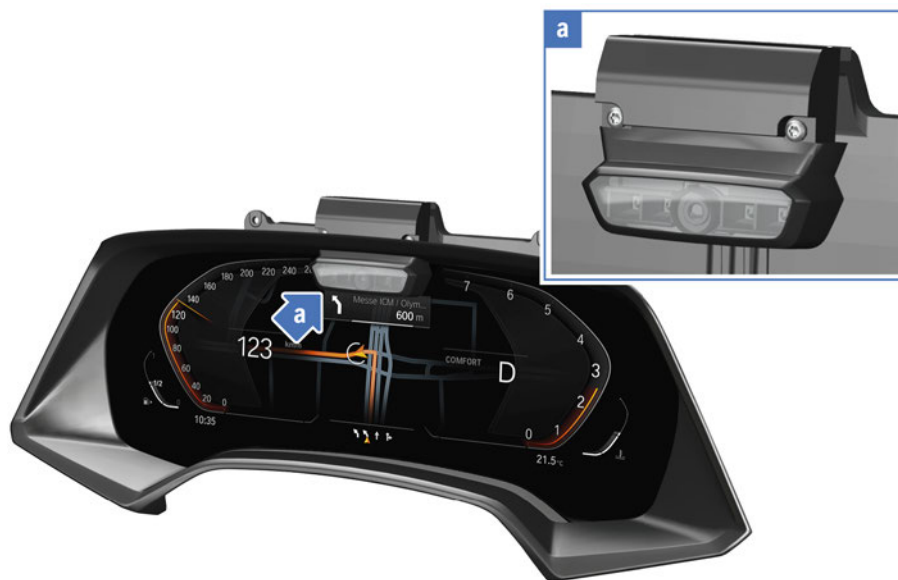
8.3. Display elements

8.3.1. Instrument cluster

Driver Camera System

Depending on the equipment, a camera is installed in the upper area of the instrument cluster. The Driver Camera System (DCS) is connected directly to the instrument cluster via an Ethernet cable. The DCS monitors how open the driver's eyes are and the alignment of the head using the nose. This information is required for certain assistance systems.

More information about the Driver Camera System can be found in the "ST1858 Driver Assistance Systems 2018" reference manual.



Driver Camera System

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8.3.2. Central information display with touch function

With the Live Cockpit Professional, the 12.3" central information display is installed and now shows the content with a resolution of 1920x720p.

