



**Audi Australia Pty Ltd**  
Shaun Cleary  
Corporate Communications Manager  
T: +61 2 9695 6252  
E-Mail: [shaun.cleary@audi.com.au](mailto:shaun.cleary@audi.com.au)  
<http://autodeadline.com.au/audi>

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## PRESS INFORMATION

### The new Audi A7 Sportback

<b>Condensed information</b>	<b>2</b>
The most important information on the new Audi A7 Sportback	
<b>Facts and figures</b>	<b>6</b>
Product highlights at a glance	
<b>The car in detail</b>	<b>9</b>
Everything you need to know about the new Audi A7 Sportback	
▶ DESIGN	9
Exterior design	9
Lighting design	11
Interior design	12
Colours and materials	13
▶ DIGITALISATION	14
User operation	14
Infotainment	16
Driver assistance systems	17
▶ DRIVING EXPERIENCE	20
Chassis	20
Broad-based electrification	23
Drive system	24
▶ SPACE CONCEPT	26
Body	26
Aerodynamics and aeroacoustics	28
Comfort and convenience features	28

The equipment and features outlined in this material may be either standard or available as an option, depending on the model. This information should be read in conjunction with the latest Audi customer specification guide, for clarity on exactly which drivetrains, features and equipment are standard, optional and/or available in the Australian market.

Condensed information

## **The all new Audi A7 Sportback: Sportiness in its most beautiful form**

**The all new Audi A7 Sportback is a new style of Gran Turismo, offering systematic digitalisation, a dynamic driving experience and a space concept that combines a wide range of customer requirements. The large four-door coupé is the essence of Audi's new design language.**

### **Progressive sportiness: the exterior design**

The exterior design of the new A7 Sportback embodies Audi's new, progressive design language focused on large surfaces, sharp edges and alternating light and shadows. The wide, low Singleframe grille and prominent air inlets express the dynamic character of the Gran Turismo at first glance. With the two optional headlight variants, 12 separate horizontal lighting strips create the lighting signature. Topping the line are the HD Matrix LED headlights with Audi laser light, which can be recognised by the blue marker in the reflector.

Viewed from the side, pronounced contours emphasise the large wheels – a reference to Audi's quattro genes, while the sharply dropping roof line dominates the silhouette. The large coupé is 4.97 metres long and 1.91 metres wide, but just 1.42 metres high. Its rear is tapered like a yacht, and a spoiler integrated into the long luggage compartment lid extends electrically at 120km/h. A light strip connects the rear lights, whose outer rear lights comprise 13 segments each. When the doors are unlocked or closed, dynamic lighting animations in the rear lights and headlights showcase the Audi A7 Sportback.

### **Reduction as a stylistic device: the interior design**

The design language in the interior of the new Audi A7 Sportback is reduced and clean, with its horizontal lines and sleek instrument panel conveying a feeling of spaciousness. The centre console is inclined toward the driver and underscores the Gran Turismo's sporty character, while the cockpit architecture and the MMI monitor merge to form a homogeneous surface. Most vehicle functions can be controlled via two displays in a black-panel look – the upper display is integrated almost invisibly into the dashboard. The choice of colours, upholstery materials, inlays and interior lighting fit perfectly into the futuristic lounge atmosphere.

### **Systematically digitalised: MMI touch response and online voice control**

The new Audi A7 Sportback continues the digitalisation strategy that began with the new A8 and adopts the MMI touch response concept with acoustic-haptic feedback: A tangible and audible click confirms activation of a function via the finger on the display. The upper display is used to control the infotainment, while the lower display provides access to the climate

control, comfort and convenience functions and text input. Thanks to the logical, flat menu structure, operation is intuitive like on a smartphone.

Audi has designed the optional voice control as a natural language dialogue system (MMI navigation and above). It uses both onboard information as well as knowledge from the cloud to process all input. The driver can also control many functions on the steering wheel.. MMI navigation plus also includes the Audi virtual cockpit.

#### **Fully networked: Infotainment and Audi connect**

Its extensive range of infotainment makes the A7 an intelligent endurance athlete. MMI navigation uses the latest generation of the Modular Infotainment Platform. It transmits data at LTE speed and features an integrated Wi-Fi hotspot.

The driver can also personalise the system by adjusting some 400 parameters to set up an individual profile for greater comfort and create six more driving profiles. The new Audi A7 already recognises the customer when the car is opened and adjusts numerous settings according to the individual profile.

#### **Comprehensively updated: the driver assistance systems**

Audi offers a choice of up to 39 driver assistance systems in the new A7 Sportback.

Like the A8, the new Audi A7 Sportback is equipped with the central driver assistance controller (zFAS), which continually computes an image of the surroundings. It draws on a sensor set that in the full version includes five radar sensors, a front camera, four 360-degree cameras and twelve ultrasonic sensors. The Audi (remote) parking pilot and Audi remote garage pilot, which is expected to follow in 2019, can automatically steer the Gran Turismo into a parking space or garage and back out again when the driver activates this function on their smartphone. The driver can also activate the Audi parking pilot via the corresponding button.

#### **More dynamic driving and greater long-distance comfort: the chassis**

The new Audi A7 Sportback further optimises the synthesis of dynamics and comfort. It is dynamically agile on winding country roads and comfortable on the highway. Its optional dynamic all-wheel steering combines direct steering with superior directional stability. At the front axle, it changes the steering ratio depending on the driving situation. At the rear axle, it turns the wheels either in the same or opposite direction of the front wheels depending on the speed. Even with the base steering, a new steering boost concept provides the driver with intensive feedback from the road.

The sport differential actively distributes drive torque between the rear wheels, complementing the standard quattro all-wheel drive. It is controlled by the electronic chassis platform (ECP) along with the optional dynamic all-wheel steering, standard suspension with

damper control and adaptive air suspension with controlled damping (option). Thanks to this close networking, all systems work together for increased comfort, sportiness and maximum precision. The driver can choose from several profiles in the Audi drive select system, offering a wider spread between comfort and dynamics compared to the previous model.

#### **Broad-based electrification: Mild hybrid system for all engines**

The new Audi A7 Sportback's drive system is now even more efficient thanks to a new mild-hybrid system (MHEV). At market introduction the coupé will be available with a 3.0 TFSI, with the 3.0 TDI engine to follow in 2019. With either engine, the MHEV system is based on a 48-volt primary electrical system and a belt alternator starter (BAS) generating up to 12 kilowatts of recuperation power. The A7 Sportback can coast with the engine off over a wide speed range and then restart smoothly via the BAS. The start-stop function now activates at 22km/h. The 3.0 TFSI is mated to a seven-speed S tronic; the 3.0 TDI to an eight-speed tiptronic. In combination with the S tronic, the quattro drivetrain uses the efficient ultra technology that activates rear-wheel drive as needed.

The 3.0 TFSI, a turbocharged V6, has an output of 250kW and 500Nm of torque. It accelerates the four-door coupé from 0 to 100km/h in 5.3 seconds on its way to a top speed of 250km/h. The Audi A7 Sportback 55 TFSI consumes 7.3 litres of fuel per 100 kilometres, corresponding to 165 grams CO<sub>2</sub> per kilometre. The 3.0 TDI produces 210kW and 620Nm of torque, and accelerates from 0 to 100km in 5.7 seconds. It consumes in the base version just 6.0 litres of fuel per 100 kilometres, corresponding to 156 grams CO<sub>2</sub> per kilometre.

#### **The body concept: Coupé, Sedan and Avant in one**

The design of a coupé, the space of a sedan and the variability of an Avant – the new Audi A7 Sportback combines the best of three worlds. Compared to its predecessor, its interior has grown in length by 21 millimetres. The luggage compartment has a base size of 535 litres and can be expanded up to 1390 litres with the backrests folded down. Body attachments are made of lightweight aluminium. The Gran Turismo gets top marks for stiffness, crash safety, aerodynamics and aeroacoustics.

## Facts and figures

### **The new Audi A7 Sportback**

#### **Exterior and lighting design**

- Particularly sporty interpretation of the new Audi design language: taut, muscular body; wide, low Singleframe grille
- Side view with sporty-sinewy proportions; powerful contours above the wheels to emphasise the quattro drive, taut roof line, strongly tapered rear end with continuous light strip
- Digital daytime running lights signature
- Optional HD Matrix LED headlights with Audi laser light, dynamic lighting effects in the headlights and rear lights when unlocking and locking
- Length 4969 millimetres, wheelbase 2926 millimetres, width 1908 millimetres, height 1422 millimetres
- Wheel sizes 20" or 21"

#### **Interior design, colours and materials**

- Interior design with clean design language, fusion of architecture and operation
- Visually seamlessly integrated 10.1-inch display, only a few buttons and controls
- Optional ambient and contour ambient lighting package
- Wide selection of sophisticated materials such as Valcona leather; new colours; and S line sport package as standard equipment on the 50 TDI and 55 TFSI quattro

#### **User operation**

- New operating and display concept MMI touch response: two touchscreens with haptic and acoustic feedback, intelligent text input
- Natural-language voice control with onboard and cloud search
- Key functions can be operated from the steering wheel
- Head-up display standard equipment
- Audi virtual cockpit with full HD resolution (1920 x 720 pixels)
- Around 400 functions can be personalised via seven profiles, if desired

#### **Infotainment and Audi connect**

- New generation of the Modular Infotainment Platform; top version MMI navigation plus with data transmission via LTE Advanced and Wi-Fi hotspot
- Optional Bang & Olufsen Advanced Sound System with 3D sound also for the rear

## **Driver assistance systems**

- Up to 39 driver assistance systems, including new systems such as the garage pilot and parking pilot from 2019 and the crossing assist
- Innovative sensor set: Long-range radar and four mid-range radars, front camera, 360 degree cameras and ultrasonic sensors
- Permanent merging of the various sensor data in the central driver assistance controller (zFAS)
- Automatic parking of the A7 Sportback with the Audi (remote) parking pilot and Audi remote garage pilot with simultaneous monitoring by the driver from 2019

## **Chassis**

- Optionally available dynamic all-wheel steering with variable ratio at the front axle, and rear wheels that steer in the opposite/same direction
- Progressive steering standard, five-link front and rear axles
- Suspension with adaptive damper control as standard equipment and adaptive air suspensions with controlled dampers available as options
- Electronic chassis platform (ECP) for central driving state computation and optimal control of the chassis control systems

## **Mild-hybrid system**

- 3.0 TFSI (55 TFSI) and 3.0 TDI (50 TDI) with 48-volt primary electrical system and mild hybridisation via belt alternator starter; enables coasting with the engine off and high recuperation power
- Extended start-stop operation with predictive convenience start

## **Drive system**

- At market launch:
  - 3.0 TFSI with 250kW and 500Nm
  - 0 to 100km/h in 5.3 seconds, top speed of 250km/h, average fuel consumption of 7.3 litres per 100km and 165 grams CO<sub>2</sub> per km
  - 3.0 TDI with 210kW of output and 620Nm of torque
  - 0 to 100km/h in 5.7 seconds, top speed of 250km/h, average fuel consumption of 6.0 litres/100 km (156 grams CO<sub>2</sub> /km)
- Additional variants with four or six-cylinder engines after market launch, including
  - V6 3.0 TFSI with seven-speed S tronic and quattro ultra drive
  - V6 3.0 TDI with eight-speed tiptronic and quattro permanent all-wheel drive

## **Body**

- Generous interior, 21 millimetres longer than in the predecessor model, more head and knee room on the rear seats
- Luggage compartment with increased load-through width and 535 to 1390 litres volume
- Standard electric open/close tailgate with sensor-controlled activation by foot gesture
- Top values in aerodynamics and aeroacoustics, high passive safety



**Comfort and convenience features**

- Heated front seats with electric seat adjustment, lumbar support and memory function
- Optional acoustic glazing and large panoramic glass sunroof

The car in detail

## **The new Audi A7 Sportback: Progressive in design and technology**

The second-generation A7 Sportback is the essence of Audi's new design language and brings the show car design of the prologue studies to production. The four-door coupé is full of innovations – in terms of networking and digitalisation, the sporty-confident driving experience, as well as its versatile space concept.

### **DESIGN**

The proportions of the new Audi A7 Sportback are an optimal basis for the new Audi design language in the luxury class. The interior also takes up the design language of the prologue studies, which relies on reduction as a stylistic device. The design conveys both sportiness and progressiveness.

### **Exterior design**





Four numbers circumscribe the sporty character of the new Audi A7 Sportback. It is 4969 millimetres long, has a wheelbase of 2926 millimetres and is 1908 millimetres wide, but just 1422 millimetres high. In all dimensions, the differences to the previous model are just a few millimetres.

The Singleframe grille of the new Audi A7 Sportback is wide and low-mounted. All adjacent surfaces and lines emanate from it. The side air inlets in the front skirt emphasise the Gran Turismo's sporty character. Contours reminiscent of the front splitters on a racing touring car form the bottom edges of the two large inlets.

Sharply tensioned lines and tautly curved surfaces characterise the side view of the A7 Sportback. The low-set shoulder line draws the visual focal point downward for more sportiness. The window line, which rises continuously towards the rear, conveys dynamics even when stationary. Powerful contours over the wheel arches further emphasise the sporty appearance and are a feature of new design language, citing the 'blisters' of the Audi Ur-quattro and referencing the tradition of technology at Audi. The point of the third side window tapers upwards – a throwback to the Audi 100 Coupé S from 1970.

Similar to the predecessor model, the rear of the new Audi A7 Sportback is tapered like a yacht. The rear end is about three centimetres higher, further improving the aerodynamics. At a speed of 120km/h, a spoiler extends from the rear hatch. The sweeping contour of the spoiler lip gives the rear end the look of a three-dimensional sculpture – starting with the Audi rings, the rear lights and the connecting light strip.

The distinctive exterior design of the new Audi A7 Sportback is largely devoid of chrome. The S line exterior package standard on the 50 TDI and 55 TFSI quattro further hones the sporty look, with a more pronounced front bumper and titanium black air inlets, and the side sills are more strongly pronounced. At the rear is a strongly sculpted, titanium black diffuser insert. There is a choice of 11 colours, eight of which are new. Some are mixtures of multiple tones that look different depending on the light and impart a particularly elegant touch to the outer skin. Customised paint finishes are available via Audi exclusive for the new Audi A7 Sportback upon request.

## Lighting design



The A7 Sportback is a testament to Audi's leading role in lighting technology and lighting design. The Gran Turismo's headlights are available in three versions: in [LED technology](#), as [HD Matrix LED](#) and as HD Matrix LED with [Audi laser light](#). In continuation of the top slat of the Singleframe, the two Matrix variants are divided horizontally to make the headlights appear slim and sporty. The dominant upper area houses the daytime running lights and creates a look with plenty of character. The low beam module is in the 'pupil'. With the two [HD Matrix](#) variants, the daytime running lights signature is digital in character: with 12 light segments positioned vertically next to each other, separated by narrow spaces – conjuring up an association with the 0 and 1 of the digital world.

In the lower zone are the turning light and the two-line Matrix high beam, which is made up of 32 individually controllable LEDs. They illuminate the road dynamically and precisely while hiding other road users from the cone of light. The LEDs also act as cornering lights. With the top-of-the-line headlights, the lower segment also includes the laser spot with its X-shaped metal aperture and the blue light guide. The laser spot is activated at a speed of 70km/h and doubles the range of the high beam.

The tail light of the big coupé also seems to be digital. Each unit comprises 13 vertical segments that alternate with the brake light, which is also segmented. The LED light strip – a typical feature of an Audi top-of-the-line model and at the same time an homage to the Ur-quattro – interconnects them. As on a racing car, the rear fog light is positioned in the centre.

The Audi A7 Sportback stands for a new era in Audi lighting design – for aesthetics through movement. The HD Matrix LED headlights and above feature a coming home/leaving home animation. When the car is locked and unlocked, the headlights and rear lights present dynamic lighting displays.

## Interior design



The interior of the new Audi A7 Sportback boasts a fascinating, futuristic lounge atmosphere – reduction is a key stylistic device. The design language combines lean, taut surfaces with clean contours. All the design motifs are logically connected. The driver and front passenger experience a generous space in which the architecture fuses seamlessly with the user interface. With its orientation toward the driver and three-dimensional structure, the instrument panel has a light, sleek and sporty appearance. The upper MMI touch response display is almost invisibly embedded into the black panel architecture and framed by an aluminium-look frame that extends to the front passenger door.

The asymmetric console in the centre tunnel also stands out with its black-panel look – this is home to a second display, below which is a key bar. On the doors, the armrest and the pull handle transition into a stretched aluminium panel, making the entire zone look like a swing arm.

Audi offers two lighting packages in the new A7 Sportback: the ambient lighting package and the optional contour ambient lighting package. Both subtly highlight the space, volume and materials, and visualise the interior design in the dark. The ambient light makes the

dashboard and centre console seem to float, and in the door it enhances the sense of space. The contour light traces the large lines on the centre console and in the door panels and can be set to any of 30 colours.

## **Colours and materials**

The new Audi A7 Sportback offers a wide range of colours and materials from which to choose, perfectly blending into the atmosphere of modern sporty elegance. Elegant wood inlays with an open-pored, natural-like finish contrast with the cool, technical accents in the interior. As always with Audi, the workmanship is the epitome of precision. The materials have been selected with the utmost care and used on the handcrafted manufacturing level.

There are two equipment levels: standard and S line sport package. The standard equipment alone offers a choice of four interior colours: black, okapi brown, pearl beige and metropolis grey. The higher tier of the S line sport package also includes the colour rotor grey.

The sophisticated upholstery of Valcona leather with its new rhombus design, is standard on the A7 Sportback. The Audi exclusive range provides a wide range of options for anyone looking to add an even more customised look to their vehicle.

## **DIGITALISATION**

Thanks to its full-spectrum connectivity, the A7 is ideally equipped for long-distance driving with respect to comfort, safety and adaptability to the individual. With its fully digital operating system, extensive range of connectivity features and up to 39 driver assistance systems, it offers maximum comfort and personalisation.

## User operation



The new Audi A7 Sportback uses [MMI touch response](#), the fully digital operating concept from the flagship A8 that can be operated as intuitively as a smartphone with touch and swipe gestures. Two touch displays with haptic and acoustic feedback replace the rotary pushbutton and many buttons from the previous model. They transport Audi's quality standards into the digital age and offer a high degree of operating safety.

The upper display controls the infotainment and measures 10.1 inches when equipped with MMI navigation plus. The lower, 8.6-inch display is on the centre console and is used for the climate control, comfort and convenience functions and text input by handwriting or virtual keyboard. The driver can rest their wrist on the wide gear lever when using the controls.

Intelligent, detailed solutions make using the new technology even more attractive. If a finger touches an icon, this is confirmed either by an animation or a change in colour. If the finger pushes so hard that it triggers the function, the icon or list entry lights up briefly. Many symbols are also configured with long-touch and long-push functions. Wiping, scrolling and multifinger gestures are also supported. Text entry on the lower display detects not only entire words, but also letters drawn over top of each other and confirms this with acoustic feedback.

Both displays present the images and graphics on a black background. The graphical user interface has been deliberately reduced so that information can be understood particularly quickly with a few pictographs subtly animated. The menu structure is lean and intuitively



understandable. On the lower display, the start screen can be configured according to your personal preferences.. [MMI search](#) is based on free text input. If the driver is looking for a restaurant, for example, the system offers a potential list after just a few letters have been entered.

The [Audi virtual cockpit](#) (together with MMI navigation plus) sport the same look. The digital instrument cluster measures 12.3 inches in diagonal and offers full HD resolution of 1920 x 720 pixels. The driver can choose between two interfaces – the classic view and infotainment mode. Operation is via the buttons and rollers on the multifunction steering wheel. A [head-up display](#), which projects important information such as navigation and speed data onto the windscreen, is standard equipment. The image window for this – 22 x 8 centimetres is in the driver's direct field of view and can be adjusted in height and brightness.

Voice control is another function available with MMI navigation and above. It is designed as [natural language voice control](#). This makes the A7 an intelligent conversationalist and travel companion. The user can speak freely for the most part. The system asks questions, if necessary, allows corrections and additions, and offers selection options. The user can switch between different menu areas within a dialogue. For example, the user can call a contact from the phone book and then use the associated address as a navigation destination. The voice control system responds to commands and questions both by using information stored onboard about destinations and media or from the cloud.

The A7 allows an individual vehicle setup. Up to seven Gran Turismo drivers – six regular users and one guest – can store their preferred settings in individual profiles. This [personalisation](#) encompasses up to 400 parameters, from the preferred heating or cooling to frequent navigation destinations and preferred media. The car recognises the respective user when it is unlocked by means of the car key carried and the via the Audi connect key and activates the user's individual profile automatically.

## **Infotainment and Audi connect**

The comprehensive infotainment and connectivity functions make the A7 an intelligent long-distance athlete. The standard MMI navigation and optional MMI navigation plus use the latest generation of the [Modular Infotainment Platform](#), the [MIB 2+](#). The Audi connect data transmission module is included standard. This brings a [Wi-Fi hotspot](#) that also supports the new 5 GHz band and the fast LTE Advanced transmission standard to the car. It allows download rates of up to 300 MBit/s and upload rates of up to 50 MBit/s.

In conjunction with MMI navigation plus, navigation in the Audi A7 Sportback offers attractive new features, both visual and functional. The map uses a new texture and includes detailed 3D models of many large cities.



The [Audi phone box](#) light makes, charging your smartphone even more convenient via inductive charging and the ability to pair up to two mobile phones.

Three sound systems are available in the new Audi A7 Sportback, depending on the model: the Audi sound system, the [Bang & Olufsen Sound System](#) with 3D sound up front and the [Bang & Olufsen Advanced Sound System with 3D sound](#) up front and in the rear. Of the 19 speakers in the top system, two each in the A-pillars and in the roof arch provide the spatial dimension of height, transforming the interior into a world of acoustic experiences. Drives for CDs and DVDs, tuners for digital radio and TV, the [Audi smartphone interface](#) as well as the [Audi tablets](#) for the rear seats, which are available from Audi Genuine Accessories, complete the program.

## **Driver assistance systems**

Audi offers 39 driver assistance systems in the new A7 Sportback, making driving even more comfortable, efficient and safer

The [adaptive cruise assist \(ACA\)](#) builds on the adaptive cruise control (ACC) of the predecessor model and adds a lane tracking function that also supports traffic jams. At speeds between 0 and 250km/h, the system keeps the new A7 Sportback at the desired distance to the vehicle ahead. It also uses slight steering interventions to help the driver to stay in the lane and supports with longitudinal guidance in construction sites by means of the narrowed road assist.

Those wishing to drive particularly efficiently can supplement the ACA with predictive control and the efficiency assist which enables an anticipatory driving style. If the adaptive cruise assist is deactivated, the [efficiency assist](#) simply indicates to the driver when it would make sense to ease off the accelerator. [Turn assist](#) and [swerve assist](#) are also included.

The A7 Sportback includes the newly developed [crossing assist](#). If the mid-range radars, which can look roughly 75 ahead, detect crossing traffic in front of the car, the system warns the driver and applies the brake, if necessary. The [lane change warning](#) alerts the driver of risks when changing lanes. The [exit warning](#) indicates vehicles or cyclists approaching from the rear when opening the door and briefly prevents this from happening. [Cross traffic assist rear](#) kicks in when the new A7 Sportback is backing out of a tight space.

The safety systems [Audi pre sense rear](#), [Audi pre sense basic](#) and [Audi pre sense front](#) are standard. They detect collision hazards all around the car and initiate targeted preventive measures – whether maximum braking, adjusting the seats or tightening the belts. [Audi pre sense front](#) includes a warning and braking function for vehicles, pedestrians and cyclists. The [emergency assist](#) brings the car to a stop if the driver is no longer able to do so.

The [360 degree cameras](#) with 3D images and curb view are standard, while [night vision assist](#) is available as a separate option. The latter uses an infrared camera to detect pedestrians and larger wild animals at long distances in the dark and warns the driver of their presence.

Two innovative new features, the [Audi \(remote\) parking pilot](#) and the [Audi remote garage pilot](#), are expected to be available in 2019. Both systems automatically steer the new Audi A7 Sportback into a parallel or transverse parking space or into a garage and out again, operating the steering, accelerator, brake and automatic transmission. The driver monitors the manoeuvre and activates the systems with his/her smartphone via the corresponding button in the new [myAudi app](#) or via the button in the centre console. The respective button must be pressed throughout the entire parking procedure. To complete the package, the A7 Sportback also includes the [360 degree cameras](#), the [maneuvering assist](#) and the [curb warning](#).

Behind the new assistance systems in the new A7 Sportback are the [central driver assistance controller \(zFAS\)](#), which Audi debuted in the A8, and a portfolio of sensors that complement each other with their respective strengths.

Fully equipped, there is a set of 23 sensors in the new Audi A7 Sportback:

- a long-range radar up front,
- four mid-range radars at the vehicle's corners
- one infrared camera ([night vision assist](#)) at the front,
- a front camera at the top of the windshield,
- four [360 degree cameras](#) at the front, rear and exterior mirrors and
- 12 ultrasonic sensors at the front, flanks and rear.

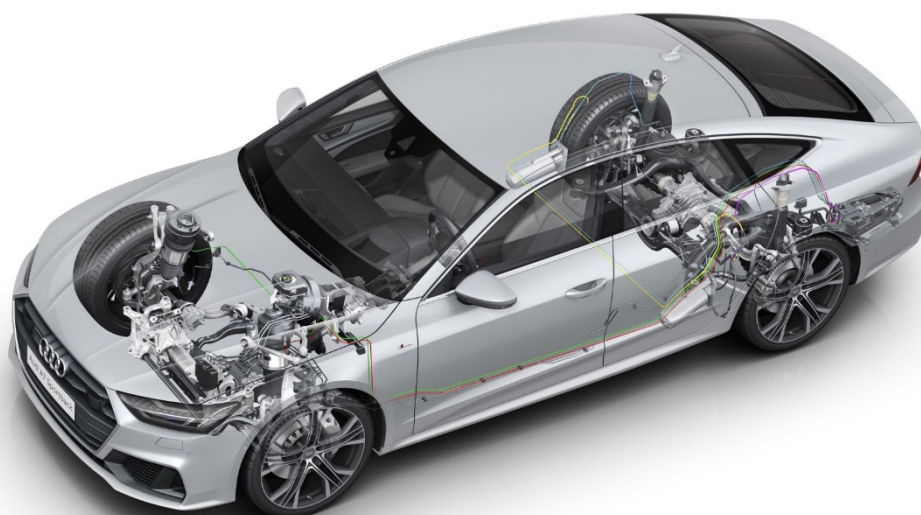
The data from the various sensors flow together in the zFAS. With its high-end processors, the tablet-sized computer continually computes a differentiated image of the vehicle's surroundings. This centralised environment model enables the assistance systems to further improve their performance compared to the predecessor model, for example, when they detect the end of a traffic jam and initiate braking. Also, navigation is even more precise, because the sensor data fusion locates your own car down to the exact lane.

## **DRIVING EXPERIENCE**

The Audi A7 Sportback impresses with even more dynamic driving on the one hand and increased comfort on the other. Thanks to numerous chassis innovations, the Gran Turismo from Audi offers a new range between comfort and dynamics. The [mild-hybrid technology](#), which is also new, makes the drive system even more efficient and at the same time more comfortable. In addition, the A7 will be hitting the road with updated engines.



## Chassis



New chassis components enable the four-door Gran Turismo to perfect its synthesis of sportiness and long-distance comfort. The new Audi A7 Sportback handles more agilely and spontaneously yet is also safer and more comfortable. This has been achieved using innovative technologies such as [dynamic all-wheel steering](#), damper control and controlled power distribution by the quattro sport differential. The central control of these systems via the [electronic chassis platform \(ECP\)](#) make this synthesis of sportiness and comfort possible.

With the standard progressive steering and the optional dynamic all-wheel steering and sport differential, the A7 achieves the handling characteristics of a compact sports car. The [dynamic all-wheel steering](#) combines the dynamic steering at the front axle, which works with strain wave gearing, with a separate rear axle steering system with a spindle drive. This makes it possible to independently adjust the steering angles at the front and rear axles. The dynamic all-wheel steering ends the conflict of aims between agile response and stability.

At speeds up to 60km/h, the rear wheels are turned as much as five degrees in the opposite direction. This reduces the turning circle by up to 1.1 metres, and the car becomes more agile in city traffic, when manoeuvring and in tight switchbacks. At 60km/h and above the rear wheels turn in the same direction as the front wheels, meaning that the new A7 Sportback is even more stable on the road and performs abrupt evasive manoeuvres with complete composure. In many cases the Electronic Stabilisation Control (ESC) does not have to

intervene. If the turn-in of the rear wheels is also considered, the [dynamic all-wheel steering](#) can vary the steering ratio between 9.5 and 16.5:1.

The steering tuning of the standard progressive steering and optional [dynamic all-wheel steering](#) provides for intense, responsive feedback from the road and improved steering feel. Already sporty, the steering becomes increasingly direct with increasing steering angle. With both steering systems, the electromechanical power steering achieves the optimum between comfort and dynamic feedback and conveys useful information to the driver and filters out unpleasant jolts. The connection between the steering wheel, wheels and the road is direct and tight.

An even wider spread between comfortable and sporty suspension tuning and an expanded range of suspension choices make the A7 the perfect Gran Turismo. Both the front and rear axles of the new Audi A7 Sportback are five-link constructions made largely of aluminium. Two subframes – the front rigid, the rear hydraulically mounted – attach them to the body. The track is 1651 millimetres up front and 1637 millimetres in the rear.

Audi offers the [suspension with damper control](#) as standard equipment. Its management is comfort-oriented and has been converted to an energy-efficient concept – higher current only flows when the valves are closed to set the dampers to hard.

Available as an option is the particularly comfortable [adaptive air suspension](#), also with controlled damping. It can be set to three modes and includes a 'lift' position for poor roads and automatic leveling. In 'auto' and 'comfort' modes, it lowers the body by 10 millimetres at speeds above 120km/h further improving airflow and stability.

The [electronic chassis platform \(ECP\)](#) coordinates the controlled suspensions. As the central chassis controller, it collects comprehensive information about the movement of the car and the data from the chassis control systems involved. From these, it calculates and precisely coordinates the optimal function of these components in an integrated handling controller. The driver of the new Gran Turismo experiences this advancement as precise handling with increased lateral dynamics and greater comfort.

Besides the dampers, the ECP also controls the [dynamic all-wheel steering](#) and the updated [sport differential](#), which actively distributes the drive torque as needed between the rear wheels during fast cornering. The driver can adjust the settings for all controlled components in the Audi drive select dynamic handling system – in the modes comfort, auto and dynamic. The [dynamic all-wheel steering](#) varies its ratio and the degree of feedback, for example.

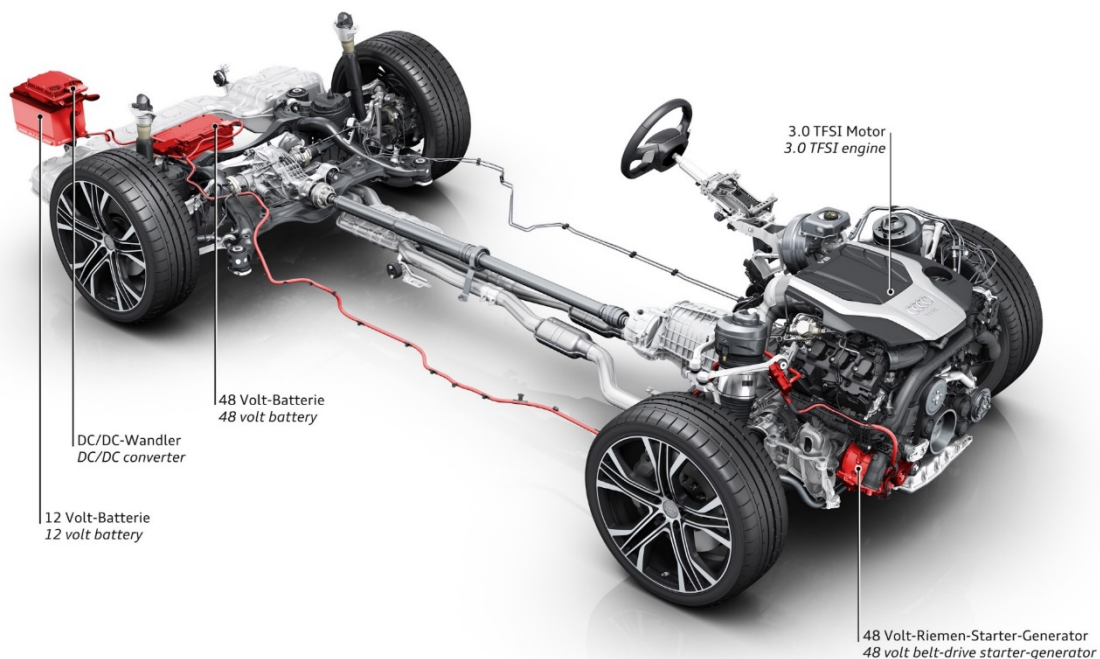
The powerful, fully ventilated brakes are another contributor to the new Audi A7 Sportback's high level of driving safety. The front discs on the A7 Sportback 50 TDI have a diameter of 350 millimetres (rear: 330 millimetres) and combine grey cast iron friction rings with

aluminium pots. The fixed calipers on the front axle – made of aluminium as standard – each accommodate six brake pistons. Electronic Stabilisation Control (ESC) provides even more precise control than in the previous model.

The wheels for the big coupé start at 20 inches, featuring torus absorbers – foam pads glued into the tyres – reduce unwanted droning frequencies. The standard wheels measure 8.5 J x 20 and are equipped with 255/40 tyres.

A unique function integrated into the ESC warns the driver if a wheel is not tight.

### **Broad-based electrification**



The Audi A7 Sportback is equipped standard with the new [mild-hybrid technology](#) (MHEV, mild hybrid electric vehicle) for greater efficiency and comfort. The technology reduces consumption by as much as 0.7 litres of fuel per 100 kilometres in real driving. With the 3.0 TFSI and 3.0 TDI, it is based on a newly developed 48-volt primary electrical system and comprises a compact lithium-ion battery and a belt alternator starter (BAS) that is connected to the crank shaft.

Between 55 and 160km/h, the new Gran Turismo can coast with the engine off when the

driver lifts off the accelerator – completely emissions-free for up to 40 seconds. As soon as the driver steps on the accelerator again, the BAS quickly and smoothly restarts the engine. The 48-volt system enables a high recuperation power of up to 12kW and allows start-stop operation from just 22km/h. The engine is started as soon as the vehicle ahead starts moving, even if the driver is still pressing the brake pedal.

## **Drive system**

For Australian launch,, Audi is equipping the new A7 Sportback with the powerful six-cylinder 3.0 TFSI engine, with the 3.0 TDI engine to follow in 2019. The turbocharged petrol engine in the A7 Sportback 55 TFSI quattro produces 250kW and delivers 500Nm of torque over a broad band from 1370 to 4500rpm. It accelerates the big coupé from 0 to 100km/h in 5.3 seconds; top speed is 250km/h). The Audi A7 Sportback 55 TFSI consumes just 7.3 litres of fuel per 100 kilometres, corresponding to 165 grams CO<sub>2</sub> per kilometre.

The new three-litre V6 is packed with innovations. Its exhaust end lies inside the 90° vee, the short gas paths and the twin scroll charger, which prevents unwanted interactions between the gas columns, guarantee spontaneous throttle response. The [B-cycle combustion process](#), which is designed specifically for part load, makes the V6 petrol engine particularly efficient. To support it, the [Audi valvelift system \(AVS\)](#) adjusts the intake valve opening times and stroke in two stages based on load and engine speed. The three-litre petrol unit produces a subtle and sonorous sound that never becomes intrusive even under load. This is due in part to the new tube guide in the dual-branch exhaust system that largely eliminates hum frequencies.

The V6 TFSI has shed 14 kilograms and now weighs 172 kilograms. Its aluminium crankcase features integrated, thin-walled cylinder liners of grey cast iron. In combination with the newly developed rings for the aluminium pistons, this reduces friction. Another efficiency element is thermal management with separate cooling loops for the crankcase and cylinder head. The exhaust manifold is integrated in the cylinder head and bathed in coolant. This helps the engine to heat up quickly following a cold start. When the engine is warm, this solution lowers the exhaust temperature, reducing fuel consumption, particularly during sporty driving.

Audi is also offering the A7 Sportback 50 TDI quattro tiptronic as a second engine variant at market introduction. It produces 210kW and delivers 620Nm of torque between 2250 and 3000rpm. It consumes just 6.0 litres of fuel over 100 kilometres, analogous to 156 grams CO<sub>2</sub> per kilometre. The accelerates the Gran Turismo from zero to 100km/h in 5.7 seconds on its way to a top speed of 250km/h.

Weighing just 190 kilograms, the 3.0 TDI combines numerous high-tech features. These



include particularly complex thermal management, newly developed cylinder heads, greatly reduced friction, a modified chain drive and an electrically adjustable turbocharger that develops up to 2.0 bar of boost pressure. The diesel engine also works together with a 48-volt MHEV electrical system.

An additional four-cylinder engine will eventually round out the engine lineup.

<b>Audi A7 Sportback</b>	<b>55 TFSI (3.0 TFSI)</b>	<b>50 TDI (3.0 TDI)</b>
<b>Displacement</b>		
in cc	2995	2967
<b>Max. power output</b>		
in kW at rpm	250kW From 5000 – 6400	210 From 3500 – 4000
<b>Max. torque</b>		
in Nm at rpm	500 From 1370 – 4500	620 From 2250 – 3000
<b>Top speed</b>		
in km/h	250	250
<b>Acceleration</b>		
0 – 100 km/h in s	5.3	5.7
<b>Fuel consumption (combined)</b>		
in l/100km	7.3	6.0
<b>Combined CO<sub>2</sub> emissions</b>		
in g/km	165	156
<b>Drive system</b>	quattro drive	quattro drive

\* Fuel consumption and CO<sub>2</sub> emission figures given in ranges depend on the tyres/wheels used

For power transmission, the Audi A7 Sportback 55 TFSI is equipped with a [seven-speed S tronic](#), which has been redesigned in many details in view of the high torque. The double-clutch transmission changes gears quickly and almost imperceptibly; thanks to its electrically driven oil pumps and pressure accumulator, it can do so during coasting with the engine stopped.

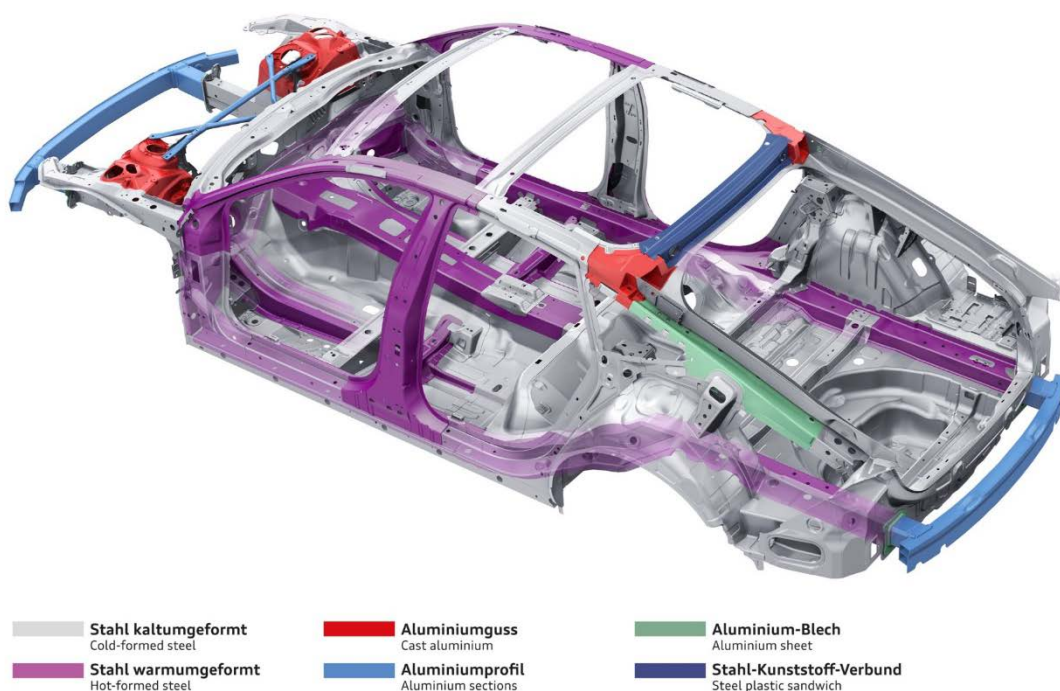
The 3.0 TDI is mated to an [eight-speed tiptronic](#). An rpm-adaptive torsion damper with a centrifugal force pendulum largely compensates for undesirable vibrations in the engine. This permits efficient driving from engine speeds as low as 1000rpm. When coasting and rolling out, a clutch in the central transmission opens and interrupts the power connection. A new electric oil pump makes it possible to engage the gear that will be needed after the rolling phase. The transmission control unit detects stop-and-go situations and ensures comfortable starts.

The S tronic transfers the engine power to a [quattro drive with ultra technology](#). The drivetrain is highly efficient – activating the rear wheel drive when needed. There are no differences in terms of traction and handling compared to permanent systems.

## SPACE CONCEPT

The A7 body concept combines the best of all worlds – the design of a coupé, the spaciousness of a sedan and the versatility of an Avant. The luggage compartment holds up to 1390 litres. The interior is extremely quiet thanks to highly advanced aerodynamics and aeroacoustics.

### Body



The new Audi A7 Sportback has a larger interior despite the same exterior dimensions. It transformed 12 millimetres more wheelbase into an additional 21 millimetres interior length. The same applies to leg room, knee room and head room on the rear seats.

In the base configuration, the luggage compartment of the large, four-door coupé holds 535 litres, despite a sloping rear hatch. This increases to 1390 litres with the split rear seatbacks folded down. The loading sill is just 669 millimetres above the road surface. The extended load-through width now measures 1050 millimetres so that two golf bags fit laterally in the luggage compartment. The long rear hatch – another unique feature – opens and closes electrically as standard or via foot gesture with the optional convenience key.



Due to the increased torsional rigidity and increased space in the interior, the body of the A7 contributes significantly to the increased sportiness and increased comfort level. The body of the new Audi A7 Sportback consists of an intelligent mix of materials. As an ultra-high-strength composite, hot-formed steel components form the backbone of the passenger compartment, accounting for 23.9 percent of the weight of the structure. It is used primarily in the lower section of the front bulkhead, the side sills, the rear cross member, the B-pillars and the front zone of the roof line. Here and in other areas of the body Audi uses sheet metal blanks in many places with variable wall thicknesses between 0.75 and 2.05 millimetres. They combine low weight with high strength, these tailored blanks (custom-made sheets) are created by partial tempering and by complex processes during rolling or welding.

The aluminium components in the body-in-white together weigh 10.9 kilograms. The strut dome and reinforcements in the roof frame are made of cast aluminium, the strut brace in the engine compartment and the central cross brace under the floor of extruded sections. An aluminium sheet supports the B-pillars, and the upper shell of the rear roof frame is made of a new steel/polymer mix. Doors, bonnet and boot lid are made entirely of aluminium. The new Audi A7 Sportback 55 TFSI weighs 1815kg without a driver.

The body of the new Audi A7 Sportback is also improved in numerous criteria compared with the previous model. The newly designed structural front end and the torsion rings have a positive effect with respect to rigidity. The significantly stiffer connection of the front axle improves handling and the acoustic behaviour of the body. Hydraulically switchable engine mounts eliminate vibrations at idle. In a head-on collision, the three stress planes in the front end absorb the forces. The reinforcements of the longitudinal members have variable wall thicknesses, which leads to controlled deformation.

## **Aerodynamics and aeroacoustics**

The new Gran Turismo from Audi has a drag coefficient of 0.27. The Audi Aerodynamics team put in a lot of work in all areas, including on the exterior mirrors and the rear axle trim. Small spoilers, including in front of the wheels and the bow capsule, direct the flow at the underbody. The outer areas of the air inlets feature additional openings – they guide a portion of the air flow into the wheel housings, where it flows past the wheels. When the spoiler extends electrically at a speed of 120km/h, it provides additional downforce on the rear axle – roughly 50 kilograms at top speed.

The new Audi A7 Sportback maintains the top level of the previous model with respect to aeroacoustics. Despite the frameless doors, it spoils its passengers with extraordinary acoustic comfort. The seal concept for the doors and rear hatch is sophisticated. Audi offers optional acoustic glazing six millimetres thick for everything except the rear window. Tinted privacy glass for the rear, a heated windscreen and rear blinds are also available.

## **Comfort and convenience features**

New comfort features enhance the sense of well-being on board the A7 Sportback. The newly developed seats play a large part in the interior's lounge character. They are slim and lighter than in the previous model. The structure of the seat cushions and backrests guarantees excellent comfort and good lateral support.

Audi offers the front sport seats. The seats feature multi-way power adjustments and lumbar support. They include three-stage heating. 2+1 seats are standard in the rear.

The standard three-zone automatic air conditioning system has a filter that eliminates the bulk of the gases and particulates, and also neutralises many allergens.

The optional windscreen wipers for the A7 Sportback have also been newly developed and are intelligently controlled. The spray nozzles lie in their arms, and the water is sprayed directly in front of the blades, always at the correct wiping angle. This uniform wetting, which also takes into account the driving speed, the outside temperature and the degree of soiling, cleans the windshield fast, efficiently and reliably. Other attractive equipment options include the pre sense rear package with side airbags and illuminated seatbelt buckles, the storage package and the particularly large panoramic glass sunroof. The fuel tank of the four-door coupé comes standard without a screw cap.