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The new A6 series – better and more attractive than ever

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Summary

Fresh power for an established winner – the new Audi A6

The winner in the business class has just gotten better – Audi has thoroughly updated the A6 family. New engines, transmissions and headlights, plus a new infotainment system makes the A6 more efficient, more powerful, more attractive and more sophisticated than ever.

Sharp lines, emphasised horizontals, athletically taut surfaces – the design of the A6 models epitomises precision and sporty elegance. It was carefully honed as part of the model refresh, with changes made to the Singleframe grille, the headlights, air inlets, bumpers, side sills, rear lights and tailpipes. Audi offers headlights with LED technology or Matrix LED technology, combined with dynamic turn signals.

Thanks to its intelligent composite construction concept, the body is extremely rigid and safe. Numerous components of aluminium and hot-shaped steel form the backbone of a systematic lightweight construction concept. The new A6 1.8 TFSI has a kerb weight (without driver) of just 1,570 kilograms. Vibrational comfort is excellent; cabin noise is extremely low.

The sinewy style of the exterior is echoed in the car's spacious interior. Every detail documents the uncompromising level of quality familiar to Audi drivers. Elegant colours and carefully selected materials emphasise the cultivated atmosphere. The new Audi design selection in the interior colours flint grey (A6 models) and Arras red (S6) address particularly discerning customers.

The new A6 models are also way ahead of the competition when it comes to infotainment, with MMI navigation plus with MMI touch. The navigation system with the power-retractable eight-inch monitor is now based on a new technology platform that uses the fast Tegra 30 graphics chip from Audi's partner Nvidia. The supplemental module Audi connect transfers data via the fast LTE standard.

The range of driver assistance systems is also extremely attractive, topped by adaptive cruise control with stop & go function. Audi side assist, which

uses radar to check behind the car when changing lanes, works closely together with Audi active lane assist, which prevents unintended lane changes. The night vision assistant now includes even more functions, and the Audi pre sense basic safety system is standard. Important information can be called up via the optional head-up display.

Extensively updated: the engine lineup

The engine lineup for the new A6 includes one TFSI unit with an output of 140kW and two TDI units that produce 160kW and 235kW. All engines comply with the limits of the Euro 6 emission standard, and their CO₂ emissions have been reduced by as much as 11 percent. Combined with the all-new S tronic transmission, the 1.8 TFSI consumes just 5.7 litres of fuel per 100 kilometres, corresponding to 133 grams CO₂ per kilometre.

The high-performance diesel is paired with an eight-speed tiptronic. All other engine variants work together with a seven-speed S tronic. In the version with front-wheel drive, a fully redeveloped dual-clutch transmission replaces the multitronic. For the 3.0 TDI Biturbo and the S6, the quattro permanent all-wheel drive can be supplemented with the sport differential, which actively distributes power between the rear wheels.

The chassis with its sophisticated wheel suspensions also combines supreme comfort with sporty handling. The Audi drive select dynamic handling system is standard, and Audi offers a choice of the sport suspension and adaptive air suspension as options. The wheels measure between 18 and 20 inches in the diagonal. The V6 models are equipped with new lightweight brakes, and dynamic steering is available on the 3.0 TDI Biturbo and S6 models.

Now even sportier: the new Audi S6

The new Audi S6 is a sports car for everyday. The 4.0 TFSI, a Biturbo V8 producing 331kW, accelerates from 0 to 100 km/h in 4.4 seconds. Fuel consumption is just 9.2 litres per 100 kilometres, the equivalent of 214 grams CO₂ per kilometre, respectively. This efficiency is due in large part to the cylinder on demand (COD) system, which only activates four of the eight cylinders when under part load.

At a glance:

The new Audi A6 model series

Body and design

- Lightweight body with high aluminium content and high-strength, hot-shaped steels, the A6 1.8 TFSI has a kerb weight (without driver) of just 1,570 kilograms
- New design solutions at the front, side sills and rear
- LED headlights and Matrix LED headlights with dynamic turn signals available as options
- Optional power luggage compartment lid with sensor control

Interior and controls

- Spacious interior, luggage capacity up to 995 litres
- Front seats optionally with ventilation and massage function
- Head-up display optional
- Self-assured design, top-quality workmanship, new colours and materials, optional S line sport package and new Audi design selection

Drivetrain

- Three powerful engines each - TFSI and TDI units with output from 140kW to 235kW
- Up to 11 percent lower CO₂ emissions; all engines meet Euro 6 emission standard
- 1.8 TFSI ultra with S tronic just 133 g CO₂ per km
- Many aspects of the 3.0 TDI units are newly developed
- New seven-speed S tronic for front-wheel drive; 3.0 TDI Biturbo with eight-speed tiptronic
- quattro drive for many model versions; top models with optional sport differential

Chassis

- Sophisticated suspensions; wheels between 18 and 20 inches in diameter; brakes in models with more powerful engines feature new fixed aluminium calipers
- Audi drive select dynamic handling system is standard; dynamic steering, adaptive air suspension and sports suspension are optional

Assistance and infotainment systems

- New MMI navigation plus with new computer hardware and high-resolution, eight-inch monitor supplements Audi connect with LTE modem
- Optional Bang & Olufsen Advanced Sound System
- Cutting-edge safety and assistance systems; new interconnectivity between Audi side assist and Audi active lane assist

Audi S6

- 4.0 TFSI developing 331 kW, COD system
- 20-inch wheels and adaptive air suspension sport standard
- Optional sport exhaust system for particularly sporty sound

Full version

Full scope of Audi's technological expertise – The new A6 model series

The revised A6 model series is launching with numerous new features on engines, transmissions, headlights and infotainment. The Audi A6 is even more powerful, efficient and sophisticated than ever. The S6 Sedan sport model also benefit from the model refresh.

Body

The new Audi A6 is a stately car, measuring 4,933 millimetres in length. The wheelbase measures 2,912 millimetres, the width 1,874 millimetres and the body height 1,455 millimetres. The body of the new A6 has an aluminium content of roughly 20 percent.

The cross-strut in the engine compartment and the cross-members behind the front and rear bumpers are made of aluminium sections. The front strut braces are highly integrated aluminium castings. Compared with comparable welded components of steel sheet, they save more than 10 kilograms of weight. The integral subframe behind the instrument panel, the rear shelf, the cross-member in the boot, the front fenders, the doors, the bonnet and the boot lid are made of aluminium panels. This lightweight construction concept yields a weight savings of roughly 15 percent compared with conventional steel construction.

Furthermore, the body of the new Audi A6 includes numerous hot-shaped steels, which combine extreme strength with low weight. They are used in the transition from the front section of the car to the occupant cell, in the A-pillars and the roof arch, in the centre tunnel, the side sills and the B-pillars, at the transition of the side sills to the rear section of the car, and in the floor panel. In many areas, Audi uses tailored blanks – panels of various thicknesses within the component.

Other advantages of the bodies with their outstanding manufacturing quality: They achieve top values with respect to torsional stiffness, thus providing the basis for the highly precise handling and quietness in the cabin. Hydraulic elements minimise vibrations of the wheel suspensions, rear subframe and engine. Acoustic glazing in the front and side zones of the occupant cell is standard, and there are three seal lines at the doors. As an option, Audi offers insulating/acoustic glass all around and tinted privacy windows.

The new Audi A6 is also impressively aerodynamic, with values of 0.26. The paneled underbody channels air in a controlled manner, and air also flows through the engine compartment with minimal losses. Numerous details, such as the design of the exterior mirrors, provide for excellent aeroacoustics. The bodies also get top marks when it comes to passive safety, both in the event of a crash with other vehicles and for pedestrian safety. In the cabin, Audi's adaptive restraint system offers outstanding protection.

Exterior design

Elegant, powerful and sportily progressive – the new Audi A6 is attired in striking shapes. The proportions are balanced, sharp lines frame taut surfaces and the low roofline quickly begins sloping back downward. The tornado line gives the body strong shoulders, and the redesigned, more strongly contoured side sills draw the dynamic line slightly upward. The large, precisely defined wheel wells emphasise the muscular character; the trim strips over the side windows are now in high-gloss black.

The Singleframe grille at the front now appears even wider. Its six corners are now more striking; chrome struts provide for even more elegance. The bumper has also been redesigned. The side air intakes are interconnected and framed by a chrome clasp. Lateral slats structure their interior, and pronounced edges accentuate them at the top.

The headlights also feature a progressive design. Xenon plus units, LED or Matrix LED headlights are either fitted as standard, or optionally available, depending on the model. A bundle of 19 light-emitting diodes per headlight paired with four reflectors produce the high-beam light. Matrix LED headlights ideally illuminate the road ahead without dazzling other road users. Their control unit, which communicates with the camera on the rear view mirror, can switch the individual diodes off and on and dim them in 64 stages as needed.

Another strength of the Matrix LED headlights is the intelligent cornering light, which is created by a shift in the light centre position. With the MMI navigation plus on board, the cornering light uses the route data to illuminate the curve shortly before the steering wheel is turned. Audi bundles the Matrix LED headlights with front and rear dynamic turn signals in the new A6. When the driver taps the turn signal, individual LEDs light up from the inside out.

At the sculptured rear end of the car, the lights are now slimmer and the boot lid boasts a chrome trim. The diffuser insert houses the new exhaust tailpipes, whose trapezoidal design underscores the width of the car. The tail lights are now comprised entirely of LEDs, and rear dynamic indicator signals are standard in combination with LED headlights.

The colour palette for the new Audi A6 includes solid, metallic and pearl-effect shades, including four colours exclusive to individual models such as the allroad, S line and S models. The standard colours are aviator blue, brilliant black, Dakota grey, florett silver, glacier white, garnet red, Havana black, ibis white, carat beige, moonlight blue, mythos black, Oolong grey and tornado grey. Options include the Audi exclusive black gloss package which add additional sporty accents to the design.

Engines

One TFSI and two TDI engines with outputs ranging from 140kW to 235kW – the reorganised engine lineup for the Audi A6 covers the full breadth of customer expectations. All engines comply with the Euro 6 emission standard. Their CO₂ emissions have decreased by as much as 11 percent. As forced-induction, direct-injection engines, all follow Audi's right-sizing philosophy.

The start-stop-system in combination with the seven-speed S tronic and the eight-speed tiptronic offers added features. When the driver rolls up to a red light or other obstacle, the engine can be deactivated as soon as speed drops below seven km/h. This function remains inactive in S mode and in the touch control gate of the seven-speed S tronic. The new start-stop-system works closely together with the ACC stop&go. When the engine is inactive, it starts again as soon as the vehicle ahead begins moving.

The entry-level petrol engine is now the 1.8 TFSI. The 1,798 cm³ four-cylinder unit produces 140kW and 320Nm of torque, the latter between 1,400 and 4,100rpm. Special features of the engine include dual injection in the combustion chambers and the induction pipe, the exhaust manifold integrated into the cylinder head and the Audi valvelift system (AVS) for the exhaust valves.

The 1.8 litre petrol engine is already powerful enough to make the new Audi A6 is very agile. When paired with the S tronic, it sprints from 0 to 100km/h in 7.9 seconds with a top speed of 233 km/h. Average fuel economy, however, is just 5.7 litres per 100 kilometres, corresponding to 133 grams CO₂ per kilometre.

The TDI: three litre-V6 in two engine power classes

Audi offers two versions of the 3.0 TDI, which displaces 2,967cm³ as a comprehensively revised, highly efficient monoturbo and as a powerful Biturbo. Thanks to an emissions-control unit compliant with the Euro 6 emission standard, all versions of the V6 also bear the 'clean diesel' designation.

The monoturbo, which weighs only around 190 kilograms, features particularly effective thermal management, new cylinder heads and a modified chain drive. Its common-rail system generates up to 2,000 bars of pressure. It has been specifically designed for low fuel consumption, the 3.0 TDI clean diesel produces 160kW. Its torque of 500Nm is available between 1,250 and 3,000rpm.

The 3.0 TDI 160kW moves the new Audi A6 with great ease. In combination with the S tronic and quattro, the standard sprint from 0 to 100km/h is completed in 6.6 seconds, and top speed is 244 km/h. According to ADRs,

the Sedan consumes 5.1 litres per 100 kilometres – a CO₂ equivalent of 133 grams per kilometre.

650 Nm: the 3.0 TDI clean diesel Biturbo

The top TDI engine in the new A6 family is the 3.0 TDI clean diesel Biturbo. It produces 235kW and delivers a brawny 650Nm of torque to the crankshaft between 1,400 and 2,800rpm. Its two turbochargers are connected in series via a changeover valve. The pistons, cylinder heads and camshafts have been specially designed for the high-performance concept. A sound actuator in the exhaust system gives the engine a full, sporty sound.

With the Biturbo V6, the new A6 Sedan sprints from 0 to 100km/h in five seconds. The governed top speed of 250km/h is a mere formality. The consumption figures are 6.1 litres per 100 kilometres, the equivalent of 161 grams CO₂ per kilometre.

Drivetrain

Audi also has a variety of drivetrain solutions available. Power flows either to the front axle or to all four wheels. quattro permanent all-wheel drive distributes power for the 3.0 TDI with 160kW and also the 3.0 TDI Biturbo, and can be supplemented with the sport differential at the rear axle if desired.

The eight-speed tiptronic is reserved for the 3.0 TDI clean diesel with twin turbochargers. The seven-speed S tronic is standard for all others. There are slight technical differences between the versions for front-wheel and all-wheel drive.

All automatic transmissions are state-of-the-art. They are incorporated into the thermal management for the engines and characterised by their high efficiencies. Their lower gears feature short, sporty ratios, while the upper gears are long to reduce revs and fuel consumption. Drivers can choose between D and S modes or take over gear changes themselves at any time. Paddles on the steering wheel are standard.

The eight-speed tiptronic is a classic torque-converter transmission. It shifts smoothly, quickly and snappily. Under normal driving conditions, the lockup torque converter connects the transmission directly to the engine. It works with limited slip in certain situations, which in interplay with the integrated

shock absorber permits very low engine speeds without vibrations. When the car is not moving, the transmission is disconnected from the engine.

The seven-speed S tronic follows a different principle. Its two multi-plate clutches operate two mutually independent sub-transmissions, which are similar in nature to manual transmissions. They are continuously active, but only one is connected to the engine at any given time. Gears are shifted by switching the clutches. This takes just a few hundredths of a second and occurs with virtually no interruption of propulsive power. When the standard Audi drive select system is in efficiency mode, the S tronic begins to freewheel as soon as the driver takes his or her foot off the accelerator.

In the version with quattro all-wheel drive, the clutches of the seven-speed S tronic are arranged radially one above the other as opposed to axially one behind the other as in the newly developed version for front-wheel drive. The new transmission, which replaces the multitronic, sets new standards with respect to efficiency. The secrets to this success are a further reduction of friction, the low weight of the components and an innovative oil supply system. A centrifugal force pendulum on the flywheel makes it possible to operate the engine at very low speeds.

Lightning-fast redistribution: quattro permanent all-wheel drive

The quattro permanent all-wheel drive is purely mechanical. During normal driving, the self-locking centre differential funnels 60 percent of engine torque to the rear axle and 40 percent to the front. It can also redistribute the power immediately if necessary – up to 70 percent to the front axle or as much as 85 percent to the rear.

The perfect partner for quattro all-wheel drive is torque vectoring, an intelligent software function of the ESC electronic stabilisation control. Upon detecting that the front inside wheel (front and rear axle on quattro models) in a turn has been relieved too much, the ESC unit minimally and precisely brakes the wheel concerned. The intervention causes excess torque to flow to the outside wheel. Due to the difference in propulsion forces, the Audi A6 turns slightly into the corner. Self-steering behavior remains neutral longer, and handling becomes more precise, agile and stable.

The optional sport differential actively distributes the engine torque between the rear wheels during dynamic driving. In fast cornering, the system literally pushes the new Audi A6 into the radius. Management of the

sport differential is integrated into the control functions of Audi drive select. The latest evolution is even faster and more sensitive.

Chassis

With their sophisticated chassis, the new Audi A6 combines tremendous athletic talents with luxurious comfort – from a dynamic pace to composed cruising. The front axle is a construction with five aluminium links per wheel that can handle longitudinal and lateral forces separately. An integral subframe made of high-strength steel serves as the backbone of the suspension, which has a track of 1,627 millimetres.

The Audi track-controlled, trapezoidal link principle is used for the rear axle, which has a track of 1,618 millimetres. The links here are also made of aluminium. Two hydraulically damped bearings join the steel subframe to the body. As with the front axle, the wheel carriers and pivot bearings are made of aluminium and the stabilizer bars are hollow tubes.

The business models from Audi roll off the assembly line with a sportily balanced steel-spring suspension as standard. A sports suspension that lowers the body by 20 millimetres, is available as an option. This, and 20-inch wheels, comprise the S line sport package.

The efficient electromechanical power steering has a 16.1:1 steering ratio. Its boost depends on the current speed. The steering works in conjunction with the Audi active lane assist and park assist systems. For the top models, Audi offers the optional dynamic steering, which uses a superposition gear to vary its boost by roughly 100 percent, primarily as a function of speed. At the cornering limit, it countersteers with minuscule impulses. The result is improved handling and driving safety.

The Audi drive select dynamic handling system is standard in the new Audi A6. This system enables the driver to switch the operating mode of the engine, automatic transmission, steering and other systems between the modes comfort, auto, dynamic, efficiency and individual. A number of optional modules are available depending on the engine version, such as the sport differential, dynamic steering and the adaptive air suspension.

The air suspension with controlled damping provides for smooth rolling. In the front suspension struts, air springs enclose the shock absorbers; these components are separated in the rear suspension. A control unit adjusts the

shock absorbers according to road conditions, the driver's style, and the mode chosen in Audi drive select.

At speeds of more than 120km/h, the adaptive air suspension will lower the car by 10 millimetres. On uneven driving surfaces, it can raise it by 20 millimetres. The air suspension is also used to level ride height. The CDC continuous damping control complements the work of the air suspension perfectly. The control unit adjusts its function for each wheel individually in milliseconds. Electromagnetically actuated valves control the flow of hydraulic fluid through the shock-absorber piston.

The new Audi A6 is available with alloy wheels in sizes from 18-inches to 20-inches in diameter. Audi and quattro GmbH offer seven new variants. All tyres have been optimised for rolling resistance. An ultra-compact spare wheel is standard.

Lightweight construction: new brakes for powerful engine variants

All front wheel brakes are internally vented, and at up to 356 millimetres in diameter guarantee ample stopping power. Models with engine outputs of at least 160kW are equipped up front with a newly developed brake system with fixed aluminium calipers and weighing three kilograms less than the previous component. The electric parking brake is integrated into the rear axle.

Electronic Stabilisation Control (ESC) also boasts numerous enhancements. Activating sport mode will largely deactivate engine intervention and somewhat minimise braking intervention. In front-wheel drive models, torque vectoring – an ESC sub-function – improves handling during fast cornering by slightly braking the inside front wheel that is subjected to a reduced load.

Interior

The interior of the new Audi A6 offers plenty of space thanks to the long wheelbase of 2,912 millimetres. Wide and tall door openings provide comfortable access for all passengers. Stepless door stays keep the doors in position when opened; power-assisted closing is optional. Even tall passengers will find the rear compartment comfortable.

There is a choice of four types of front seats. 10-way, electrically adjustable seats with lumbar support are standard. Options include multi-stage

ventilation and heating. The customised contour seats feature 18-way power adjustment with memory function. Their side bolsters and lumbar support can be adjusted pneumatically. With the optional massage function, the user can select from five different intensities in five different programs to have 10 air chambers massage their back. The sport seats feature pronounced side bolsters, pull-out seat cushions and power lumbar supports. The S6 is equipped with S sport seats, which provide even greater stability and integrated head restraints.

The controls in the new A6 models from Audi are clear and easy to understand, and the instruments are easy to read. The driver information system between the speedometer and tachometer is a new full-colour version with a seven-inch diameter. It consolidates all important information and settings in one place, including the efficiency program with tips for an economical driving style.

The driver information system is operated via the standard leather multifunction steering wheel with shift paddles. The second control level is the standard MMI control unit on the console of the centre tunnel. The on-board MMI monitor (8.0 inches diagonally) automatically emerges from the instrument panel when the system is turned on.

One of the strengths of the new Audi A6 is the highly efficient, deluxe automatic air conditioning with four-zone version climate control. The optional head-up display is another highlight from Audi. It projects all important car, navigation and assistance system information in colour onto the windscreen, where this information appears in front of the driver roughly in line with the headlights.

The sportily elegant lines of the exterior carry over to the interior design. The large inlay, the wrap-around, runs in an arc below the windscreen and terminates in the front doors. The low, seemingly weightless instrument panel rounds off the concept of the taut lines with an elegant sweep. The wide, asymmetric centre console emphasises the orientation toward the driver.

Uncompromising: fit and finish

The materials have been selected and crafted with the utmost care. Elements such as the air vent thumb wheels or the buttons of the MMI control unit shine with a fine, aluminium-look finish. The selector lever and

quattro badge on the cover of the glove box have also been redesigned. The optional ambient lighting with its LEDs and light guides highlight the interior in the dark.

The designers have also reorganised the colours and materials used in the cabin as part of the model refresh. The standard seats can be ordered with Milano leather upholstery. Valcona leather is an additional option for the customised contour seats. The S sports seats are upholstered exclusively in particularly high-grade Valcona leather.

The spectrum of interior colours is also diverse. The palette has been completely revised and now contains four standard colours, plus specific S line, allroad and S model colours. The Audi design selections flint grey (A6) and Arras red (S6) set special accents and boast coordinated leather shades, contrasting stitching and decorative inlays. Several leather packages and items from the Audi exclusive range round out the palette.

Large inlays in the doors, on the instrument panel and the centre console leave their mark on the design of the interiors in all models of the new A6 family. Satin finish, silver-grey and satin finish, silver-beige are standard here (depending on the interior colour chosen). Options include aluminium delta silver; black piano finish; walnut, dark brown; Beaufort walnut and aluminium/Beaufort, black.

The S line sport package provides for even more sportiness. Black is the dominant colour in the interior. S line embossing and contrasting stitching adorn the backrests of the sport seats. The inlays are matt brushed aluminium, with piano finish, aluminium/Beaufort and other woods from the standard range available as options. Seat coverings in light lunar silver are available in addition to the black seats.

The new Audi A6 Sedan offers 530 litres of boot space. The split rear back seats fold down easily, thus increasing the volume to 995 litres.

A power tailgate is available as an option. In combination with the likewise standard convenience key, the driver can open the boot/tailgate by making a kicking gesture with his or her foot. The new Audi A6 models can tow loads between 1.8 and 2.1 metric tonnes (braked, eight percent gradient), depending on the engine variant.

Infotainment and Audi connect

Audi also offers customers of the new A6 series a wide range of infotainment choices. The MMI Navigation plus with MMI touch is standard, which includes the 180-watt Audi sound system, voice control, the Audi music interface, and a Bluetooth interface.

MMI navigation plus with MMI touch draws on the computing power of the Audi modular infotainment platform (MIB). It comprises the Radio Car Control Unit for the triple tuner and sound system with the MMX board (Multi-Media eXtension). The board integrates – along with the working and flash memory – a super-fast processor from Audi's partner Nvidia. This processor is responsible for all voice control, navigation and telephone features.

The second-generation MIB used in the new A6 family is equipped with the cutting-edge Tegra 30 processor from Nvidia. This quad-core chip boasts a clock speed of over one GHz and performs some eight billion computations per second. It works together with a specialised 3D graphics program that generates sophisticated animations and images. A DVD drive, two card readers, a Bluetooth interface, the Audi music interface, 64 GB of flash storage (10 GB of which is for music) and the high-resolution, eight-inch monitor round out the list of features for the MMI navigation plus.

Even easier to use: the new MMI touch

The MMI touch is another system highlight. The driver writes letters and numbers on the screen with his or her finger to enter a destination or telephone number. The system provides acoustic feedback after each character so that the driver's eyes can stay on the road. The user needs to enter just a few letters before a destination is suggested, similar to performing a Google search.

In parallel with this, the MMI navigation plus also offers the classic control level via the MMI terminal and the multifunction steering wheel.

Furthermore, the system also features voice control that allows a town and street to be entered as a spoken command. In addition to the map on the MMI monitor, a second colour map is displayed in the driver's field of vision on the seven-inch display of the colour DIS between the tachometer and the speedometer.

MMI navigation plus works closely together with the driver assistance and safety systems in the new A6 series. The navigation data can be updated at no charge five times during the first three years following the purchase of the car.

Audi connect, a data transmission module that establishes a connection to the Internet, is the ideal supplement to the MMI navigation plus. It uses the fast standard LTE whenever possible. Audi was the first manufacturer to incorporate this technology into the car. Passengers can surf and email using the module's WiFi hotspot – on as many as eight mobile devices.

The Bose surround sound system integrates a 12-channel amplifier with an output of more than 600 watts and boasts 14 loudspeakers, including a subwoofer and a centre speaker.

Discerning hi-fi aficionados in particular will appreciate the Bang & Olufsen Advanced Sound System, delivering more than 1,200 watts. Its 15 speakers feature encapsulated housings and covers made of polished aluminium. Each individual speaker is driven via a separate amplifier channel. Particularly eye-catching are the acoustic lenses, which emerge from the instrument panel when the system is powered on. The centre speaker and subwoofer guarantee rich surround sound.

Driver assistance systems

A broad portfolio of driver assistance and safety systems is available for the new A6 family. The driver information system in the MMI navigation plus includes the rest recommendation function. It uses various sensors to analyse driving behavior and warns the driver if there is any indication that he or she is starting to lose concentration.

Another new standard feature is the secondary collision brake assist. If a crash triggers the safety system, it is activated to aid the driver. It can initiate automatic braking to reduce the risks of skidding and additional collisions during the accident.

Playing the main role among the optional assistance systems is the adaptive cruise control with stop & go function. It accelerates and brakes to maintain a safe distance to the vehicle ahead. The driver can specify the distance and the control dynamics in four stages. The system covers the entire range of

speeds from stationary to 250km/h and analyses the data from two radar sensors, a video camera, the ultrasonic sensors and additional systems.

The Audi pre sense safety system is available in a variety of versions. In the standard version, Audi pre sense basic, it intervenes upon detecting an unstable driving situation via the sensors of the ESC stabilisation control system. In such cases, it ensures the front seatbelts are electrically tensioned and the sunroof and the side windows are closed, leaving just a gap.

The ACC stop & go also includes the expanded version, Audi pre sense front. It helps to prevent collisions with the vehicle ahead and to mitigate their consequences. In a dangerous situation, the system uses a graduated warning concept to urge the driver to brake. If the driver remains passive, partial braking is performed autonomously provided that the vehicle ahead is moving.

In the full version – Audi pre sense plus as part of the Technik package – the system initiates full braking shortly before a crash. At speeds below 30km/h, automatic emergency braking with full power is performed even behind a stationary vehicle. Below 20km/h, this full braking in many cases prevents the accident altogether and greatly reduces the impact speed in any case.

The standard Audi side assist lane change assistant uses two radar sensors that monitor the space up to around 70 metres behind the car during lane changes at speeds over 30km/h. If a vehicle is in the blind spot or approaches rapidly, a warning LED in the housing of the respective exterior mirror lights up. If the driver still activates the turn signal, the LED flashes several times at high frequency. Audi side assist is coupled with the Audi pre sense rear system, which also initiates preventive protective measures.

Starting at 65km/h, Audi active lane assist detects lane markings on the road with a video camera. If the new Audi A6 approaches a lane marking without indicating, the system assists the driver in steering back into the lane by making a slight intervention in the electromechanical steering system.

The driver can choose in the MMI to have the steering wheel vibrate as well. If the driver selects an early intervention point, Audi active lane assist helps

to keep the car in the centre of the lane. In the new A6, the system works closely together with Audi side assist. The warning about a critical lane change may then be accompanied by a supportive intervention in the steering system.

Even greater safety: the night vision assistant

The night vision assistant uses a far infrared camera located at the front of the vehicle. It reacts to the heat radiated by objects. Converted into black-and-white images, its information can be seen on the large driver information system display. The cooler surroundings appear dark, while animals and people appear strikingly bright. The system, which has a visual range of up to 300 metres, can detect people and larger animals at up to around 100 metres away and highlights them with yellow markings.

If the computer detects a hazardous situation, the brake system can be preemptively pre-filled. A warning signal sounds and a red warning appears on the driver information system's screen and in the optional head-up display. If the new Audi A6 is equipped with the high-beam assistant (standard) or the optional Matrix LED headlight, the person can be targeted and illuminated with three short bursts of light (outside urban areas).

Several systems are available to make parking easier; the top of the line is the park assist system with display of surroundings. It uses 12 ultrasonic sensors to create an image of the surroundings of the new A6, and steers the car into parallel and perpendicular parking spots at the push of a button. The driver only has to accelerate and brake. The system also takes over the steering when pulling out of parallel spots. A surroundings display warns of obstacles to the sides that had been recognised while driving past them. The system can be combined with a reversing camera or 360 degree cameras. The four small, wide-angle lenses mounted on the car capture images of the immediate surroundings. The driver can have the MMI monitor display the images from these cameras in a variety of views.

The new Audi S6

The new Audi S6, which has also been thoroughly revised, is a sports car for everyday driving and recreation. Its design with the characteristic S details already suggests its dynamic nature. The 4.0 TFSI produces 331 kW and makes a constant 550 Nm of torque available across a broad range from 1,400 to 5,700 rpm.

The new Audi S6 accelerates from 0 to 100km/h in 4.4 seconds. Top speed is electronically governed at 250km/h. Despite the enhanced performance, fine-tuning of the engine application in combination with optimised use of cylinder on demand (COD) has reduced the average consumption of the S models to 9.4 litres of fuel per 100 kilometres. This figure corresponds to CO₂ equivalents of 218 grams per kilometre.

The cylinder on demand system, which only activates four cylinders when under part load, is an efficiency highlight. During these phases, Active Noise Cancellation (ANC) suppresses intrusive noise by broadcasting a precise antiphase sound to the cabin through the sound system's speakers. Active engine bearings attenuate low-frequency vibrations. The cylinder heads of the V8 Biturbo have the intake side on the outside and the exhaust side on the inside. This innovation enables short gas-travel paths with minimal flow losses and subsequently spontaneous response.

The power of the 4.0 TFSI is transferred via a seven-speed S tronic to the quattro permanent all-wheel drive system, which uses a centre differential with a high locking rate. The wheels measure 20 inches; the calipers of the front brake discs are painted matt black and bear S6 logos. The standard adaptive air suspension sport lowers the body by 10 millimetres.