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## The Audi Q6 e-tron: electric mobility on a new level

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*The equipment, data and prices specified in this document refer to the model range offered in Germany. Subject to change without notice; errors and omissions excepted.*

All terms marked in blue in the text are explained in detail in the technology lexicon at <https://www.audi-mediacenter.com/en/audi-technology-lexicon> for a detailed explanation.

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## The model in detail

# **The new Audi Q6 e-tron: experience Vorsprung durch Technik**

**The Audi Q6 e-tron\* is the first production model on the Premium Platform Electric (PPE) and is, therefore, the new reference for Vorsprung durch Technik. The new model is not only characterized by impressive driving and charging performance but also sets standards in terms of range and efficiency. The exterior is characterized by powerful SUV design with perfect proportions and further developed elements typical of electric vehicles from Audi. The new design philosophy in the interior and pioneering technologies making their debut in the model open the next chapter of electric mobility at Audi and make Vorsprung durch Technik a tangible experience every day.**

The Audi Q6 e-tron\* is an all-electric SUV in the premium mid-size segment and thus complements Audi's electric SUV model portfolio. With a vehicle length of 4,771 millimeters (15.6 ft), a width of 1,939 millimeters (6.4 ft) without mirrors, and a height of 1,648 millimeters (5.4 ft), the SUV offers maximum space, comfort, and, therefore, suitability for everyday use. The wheelbase of 2,899 millimeters (9.5 ft) allows plenty of legroom, especially for the second row of seats. With these dimensions, the Audi Q6 e-tron\* offers enough space for five passengers with luggage. The exterior is powerful, sporty, and perfectly proportioned. In the interior, a new design philosophy finds its way into series production with the Audi Q6 e-tron\*. Powerful electric motors and a newly developed lithium-ion battery with a total gross capacity of 100 kWh (94.9 kWh net) not only ensure impressive acceleration, but also a range of up to 625 kilometers (388 mi) in the Audi Q6 e-tron quattro\*.

Thanks to 800-volt technology and a maximum charging capacity of up to 270 kW as standard, the Audi Q6 e-tron\* excels in short charging stops. Up to 255 kilometers (158 mi) can be recharged in ten minutes at an appropriate charging station (HPC). The State of Charge (SoC) can be raised from 10 to 80 percent in 21 minutes. New technologies that are being used for the first time in the Audi Q6 e-tron\* and the future-proof E<sup>3</sup> 1.2 electronic architecture bring Vorsprung durch Technik to life. The sum of these innovations and strengths creates the characteristics that take electric mobility at Audi to the next level. The Audi Q6 e-tron quattro\* and the SQ6 e-tron\* will be available to order from March. Prices start at 74,700 euros for the Audi Q6 e-tron quattro\* and 93,800 euros for the Audi SQ6 e-tron\*. In addition to the design differences and the more powerful electric motors, the Audi SQ6 e-tron\* also has more extensive standard equipment, including the e-tron Sportsound. The electronically controlled sports air suspension with a continuously variable adaptive damping system is optional.

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A further variant is now also available: as the Audi Q6 e-tron performance\*, the model is characterized by particularly efficient rear-wheel drive. The new, additional variant in the Audi Q6 e-tron family not only has the longest range in the model series at up to 641 kilometers (398 *mi*), but also represents the entry-level price. The Audi Q6 e-tron\* with rear-wheel drive starts from 68,800 euros.

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## **New design philosophy goes into series production with the Q6 e-tron**

The interior of the Audi Q6 e-tron\* is oriented towards the needs of the customer more than ever. The properties of materials used were incorporated into the interior design at a very early stage of the development process and, in combination with the Audi MMI panoramic display and the MMI passenger display, create a visually clear digital stage. The high-contrast design of the interior deliberately places elements in the foreground or background, creating a three-dimensional spatial architecture that is tailored to the occupants in terms of design and ergonomics. The ambiance in the interior was designed to be decidedly homely. The “Softwrap” extends from the doors across the entire cockpit to the center console, creating a homogeneous and enveloping feeling of space. The same colors and high-quality materials, some of which are made from recycled materials, can also be found in the seats. For example, the S line variant's Softwrap uses the recycled fabric Elastic Melange, which is made from 100 percent recycled polyester. The headlining, lining of the pillars, and the sun visors are made from Draft fabric, which is also 100 percent recycled polyester.

The same is true of the Argument fabric. The sports seats with contrasting stitching (KN) are also optionally available in Elastic Melange fabric. In the S line and S model, the sports seat plus is optionally available in Dinamica microfiber, also a recycled material, or in fine Nappa leather with diamond quilting. Dinamica also adorns the door mirror. Although this fabric looks and feels like suede, almost half of it is made from recycled polyester, which comes from textile waste.

The application surfaces on the instrument panel are painted in volcano gray fine lacquer as standard. Alternatively, sweetgum natural in light brown, or birch linear natural in stone grey wood or matt brushed aluminum in anthracite can be ordered. Birch linear is a technically jointed veneer, i.e., a laminated wood that is cut into veneers and made from locally grown and FSC/PEFC-certified birch wood of European origin. The production process for this veneer was optimized to allow a greater proportion of the lumber to be utilized than was possible for veneer production in the past. This results in a reduction in offcuts.

In the S line version and the S model, customers can choose a technical fabric in anthracite in addition to matt brushed aluminum in anthracite and open-pored carbon micro twill. The latter is an innovative, technical-looking polyester fabric with recycled content that is characterized by a tactile structure and a new look.

The materials used were selected from a functional point of view and at the same time ensure a clear design differentiation of the various vehicle areas in the interior. Comfort-oriented areas are designed with generous surfaces and soft materials. In contrast, the precisely designed control surfaces in high-quality, high-gloss black emphasize the clarity of interaction.

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Specific features in the interior are reserved for the SQ6 e-tron\*, for example, the red ring around the start/stop button, the diamond with the S lettering in the seat, or S-specific displays in the MMI as well as black-painted brake calipers with S lettering on the exterior, the exterior mirror housing in Unique Chrome Silver, bumpers with aluminum inserts, the S sports suspension, and the e-tron sports sound with S tuning.

Thanks to the new Premium Platform Electric, which was developed specifically for e-mobility, the vehicle also has a generous feeling of space and roominess as well as a high level of everyday usability. The package of this SUV, in particular, has been specially designed to meet the needs of SUV customers. The interior offers plenty of storage space and stowage compartments. In the center console, there are two cup holders, a wireless cell phone charger, and a storage compartment below the center armrest with more than five liters (0.17 cu ft) of storage space. The greater comfort in the second row of seats is typical of an electric car without a center tunnel. The trunk offers 526 liters (18.6 cu ft) of storage space. If the rear seat bench is folded down, the storage space increases to up to 1,529 liters (54 cu ft). The rear seats can be folded down separately (40:20:40). A further 64 liters (2.3 cu ft) can be stored in the frunk (front trunk) under the hood – a convenient place to stow smaller travel bags, for example.

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## **The exterior: sporty, progressive, and perfectly proportioned**

The Audi Q6 e-tron\* has perfect proportions and is a further evolution of Audi's e-tron design. In the car's bodywork, soft shapes are in constant interplay with the creases and edges, lending dynamism to the shadows even when stationary. The upright front with the completely closed and inverted Singleframe follows the design language specific to electric Audi models. The vertical design of the front end makes a powerful and confident impression. A mask in selenite silver or high-gloss black frames the highly three-dimensional grille and the side air intakes. The high-positioned daytime running lights give the Q6 e-tron\* a very striking and confident appearance.

The greenhouse stretches low and taut over the powerful body. It is slightly tapered towards the rear, and the gently sloping D-pillars flow elegantly into the bodywork's muscular shoulders. The continuation between the D-pillar and the roof makes the cabin appear more elongated and the vehicle more dynamic. A prominent line that extends from the rear lights to the rear doors emphasizes the upper section of the quattro blisters - the contours of the body on which the gently sloping D-pillars are supported. The blisters are a core element of Audi's design DNA. Audi calls this central design principle "making technology visible". Thanks to the taut and precisely drawn quattro blisters, the car embodies a certain dynamism even when stationary. The shape of the Audi Q6 e-tron\* is reminiscent of the Audi e-tron GT.

Its powerful and sporty stance, when stationary, is further emphasized by the strongly tucked-in and sills and aprons accented in black. The almost perfect proportions with short overhangs and long wheelbase support this design philosophy. The sill is set off in black, emphasizing the location of the battery. This is where the heart of the fully electric vehicle with 800-volt technology beats - and the Audi e-tron design places emission-free driving at the center of the styling.

The dynamically tapered rear creates a mixture of sporty elegance and power. The clean and large rear architecture with the continuous light strip gives the Audi Q6 e-tron\* the clarity and aplomb typical of Audi.

The exterior of the Audi Q6 e-tron\* is differentiated between an attractive entry-level variant and the S line variant. At market launch, up to eight exterior colors including the standard color magnetic gray solid as well as Manhattan gray metallic, glacier white metallic, stone red or mythos black metallic are available. They emphasize the powerful and progressive design of the exterior. Two shades of blue are available: plasma blue and Ascari blue. Daytona gray is reserved exclusively for the S line variant and the S model. The black pro styling package can be ordered as an option for the Q6 e-tron\* with S line or the SQ6 e-tron\*. It is characterized by black accents for even more elegance and sportiness.

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The package includes dark Audi rings at the front and rear, dark window trim, additional parts including the radiator grille in body color, black exterior mirror housings, black inserts in the inverted, closed Singleframe, and the front and rear bumpers. The interplay of exterior colors and exterior packages with contrasting paintwork in mythos black as standard or in body color on request offers plenty of scope for individualization.

The Audi SQ6 e-tron\* shows off its electric power in a sporty and elegant way. Silver-colored add-on parts set accents at the front and rear – an exclusive feature for the S models, as do the exterior mirror housings in an aluminum look. The horizontal blade at the rear also has an aluminum look, as do the elements in the side skirts and the Singleframe. The SQ6 e-tron\* comes with black 18-inch brake calipers with a diamond S logo and 20-inch wheels in a five-twin-spoke design in matt palladium as standard.

Speaking of the wheel range, the Audi Q6 e-tron\* starts with 18-inch ten-spoke wheels as standard and the 19-inch "5-double-spoke dynamic" wheel in graphite gray in the S Line. Wheels up to 21 inches are available as an option. In addition to the standard wheels of the respective Q6 e-tron models, there is a total of seven other different designs – from sporty to elegant – to choose from; four of these come from Audi Sport. The SQ6 e-tron\* starts with 20-inch wheels.

Whether magnetic grey or Ascari blue metallic, the two edition one models present the Audi Q6 e-tron\* with visual highlights: S line design, radiator grille in body color, 21-inch wheels, brake calipers in red, dimmed Matrix LED headlights plus, LED rear light pro, exterior package black. With the edition one grey, customers receive a key trimmed to match the car's color (magnetic grey or Ascari blue) and with the Audi rings on the back.

## Sporty performance: powerful drives

When developing the new electric motors, the focus was on a modular electric axle system with optimal acoustics, efficiency, and power density. Another goal of the development in this area was a scalable electric drive system with a high level of component integration. The completely newly developed modular drive system consists of three main components: electric motor, power electronics (pulse inverter), and transmission. All components are characterized by a higher degree of efficiency. They are more compact than the current electric models in the portfolio and have a scalable design. This means that the torque output can be varied by changing the length of the electric motor. The newly developed electric motors also require around 30 percent less installation space than those previously used in Audi's electrically powered models. The new design has also made it possible to reduce the weight by around 20 percent.

The particularly compact and efficient electric motors are [built in Győr, Hungary](#). The largest powertrain plant in the world not only manufactures the electric motors but also a large proportion of the gearboxes.

A key advantage of the newly developed electric motors is their efficiency. This is primarily thanks to a new hairpin winding in the stator, silicon carbide semiconductors in the pulse inverter, as well as dry sump lubrication and an electric oil pump in the transmission. The new hairpin winding, which is being used in the Q6 e-tron\* for the first time at Audi, maximizes the current flow in the stator of the electric motor. This method also enables a higher number of windings: The fill factor is now 60 percent instead of the 45 percent reached with the conventional windings used previously. Thanks to rotor oil cooling, Audi was also able to largely dispense with the use of heavy rare earths and, at the same time, increase the power density by 20 percent. In total, the losses of the electric drives have been significantly reduced by around 50 percent compared to the Audi e-tron.

The new direct cooling of the electric motors with oil keeps components such as the stator winding and permanent magnets in the rotor in the optimum temperature range. As a result, the power-to-weight performance of the PPE's electric drive is around 60 percent higher than that of the first-generation electric drives from Audi. The newly developed electric drives for the PPE are also characterized by particularly quiet and comfortable acoustics. This is due in part to unit supports cast onto the housing, a structurally optimized housing, improved tooth geometries, and segmented staggered rotors.

When maximum performance is needed, an asynchronous motor (ASM) on the front axle is activated. It is equipped with its own power electronics and an axle-parallel, two-stage 1-speed gearbox. If required, the ASM can rotate freely without significant drag losses. In addition, no magnets are installed in the ASM, and therefore, no rare earths. The magnetic field is generated by induction.

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On the rear axle, the Q6 e-tron series is equipped exclusively with particularly compact permanent-magnet synchronous motors (PSM), which are also coupled to a two-stage 1-speed gearbox with an axis-parallel design. The 800-volt technology used in the PPE not only offers high performance and short charging times. The higher voltage also means thinner cables can be used to wire the battery and electric motor. This saves installation space, weight, and raw materials. Another advantage of 800-volt technology is a reduction of heat loss and the resulting lower cooling requirements.

Thanks to the scalability and flexibility of the Premium Platform Electric, a wide range of different performance levels and drive variants can be realized. Two model variants with all-wheel drive and two different performance levels will be available at market launch: the Audi Q6 e-tron quattro\* and the Audi SQ6 e-tron\*. Particularly efficient models with rear-wheel drive designed for range will follow at a later date - depending on the market - and will also mark the entry into the Q6 e-tron series.

The Audi Q6 e-tron quattro\* has a permanent-magnet synchronous motor (PSM) on the rear axle and an asynchronous motor (ASM) on the front axle. The PSM in the Audi Q6 e-tron\* has an axial length of 200 millimeters (7.9 in). The ASM (asynchronous motor), which spins freely without any significant drag losses, is 100 millimeters (3.9 in) long. The system output is 285 kW (387 PS). The Q6 e-tron quattro\* accelerates from zero to 100 km/h (0-62 mph) in just 5.9 seconds (combined power consumption in kWh/100 km: 19.6-17.0 (WLTP); combined CO<sub>2</sub> emissions in g/km:0; CO<sub>2</sub> class A). Overall, the efficiency measures relating to the new electric motors for the PPE alone generate around 40 kilometers (25 mi) more range compared to the previous electric model portfolio. The newly developed electric motors for the PPE require around 30 percent less installation space than the units in the first-generation e-tron. The weight has been reduced by around 20 percent.

The Audi SQ6 e-tron\* (power consumption in kWh/100 km combined: 18.4-17.5 (WLTP); CO<sub>2</sub> emissions in g/km combined: 0; CO<sub>2</sub> class A) is characterized by a system output of 360 kW (380 kW with Launch Control). The PSM on the rear axle has an axial length of 200 millimeters (7.9 in) in the Audi SQ6 e-tron\*.

The S model has a maximum range of 598 kilometers (372 mi). In Launch Control mode, the SQ6 e-tron\* (combined power consumption in kWh/100 km: 18.4-17.5 (WLTP); combined CO<sub>2</sub> emissions in g/km: 0; CO<sub>2</sub> class A) reaches the 100 km/h mark in just 4.3 seconds. The power electronics have a significant influence on power consumption and consequently on efficiency and range. This is why semiconductors made of silicon carbide are being used for the first time in the PPE and, therefore, in the Audi Q6 e-tron\*. This material is extremely efficient, particularly under partial load, and heat losses can be kept to a minimum overall. The overall efficiency is improved. In addition, the use of silicon carbide protects the battery.

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## Benchmark range thanks to more powerful and smarter battery

The completely newly developed high-voltage battery (HV battery) is largely responsible for the longest electric range in the current Audi portfolio. With a range of up to 625 kilometers (388 *mi*) making it one of the models with the longest range in its segment, the Audi Q6 e-tron quattro\* is highly suitable for everyday use. The rear-wheel drive Audi Q6 e-tron performance\* has a range of up to 641 kilometers (398 *mi*). The three model variants Audi Q6 e-tron quattro\*, Audi Q6 e-tron performance\* and Audi SQ6 e-tron\* each have an HV battery with a gross storage capacity of 100 kWh (net 94.9 kWh). Compared to the battery systems previously used by Audi, the battery consists of just twelve modules with a total of 180 prismatic cells. The 15 cells per module are connected in series. For comparison, the HV battery in the Audi Q8 e-tron\* consists of 36 modules and 432 cells.

The significant increase in cell size corresponds almost perfectly to the 800-volt architecture in order to achieve the best possible compromise between range and charging performance. The ratio of nickel, cobalt, and manganese in the cells is 8:1:1, meaning the cobalt content has been reduced, and the nickel content, which is particularly relevant for energy density, has been increased.

The decision to reduce the number of modules in the PPE batteries has a number of advantages. As a result, the battery, which can be used modularly for high and flat floor models, requires less installation space, is lighter and can be better integrated into the vehicle's crash structure and cooling system. It also requires fewer cables and high-voltage connectors. The number of screw connections has been significantly reduced. In addition, the electrical connections between the modules are shorter, which significantly reduces power loss and weight. A cooling plate integrated into the battery housing ensures homogeneous heat transfer and, therefore, almost optimum conditioning of the battery.

The protective side skirts made of hot-formed steel are not attached to the battery but instead to the body for extra stability. Another new feature is the underbody protection made of fiber composite material. This design also reduces weight, protects the lithium-ion battery from damage, and improves the thermal insulation of the battery from the environment. In this way, the battery for the PPE can be cooled or heated more efficiently.

The central control unit specially developed for the PPE, the Battery Management Controller (BMCe), is responsible for the [current regulation](#) required for fast and battery-friendly charging. The BMCe, the "electrical control center," is fully integrated into the HV battery.

As part of permanent monitoring, the twelve Cell Module Controllers (CMC) send data such as the current module temperature or cell voltage to the BMCe, which sends its information, for example, regarding the State of Charge (SoC), to the high-performance computer HCP4 (part of the new electronic architecture E<sup>3</sup> 1.2).

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This computer, in turn, sends the data to the new predictive thermal management system, which regulates cooling or heating as required for optimum battery performance.

The [high-voltage batteries are assembled in Ingolstadt](#). “With battery assembly, we are increasing vertical integration and bringing important skills to the site,” says Gerd Walker, Member of the Board of Management for Production. And Xavier Ros, Member of the Board of Management for Human Resources adds: “At the same time, we are creating new job opportunities at our sites because a successful transformation can only work together with the staff. This change is only possible thanks to Audi employees who are continuing to gain further qualifications and reinvent themselves professionally.” Audi has so far trained 8,300 employees from Production, Technical Development, and Sales in Ingolstadt for the launch of the Q6 e-tron model series. Numerous experts were also trained for electrification at the Hungarian site in Győr. In total, AUDI AG has invested more than 250 million euros in the training and development of its employees over the past two years. “As we are switching to electric mobility, we are relying on our existing plants and renewing ourselves from the inside out. This is sustainability in action, in social, ecological, and economic terms,” says Walker, Member of the Board of Management for Production.

## More efficient cooling and heating

Cooling the drivetrain components is crucial for power output and charging performance. This is handled efficiently and with low energy consumption using the ambient air. The coolant lowers the temperature of the high-voltage battery, the electric motors, and the power electronics. At higher ambient temperatures, the battery, as a particularly heat-sensitive part of the drivetrain, can also be cooled by the refrigerant circuit. A heat exchanger is used for cooling via the refrigerant circuit. It transfers the heat between the refrigerant circuit and the battery circuit, a dedicated part of the coolant circuit, and thus lowers the temperature of the coolant.

The air heat pump in the Q6 e-tron\* ensures greater comfort and range. It works thanks to the increased efficiency in the drivetrain, which leads to lower heat losses, i.e., less waste heat is generated. To compensate for this effect, an air heat pump was added to the water-glycol heat pump. This means that in addition to the waste heat in the coolant of the electric motors, power electronics and battery, the ambient air can also be used as a heating source for the interior. The temperature exchange now takes place via a heating element, which supplies the heat directly to the interior of the vehicle. As an effective addition, an 800-volt air PTC heater was also developed to support interior temperature control in the event of increased heating requirements. In this way, heat losses are avoided, such as those that occur with water-led heating circuits. Another positive aspect of direct heating of the interior via the air circuit is the rapid heat-up/response behavior and thus a noticeable increase in comfort for the customer, both in terms of increasing the temperature of the interior in a shorter time and clearing the windscreen of condensation, snow, or ice.

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## Impressive charging performance

Another key component of the product experience is the charging performance of the Audi Q6 e-tron\*. Sophisticated thermal management of the high-voltage battery, the 800-volt electrical system, and its ecosystem make charging a convenient all-round carefree experience. The Audi Q6 e-tron\* only needs ten minutes at a fast-charging station to generate a range of up to 255 kilometers (158 mi) under ideal conditions with a maximum charging capacity of up to 270 kW. Only 21 minutes are needed to charge the high-voltage battery from 10 to 80 percent. The Audi Q6 e-tron\* is the first vehicle to offer bank charging on charging station that work with 400-volt technology. The 800-volt battery is automatically divided into two batteries at equal voltage, which can then be charged in parallel with up to 135 kW. Depending on the state of charge, both halves of the battery are first equalized and then charged together. A new integrated cooling plate with U-Flow architecture ensures homogeneous heat transfer and temperature distribution.

The charging current limitation is always based on the warmest cells. The Audi Q6 e-tron\* charges at an AC charging station or home charger with up to 11 kW as standard. This fills an empty battery overnight. Audi will offer AC charging with 22 kW as an option at a later date. The charging inlet can be opened electrically via the MMI display or on the cap itself. Once the charging cable has been disconnected, the inlet closes automatically. In addition, all drivers of fully electric Audi models benefit from the [Audi charging](#) service and, last but not least, from the increasingly dense network of the [Audi charging hub](#) inner-city fast-charging concept.

The charging management supports the international charging standard CCS (Combined Charging System). The HCP5 high-performance computer ensures fast and reliable charging processes as part of the new domain computer structure of the E<sup>3</sup> 1.2 electronic architecture. A communication control device, the Smart Actuator Charging Interface Device (SACID), establishes a connection between the charging socket and the charging station as an interface and forwards the incoming standardized information to the HCP5 domain computer.

For the PPE models, Audi provides DC and AC charging options for the European market via a standard CCS Combo inlet on the rear left of the vehicle. An additional AC charging inlet is installed on the opposite side of the vehicle. The standard equipment of the Q6 e-tron series includes the familiar Plug & Charge function. At compatible charging stations, the vehicle authorizes itself when the charging cable is plugged in and begins the charging process. Charging is fully automatic.

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## Intelligent calculation: the e-tron route planner

The e-tron route planner, a service from Audi connect, calculates the fastest route with the shortest possible charging stops. This is based on the total journey time, i.e., driving time and charging time, taking into account forecasts about the traffic situation and the occupancy of the charging points. In any case, it plans the sections between charging stops in such a way that drivers reach their destination as quickly as possible - to this end, it may recommend two short charging stops with high power instead of one long, slow charging stop. The list of charging points is updated daily.

The route planner can be conveniently used either in the vehicle or in advance of the journey via the myAudi app. Users receive information such as charging capacity or charging connections and plug type for the respective charging points. The system also shows dynamic availability, such as whether charging points are free or occupied. Alternative routes with better charging infrastructure are also taken into account when calculating the optimum total journey time. The daily updated data includes detailed information such as payment and authentication options, precise operator data, and any access restrictions. The e-tron route planner preferentially selects high-performance HPC charging stations.

## Efficient interaction between recuperation and friction brake

Recuperation is an important component in increasing the efficiency and, therefore, the range of the Audi Q6 e-tron\*. During development, particular focus was therefore placed on increasing maximum efficiency and availability during standstill blending at low speeds. This means that in the Audi Q6 e-tron\*, around 95 percent of all everyday braking processes can be covered by regenerative braking, i.e., by the electric motors. The use of the friction brake during brake blending thus takes place later or less frequently. Under ideal conditions, the Audi Q6 e-tron\* recuperates up to 220 kW. The temperature and state of charge of the battery play a key role here. Recuperation takes place on the front and rear axles, with smaller decelerations handled by the rear axle alone for reasons of efficiency. Higher recuperation rates are possible on the rear axle.

In the PPE, regenerative braking is no longer handled by the brake control system, but by the HCP1 - one of the five high-performance computers - which is responsible for the powertrain and chassis in the PPE. This increases the influence of the powertrain on the braking system. The Intelligent Brake System (IBS) familiar from previous e-tron models has been significantly enhanced as part of the Premium Platform Electric. Axle-specific brake blending as described above is now possible for the first time.

During regenerative braking, the system decides on an axle-specific basis whether the use of the friction brake is necessary or whether recuperation via the electric motors is sufficient. As soon as the driver presses the brake pedal, energy recuperation takes place on the rear axle in the first step. If the driver brakes harder, the front axle also recuperates. If the brake pedal is applied even harder, the front friction brakes are added first. If the braking power is increased even further, up to the use of ABS, the rear brakes provide support. Even in situations when ABS is applied, the electric motors continue to recuperate with the same power. The transition from regenerative braking and recuperation via the electric motors to the mechanical braking effect via the hydraulically actuated friction brake is imperceptible to the driver. The brake blending ensures a well-dosed pedal feel with a clearly defined, constant pressure point.

As is typical for Audi, there is the option of two-stage coasting recuperation, adjustable via the paddles on the steering wheel with a deceleration of up to 1.5 m/s<sup>2</sup>. Furthermore, particularly efficient coasting is also possible. Here, the electric SUV rolls freely without any additional drag when the foot is taken off the accelerator pedal. Another variant available in the Audi Q6 e-tron model series is drive mode “B”, which comes very close to what is colloquially called the “one-pedal feeling”. If the driver selects the automatic function in the MMI, the vehicle automatically recuperates energy where appropriate. Parameters used include route data stored in the navigation system, such as gradients, curve radii, town signs or speed limits. Another important factor is the traffic ahead.

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A number of components are integrated into the recuperation processes: the two electric motors, the HCP5 and HCP1 computers, the long-range radar and the front camera for Adaptive Cruise Control to scan the traffic ahead, the Intelligent Brake Control System (IBS) for brake control and blending, i.e. the transition between the friction brake and the regenerative braking, and the HCP3 so that the amount recuperated power is displayed to the driver on the Audi Virtual Cockpit.

The Q6 e tron\* is also equipped with an electronic brake control system. The technology combines brake boosting and ABS/ESC control functions in a single system. Generously dimensioned brakes with internally ventilated steel brake discs achieve outstanding deceleration. They have four-piston fixed brake callipers (six pistons on the S model) on the front axle and single-piston floating callipers with electromechanical parking brake on the rear axle. The brake callipers are optimized for braking to a stop at low speeds. Special springs support the quick and complete opening of the brake pads. Brake pad wear detection on the right-hand side of the vehicle is standard, as is the electromechanical parking brake.

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## World first in lighting technology

With the Q6 e-tron\*, Audi is not only starting a new chapter in electric mobility but also in an important part of Audi's DNA: lighting technology. With the world's first active digital light signature, the Audi Q6 e-tron\* ushers in a new era characterized by design and aesthetics that are unique to Audi.

The second generation of innovative digital OLED technology not only shapes the appearance of new Audi models but also increases the range of functions many times over. This further benefits road safety, as the communication light of the digital OLED rear lights 2.0 impressively demonstrates. Customization also reaches new standards in the Audi Q6 e-tron\*:

With - depending on the equipment - up to eight digital light signatures in the redesigned daytime running lights of the Matrix LED headlights and in the digital OLED rear lights 2.0, customers can customize the appearance of their Q6 e-tron\* like never before. Six further signatures with Coming Home and Leaving Home staging coordinated with the respective digital light signature are available as optional packages. This is possible via the MMI and, for the first time, via the myAudi app. The digital light signatures and Matrix LED functions can also be added for the LED headlights plus after the vehicle has been purchased.

### **Signature and movement come together for the first time: the active digital light signature**

Headlights and rear lights that look alive at first glance: this is how customers can imagine the active digital light signature, a world first from the Four Rings. They are part of the optional digital light signature package. "In the Audi Q6 e-tron\*, we are designing not only the shape of the light but also its entire movement for the first time in a series-production vehicle. Thanks to the perfect symbiosis between our lighting design and new technology, the light in the new Audi Q6 e-tron\* appears more lively and intelligent than ever before. We have given the light signature its own personality and at the same time given the digital world its own aesthetic," explains César Muntada, Head of Lighting Design. "With the world premiere of the active digital light signature, the Q6 e-tron model series is ushering in a new era, characterized by unique design and aesthetics that only Audi can offer."

A software module in one of the domain computers of the Audi Q6 e-tron\* makes this form of light signature possible. In the case of the second-generation digital OLED rear lights, six OLED panels with a total of 360 segments generate a new image every ten milliseconds using a specially developed algorithm. In this way, the active digital light signature conveys the liveliness and personal interaction of the car by making the "brain activity" of the Q6 e-tron\* visible through constant movement. At the front, the active digital light signature is created by the interaction of the algorithm with twelve segments that dim up and down. At the rear, all digital OLED segments are used for this purpose. The individual light segments interact in such a way that the overall brightness of the light signature does not vary.

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## **The second generation of digital OLED technology**

"Audi recognized the potential for the use of OLED technology in rear lights early on and is the only car manufacturer to consistently develop and digitalize this lighting technology. As a result, we can now offer our customers a constant stream of new lighting functions," says Stephan Berlitz, Head of Lighting Development, making it clear that there is a strategy behind the use of this technology. "Digital OLEDs are more efficient, lighter, and more homogeneous than conventional lighting systems," he continues, offering a glimpse into the future: "Thanks to their high contrast, they will gradually become exterior displays and thus an essential enabler for communication with the surroundings. With the proximity detection function, we have been interacting with other road users through light since 2020. In the Audi Q6 e-tron\*, the communication light has now been added to further increase safety."

## **The second-generation digital OLED combination rear lights in detail**

With the next generation of digital OLEDs in the rear lights of the Audi Q6 e-tron\*, Audi is significantly expanding the range of functions, the degree of freedom in design, and, above all, safety for road users. For the first time, the digital OLED rear lights can communicate with the immediate surroundings (car-to-x). The number of segments per digital OLED panel has increased from six to 60 over the first generation. In total, six OLED panels with a total of 360 segments are used in the rear lights of the Q6 e-tron\*. The new E<sup>3</sup> 1.2 electronic architecture makes it possible to control this significantly increased number of segments via a dedicated software module on one of the domain computers. The steady increase in the number of segments per digital OLED panel will enable the combination rear light to be developed into a display that further improves car-to-x communication and road safety.

The innovative digital OLED technology not only creates the conditions for a completely new rear light design but also ensures unique homogeneity and very high contrast in the display. A further advantage: The surface light source does not require any additional reflectors, light guides, or other optics and is, therefore, very efficient. Together, these properties allow engineers and designers to finally break down the boundaries between two- and three-dimensionality in design: The Four Rings create three-dimensional shapes on two-dimensional surfaces. In addition to an expressively integrated LED light strip at the rear, 3D glass creates a successful separation between the rear light signature and the other lighting functions.

Audi is also taking an innovative approach at the front of the vehicle. The next generation of digital daytime running lights and the light modules are now arranged separately from each other, which creates more clarity in the design. The designers have created the individual LEDs of the new evolutionary stage in digital daytime running lights - 70 in total - as transparent 3D objects. The front section of the digital daytime running light is fitted with a precise prismatic structure, while metalized 3D trim surrounds the daytime running light to draw the viewer's focus to the vehicle's digital eyes.

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## **More safety thanks to intelligent headlights and rear lights**

Audi has also taken the safety functions to a new level. The proximity detection system already familiar from other Audi models has been expanded to include the communication light in the Audi Q6 e-tron\*. It warns other road users of accidents and breakdowns. For this purpose, the communication light displays a specific static rear light signature with integrated warning symbols in the digital OLED combination rear light alongside the regular rear light graphics in critical driving or traffic situations. This assistance system not only supports Audi drivers but also all other road users. As with the extended traffic information, which warns of accidents or dangerous situations in the Audi A8 thanks to digitalized headlights, the communication light also draws its data from the swarm.

In addition, the second generation of digital OLED rear lights activates the communication light with warning symbols for Emergency Assist, for the RECAS (Rear-end collision alert signal), when the hazard warning flashes, during an emergency call (eCall), during a breakdown call, and when the emergency stop lights are flashing.

The communication light also gives the exit warning system an additional dimension. Previously, it only informed the occupants of the vehicle when they got out, for example, when other road users were approaching. The warning symbol of the communication light, which lights up within the rear light graphic, now also warns road users approaching from the rear. The Audi Q6 e-tron\* thus integrates others into its safety concept and increases road safety for everyone.

The communication light also uses a specific light signature at the front and rear to indicate the status of the vehicle's parking assistant when it is in an automated parking process. This makes it clear to road users in the immediate vicinity that the vehicle is in a safe state.

## **A new level of freedom: the digital light signatures in the MMI and the myAudi app**

With eight digital light signatures for the Matrix LED headlights and the digital OLED rear lights 2.0, drivers can personalize their Q6 e-tron\* in a completely new way. There are two options for selecting a signature. One is directly in the vehicle via the MMI, while a second one via the myAudi app will come later. A specially designed Coming Home and Leaving Home scenario is available for each digital light signature when leaving and unlocking the vehicle.

When using the myAudi app, customers can activate their personal light signatures from outside the vehicle and also experience the dynamic light staging directly on the vehicle, as well as the precisely tailored Coming Home and Leaving Home functions. The same applies to the communication light of the second-generation digital OLED rear lights and the proximity detection function. On request, the Matrix LED headlights can provide a live demonstration of the sign glare suppression and object masking features.

To enable customers to personalize their Q6 e-tron\* to an even greater extent, they can also add the digital light signature package to the LED headlights plus via Functions on Demand (FoD) after purchasing the vehicle, either permanently or only for a specified time.

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The Matrix LED headlights and the digital OLED rear lights have eight digital light signatures as standard, allowing the Q6 e-tron\* to be customized according to personal preferences. It is also possible to book the high beam assistant and the matrix package via functions on demand.

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## Experience digitalization - new display and operating concept

With the new electronic architecture E<sup>3</sup> 1.2, customers experience digitalization in the vehicle more directly than ever before. For example, the Audi Q6 e-tron model series has a fully networked digital interior thanks to it. Above the Soft Wrap, the digital stage with the Audi MMI panoramic display and the MMI passenger display characterizes the interior. The clearly grouped displays are perfectly integrated into the design concept and give the interior a generous and airy feeling of space. The slim, free-standing Audi MMI panoramic display has a curved design and OLED technology and consists of the 11.9-inch Audi virtual cockpit and the 14.5-inch MMI touch display. The driver's area is designed as a curve and the display with its concave shape is oriented towards the driver. The shape of the curved display is also reminiscent of the single frame characteristic for Audi. Special ambient lighting makes the Curved Display seem to float at night. Audi complements the digital stage consistently and individually for the front passengers with the 10.9-inch MMI front passenger display, which is also perfectly integrated into the dashboard design and is being used for the first time at Audi - and in the premium mid-size segment. The display has a reduced layout with eight large tiles and a list on the left with various functions, such as quick access. Thanks to Active Privacy Mode, the person in the front passenger seat can enjoy entertainment content, such as watching movies or streaming series, while moving without distracting the driver. Depending on the content, current speed, and seat occupancy, the light is directed (privacy mode on) or diffused (content visible to all) via an intelligent control unit.

In addition to infotainment applications, the display also gives passengers the option of assisting the driver with navigation tasks or finding a parking space, for example. If the passenger display is not being used or if no passenger is recognized, a digital décor is shown as a background image.

With the optional second-generation augmented reality head-up display (AR HuD), another central element of the digital stage, Audi is taking a major step forward in display technology. The display reflects a large tilted image plane towards the driver via the windshield and shows relevant information such as speed, traffic signs, assistance, and navigation symbols. The image plane is tilted forward to enhance the augmented reality effect. The focus of the human eye moves with it. This process and the large virtual image distance create the impression that the elements shown are floating at a distance of up to 200 meters (660 ft) and interact directly with elements in the environment. The displays, such as navigation instructions, driver assistance system displays, or music tracks, can be seen quickly without irritating or distracting the driver. They are particularly helpful in poor visibility conditions.

The field of view for the augmented reality content corresponds to a diagonal of around 88 inches from the driver's perspective and is based on a new digital light processor with a better sensor and data quality and around

1.3 million micromirrors. Drivers look at a display through several mirrors, comparable to looking at a smartphone.

In addition to the improved and more intuitive touch operation, the new display operating concept also takes account of global trends towards interaction. Voice control, for example, has been significantly expanded and now plays a key role. Audi's self-learning voice assistant, the Audi Assistant, can be used to control numerous vehicle functions. The digital assistant with AI support is deeply integrated into the vehicle and is shown for the first time using an avatar in the central touch display of the MMI and the augmented reality head-up display. The new voice assistant recognizes more than 800 voice commands. This means that functions such as vehicle, entertainment, or driving-related tasks can be controlled as required. In addition, conversations can be held, indirect commands can be issued (such as "I have cold feet"), or "multi-intent" commands can be given such as "Set the temperature to 22 degrees and call Peter."

The assistant is activated by saying "Hey Audi". It can also be triggered at various touchpoints and, at a later date, via the myAudi app. With the new display and operating concept, a search for the nearest charging station can be started via voice dialog, and a selection can be made from the list, which is pre-sorted using AI, by touch. Passengers can also use the Audi Assistant. With the help of the microphone module in the roof, the control unit for information electronics recognizes who is entering a command. This allows the system to control whether commands are relevant. The passenger can only control functions that are relevant to them - for example, the seat heating, climate settings, or the power windows on the passenger side, while the driver can control all possible systems.

The spoken commands are also displayed in the Audi virtual cockpit ("See what you speak" principle). The interaction light also provides visualization. The intelligent assistant is presented in the Audi Assistant Dashboard, providing proactive tips and inviting you to discover the system's possibilities.

The assistant continuously learns from user behavior and thus supports the driver. This support is divided into three categories: proactive suggestions (context information is used to proactively suggest functions for activation based on this data), smart routines (automatically recognizes recurring operating sequences, such as using the seat climate control from certain outside temperatures) and intelligent lists (such as call lists).

Vehicles like the Q6 e-tron\* and future models featuring the E<sup>3</sup> 1.2 receive ChatGPT as an extension to the Audi assistant. Passengers can activate the assistant by saying "Hey Audi" or using the push to talk button on the steering wheel and asking their question. The Audi assistant automatically recognizes whether a vehicle function is to be executed, a destination is to be searched for or, for example, the weather report is to be accessed. Only if the Audi system is unable to answer the request is it forwarded anonymously to ChatGPT. This is seamless for drivers, as all functions are integrated into the Audi assistant.

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ChatGPT does not receive any access to vehicle data. Questions and answers are deleted within 30 days in accordance with data protection regulations. This is made possible by the Cerence Chat Pro service from Cerence, which uses a variety of sources, including ChatGPT.

The new electronic architecture and the new display/operating concept are accompanied by a completely new MMI design. The Graphical User Interface (GUI) can be adapted to personal preferences and also adapts to the ambient light settings and the selected drive select mode.

### **Interaction light stages the interior**

The dynamic interaction light (IAL) offers a variety of communication functions and thus supports the interaction of the car with the occupants - a kind of communication at eye level. It spans the interior and cockpit by means of a wide arc. The light strip contains 84 LEDs. It shines with a brightness of up to 1,200 candela.

The interaction light fulfills three central functions: To showcase the interior, for example, it provides a welcome function and indicates when the vehicle is locked and unlocked. Secondly, it supports in the matter of safety: for example, the feature visualizes the dynamic indicator light. However, the IAL always remains an additional display and does not replace a blinker symbol in the Audi virtual cockpit. Thirdly, it provides information such as the visualization of the charge level indicator and the charging process. This is represented by a pulsating light. The dynamic interaction light is part of the ambient lighting package plus and appears in the same color as the contour light when inactive.

## **Infotainment - a new experience of digitalization**

The new infotainment system uses Android Automotive OS as its operating system for the first time and comes with the latest Audi connect services and the enhanced e-tron route planner. Well-known apps such as YouTube are available via the store for third-party apps, which is integrated directly into the MMI and does not require a smartphone to use. Apps such as YouTube are available via the store, which is integrated directly into the MMI and does not require a smartphone to use.

The store gives customers access to a wide range of apps that can be loaded directly into the MMI independently of the smartphone. Applications from the following categories are available to start with: Music, Video, Gaming, Navigation, Parking & Charging, Productivity, Weather, and News Services. The "Music" category includes apps such as Amazon Music and Spotify. The store is constantly being expanded, and the app portfolio is market-specific. It can be selected via a separate tile in the MMI. The additional apps are then seamlessly integrated into the MMI and can, therefore, also be used safely and reliably while driving. The app portfolio is market-specific. The familiar Audi smartphone interface for integrating Apple CarPlay and Android Auto is also on board the Audi Q6 e-tron\*.

### **Sound systems for maximum acoustic precision**

The optional Bang & Olufsen Premium Sound System with 3D sound gives the Audi Q6 e-tron\* maximum acoustic precision. A small loudspeaker in each A-pillar reproduces the spatial dimension of the height; the windshield reflects the sound. The music unfolds exactly as it was recorded - for an impressive, natural sound experience. At the heart of the Bang & Olufsen Premium Sound System is a highly efficient amplifier. It drives 20 loudspeakers with 830 watts of power. Four of these are integrated into the headrests of the front seats, making so-called sound zones possible for the first time at Audi. These can be personalized or specifically controlled for navigation announcements.

The bass speakers in the front doors are located in a separate housing. This results in less vibration of neighboring parts and ensures great precision in sound reproduction. This improves the sound quality and reduces sound propagation to the outside. The decoupling of the loudspeaker also ensures precise and voluminous bass. Illuminated lettering also showcases the sound system at night. Compared to the Audi sound system, the Bang & Olufsen system features Vehicle Noise Compensation (VNC), which compensates for interior noise by adjusting the corresponding sound frequencies.

For the first time, the Audi Q6 e-tron\* offers the option of booking sound features "on demand". This, in turn, contains three individual functions. A "bass booster", MP3 enhancement," and "automatic level adjustment." The "Bass Booster" creates a bass experience via the built-in woofers for systems without a subwoofer. In this way, the Bang & Olufsen Sound System generates a slightly stronger bass. "MP3 Enhancement" improves the sound experience with poor MP3 quality.

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With “automatic level adjustment,” the system adjusts the output volume of different sources so that the volume does not change when a radio station is automatically switched from DAB to FM.

Another Functions-on-Demand activation is called “Virtual Rooms.” This uses an algorithm developed by the Fraunhofer Institute to recreate the spatial sound of different environments. The function offers different rooms such as “Elbphilharmonie” or “Living Room.”

### **Even more convenience with digital keys**

With the digital key for the Q6 e-tron\*, compatible devices handle opening and locking doors, as well as authorizing the engine to start. Up to five digital keys can be conveniently assigned and equipped with different permissions. Modern encryption and transmission technologies in the vehicle and on the mobile device ensure a high level of security. The digital key on the smartphone offers all the functionalities of the familiar convenience key and frees drivers from having to carry additional hardware in addition to their smartphone. Each digital key can be used on at least two devices. The functionality is also similar to the convenience key: For example, with support for digital keys in Apple Wallet, Q6 e-tron drivers can lock, unlock, and start their vehicle by simply having their iPhone or Apple Watch nearby, such as in their pocket or bag. The digital key remains active for up to five hours even after the iPhone battery runs out.

Once set up, the digital key is stored on the secure element of the mobile device. The smartphone then communicates with the corresponding antennas in the vehicle via ultra-wideband (UWB), Bluetooth Low Energy (BLE) or near-field communication (NFC). The driver authorization system thus recognizes the smartphone when it is in the immediate vicinity of the car or in the interior. Neither the cell phone nor the vehicle need to be online to open, start or lock the car. If the smartphone battery runs out, all functions of the digital key can be used for a certain period of time via NFC.

To prevent remote relay attacks, the ultra-wideband (UWB) antennas in and on the car precisely measure the time it takes for a signal to travel from the antenna to the receiving digital key and back, in order to determine the exact location of people near the vehicle. A pre-defined time limit ensures that any tampering is detected immediately. The authentication range is limited to a maximum of two meters (6.5 ft).

The digital key is only available in conjunction with a phone tray with inductive charging, compatible devices and convenience key and in countries where Audi connect is available. The availability of the digital key also depends on the country. Customers can check in the myAudi app whether their own smartphone is compatible. To assign the digital key to a vehicle, an activated and verified myAudi account is required for the main user of the vehicle.

CARIAD has developed its own platform-independent software for the digital key based on the industry standard CCC (Car Connectivity Consortium). It is optimally adapted to the hardware in the vehicle and the connection to the cloud. The vehicle software for the digital key accesses two high-performance computers of the E<sup>3</sup> 1.2 electronic architecture: the HCP4 for storage and

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authentication and HCP5, the computer for controlling all data streams for the connection to the cloud.

## **Optimized driving dynamics thanks to new front axle, steering and drive torque distribution**

Most of the systems and components belonging to the chassis of the Q6 e-tron model series are new developments. Experts tune them in line with the familiar Audi DNA in order to create a high level of emotionality and the premium experience typical of Audi.

The newly designed front axle has a significant influence on the driving dynamics of the Audi Q6 e-tron\*. For the first time in an Audi model, the control arms are arranged in front of the suspension arms in the direction of travel. In addition to the advantages in terms of driving dynamics via the axle kinematics, this results in an improved package benefiting the position of the high-voltage battery. The refined axle kinematics provide noticeably more driving dynamics and also improve the steering behavior. The steering rack is now firmly bolted to the subframe. This makes the vehicle significantly more agile. The design of the steering and its control by means of new software modules in conjunction with the new front axle enable agile handling and provide the driver with significantly improved feedback on the current driving and road conditions at all times via the steering wheel.

The rear tires of the Audi Q6 e-tron\* are wider than the front tires - for even more grip and driving dynamics. The rear-biased power delivery with a highly variable all-wheel drive torque distribution also enhances the driving dynamics of the Audi Q6 e-tron\*. The different dimensions of the electric motors on the front and rear axles enable rear-biased torque distribution even under full load.

With the new passive damping system FSD (Frequency Selective Damping), the Audi Q6 e-tron\* grips the road even more firmly. Less damping is required to offer greater ride comfort in certain driving situations, for example on cobblestones. During dynamic driving maneuvers, the system adapts accordingly and thus controls the movement of the vehicle's body. The adaptive air suspension - the air suspension with controlled damping - compensates for the load via the level control and thus ensures the vehicle remains level under different load conditions.

The HCP1 regulates the operation of the dampers individually for each wheel every millisecond - depending on the road conditions, the driving style and the mode selected in the Audi drive select dynamic handling system. Electromagnetic damper valves control the flow of the hydraulic fluid. The optional electronically controlled adaptive air suspension with continuously adjustable damping system on all four wheels automatically regulates the vehicle height and damping. This gives the electric SUV a very high level of ride comfort on the one hand, but also offers enhanced driving dynamics on the other.

Various modes, including level control and manual lift function on all four wheels and lowering function on the rear axle, are set via Audi drive select. Depending on the mode selected, the air suspension is lowered by up to 20 millimeters (0.8 in) depending on the speed.

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In off-road mode, the air suspension is raised by up to 28 millimeters (1.1 in). Up to 45 millimeters (1.8 in) are possible using the lift function. The ability to lower the rear (minus 50 millimeters (2 in) at the rear axle, activated by a button in the luggage compartment) makes access to the luggage compartment and coupling a trailer easier. The normal level of the adaptive air suspension is 28 millimeters (1.1 in) lower than the standard comfort suspension.

### **Always ready to assist - the driver assistance systems**

As far as the driver assistance systems of the new Audi Q6 e-tron\* are concerned, Audi provides a wide range of functions that significantly improve everyday driving and road safety for all road users. A first for the Audi Q6 e-tron\* is the **adaptive driving assistant plus**. This supports the driver when accelerating, braking, maintaining speed and the set distance from the vehicle in front, as well as with lane guidance. This can increase driving comfort, especially on long journeys. The system uses various sensors to permanently monitor the vehicle's surroundings. These include the radar sensor installed in the front of the vehicle, the front camera, and the ultrasonic sensors. Depending on the region, high-resolution map data and swarm data from other vehicles calculated in the cloud are also used to improve driving behavior. From a fusion of this information, the vehicle calculates the route ahead and guides the vehicle comfortably and in the center of the lane by means of supportive steering interventions. At the same time, the system reacts to vehicles joining the same lane in front and regulates the distance to them. It also anticipates and adapts the vehicle speed to speed limits and situations such as bends, junctions, traffic circles and ramps (highway entrances and exits). In stop-and-go traffic, the system slows the car to a standstill and can automatically set off again depending on how long the vehicle has been stationary. At stop signs, the speed is reduced to comfortably allow the driver to take over the situation. Thanks to the large number of parameters included, the adaptive driving assistant offers the most comfortable driving experience possible across the entire speed range and in traffic jam situations. Functional content may vary depending on country availability and vehicle configuration.

In addition to the above-mentioned standard features, customers in Germany and Europe receive further functions such as exit warning, lane change warning, rear cross traffic assist, rear turn assist. Traffic sign recognition and the traffic sign-based speed limiter are also standard due to GSR and EuroNCAP.

Customers have the option of further assistance systems within various equipment packages as well as an assistance package protection and warning systems plus. The tech equipment package offers attractive features that increase comfort and digital connectivity. Selected assistance systems, such as adaptive cruise control, support the driver by maintaining the set speed and the distance to the vehicle in front. Highlights include the LED headlights plus and the Driving and Parking assistance package with surround-view camera. Tech plus includes new and proven features for more driving enjoyment, safety, and comfort. Highlights include the Matrix LED headlights and the MMI passenger display. The Tech pro package includes the adaptive air suspension and the Adaptive Driving Assistant plus described above.

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In addition, customers also get relief and comfort in everyday parking situations, as the **parking assistant plus** helps them to park and unpark the Q6 e-tron\*. The electric SUV takes care of steering, accelerating, braking, and shutting off the motors. Park Assist plus is activated via the MMI; users must constantly monitor the parking process so that the Q6 e-tron\* brakes when obstacles are detected within the system limits. If obstacles are detected within the system limits, the system brakes automatically. The system can park and unpark in parallel and perpendicular parking spaces between vehicles both forwards and backwards. With the four optional surround cameras, the Q6 e-tron\* offers a comprehensive view of the vehicle's surroundings, making it easier to park and maneuver even in tight parking spaces or driveways.

The **emergency assistant** increases safety by recognizing when drivers are inactive within the system limits. If the driver is inactive, the assistant reacts visually, acoustically, and haptically with brake jolts and switches on the hazard warning lights. If there is no reaction from the driver, the system keeps the Q6 e-tron\* in its own lane and automatically brings the vehicle to a standstill. The occupant protection measures, such as tightening the seat belts to optimize the seating position, are gradually activated. After coming to a standstill, the Q6 e-tron is prepared for the rescue of the people sitting in the vehicle and an automatic emergency call is made by the emergency assistant, depending on the country.

The **front turn assist** can prevent a collision with an oncoming vehicle at speeds of up to 25 km/h by applying the brakes. The assistant is activated when the driver switches on the turn signal. The turning assistant monitors the oncoming lane and applies the brakes if necessary. The driver is informed in the instrument cluster. The same applies to the rear turning assistant: This also provides support when turning into junctions, slip lanes or entrances to yards and garages by warning of cyclists or drivers approaching from behind. Upon detection, a display lights up in the respective exterior mirror. When leaving a parallel parking space, the Rear Turn Assist also operates from a standstill.

The **swerve assist** helps to avoid an obstacle. If the driver does not actively avoid the obstacle after an acute warning, the evasion assist in the Q6 e-tron\* provides support by selectively braking and applying a small amount of steering torque to correct the steering angle. The swerve assist is available in the speed range between 30 and 150 km/h and requires active steering during the entire maneuver.

In critical situations, the front **emergency brake assist** provides significant support. If a child suddenly runs into the road or the vehicle in front brakes abruptly, the Q6 e-tron\* also brakes automatically. The SUV detects pedestrians in a speed range of up to around 85 km/h and vehicles up to its maximum speed. If an imminent head-on collision is detected, the system warns the driver visually, acoustically and haptically in a multi-stage concept and, if necessary, applies brake assist or emergency braking to reduce speed or avoid the collision.

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The **cross traffic assist at the front** detects critical cross traffic in front of the Q6 e-tron\* and warns the driver visually and acoustically. Up to a speed of 10 km/h, it triggers a short brake jolt if necessary. Cross Traffic Assist Crossing Assist is active up to a speed of 30 km/h. The parking button can be activated if the driver wants to approach a junction or exit that is difficult to see at low speed. This transmits the images from the surround-view cameras to the 14.5-inch MMI touch display. They significantly expand the field of vision. Drivers can choose between different views.

The **rear cross traffic assist** can warn of a possible collision with approaching cross traffic when reversing. The system uses the radar sensors to monitor the area to the rear and side of the vehicle within the system limits when reversing out of a parking space. Approaching moving objects such as cars and cyclists are detected. The system warns the driver visually in the parking view in the center display and can also give an acoustic warning when reversing and, in situations recognized as particularly critical, can also apply the brakes.

The **exit warning** warns of a possible collision with detected traffic approaching from behind when the door is opened while the vehicle is stationary. The system uses radar sensors to monitor the rear and side of the vehicle within the system limits. Moving objects approaching from behind, such as cars and cyclists, are detected. If the door opening lever is pulled and another road user classified as critical is approaching, the warning strip in the door and the LED display on the exterior mirror on the affected side light up. At the same time, the opening of the door is briefly delayed and an acoustic warning signal is emitted.

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## **PPE: Variable platform offers numerous possibilities**

The Audi Q6 e-tron\*, the first fully electric model on the Premium Platform Electric, symbolizes the next stage in the company's ongoing transformation towards electric mobility and sustainability. The PPE makes it possible to launch high-volume models with high technical standards in different segments and thus electrify the portfolio. The flexibility of the PPE helps to give future models an independent character and the typical Audi DNA. The architecture is scalable so that both high- and low-floor vehicles, i.e., SUVs, wagons, and sedans, can be built within a model family. The components are already in the right places and are grouped together according to functional aspects. In addition, the PPE offers space for high-voltage batteries of different sizes, depending on the model series and design. This flexibility allows Audi models to retain their individual character.

Another aspect when designing a modern platform such as the PPE is future viability. Vehicles with rear-wheel drive can be planned in the same way as models with front-wheel or all-wheel drive. Equally important is a high degree of flexibility for the integration of future technologies. As a completely new technology platform for purely electrically powered vehicles, the PPE combines the premium experience typical of Audi with a high level of emotionality.

*\*The collective fuel/electric power consumption and emissions values of all models named and available on the German market can be found in the list provided at the end of this text.*

## **E<sup>3</sup> 1.2 as the basis for a new level of digitalization**

The core elements and central nervous system of the new E<sup>3</sup> 1.2 electronic architecture are five high-performance computers (HCP), which cover all vehicle functions - from the drive and assistance systems to the infotainment and comfort systems through to the safety systems and backend networking. The overriding aim in developing the E<sup>3</sup> in version 1.2 was to create a scalable and future-proof electronic architecture that can be used throughout the Group.

The transfer of functions from the sensor-actuator level to the computer level, i.e., the increasing decoupling of hardware and software, ensures the PPE can reliably cope with the increasing complexity in the coming years. An additional focus of development was on high-performance and secure networking of domain computers, control units, sensors, and actuators in order to master more complex systems and maintain modularity.

Another important goal was the high-performance, seamless backend connection for car-to-X swarm data applications and computationally intensive offboard functions. Audi is gradually implementing the new electronic architecture in all future vehicle models.



## Sustainable production and materials

Audi Production is using the switch to e-mobility for a comprehensive transformation of the global production network and has a clear vision for the production of the future with the [360factory](#). Audi is pursuing a holistic, sustainable approach and is modernizing, digitalizing, and transforming its existing plants. Since 2020, the plant in Győr, Hungary, has been producing net carbon neutrally<sup>1</sup> with the largest photovoltaic roof system in Europe and is the largest user of industrial geothermal energy in Hungary. Audi transports the electric motors for the PPE from Győr to Ingolstadt net carbon neutrally<sup>1</sup> with the transport and logistics company DB Cargo.

The Audi plant in Ingolstadt has been net carbon-neutral<sup>1</sup> since January 1, 2024, making it the third Audi plant to make the switch after Brussels (2018) and Győr (2020). As part of its Mission:Zero environmental program, Audi has set itself the goal of achieving net carbon neutrality<sup>1</sup> at all sites worldwide by 2025.

Audi uses recycled materials for a number of components in the Audi Q6 e-tron\*. These materials, which are prepared using a [recycling process](#), reduce the use of resources and ensure a closed and, therefore, efficient and sustainable material cycle. Based on currently planned production figures, they are to be used over the entire service life of the Audi Q6 e-tron\*.

For example, the fabrics used for the Softwrap in the interior are partly based on sustainable materials. In the S line variant, the recycled fabric Elastic Melange, which is made from 100 percent recycled polyester, is used in the Softwrap. In addition to the seats and the Softwrap, Elastic Melange is also used for the door mirror. The headliner, pillars, and sun visors are made from Draft fabric, which is also made from 100% recycled polyester.

Components containing recycled materials are also used elsewhere. Examples of this are the sound generators, which produce the exterior sound in a similar way to loudspeakers, or the large storage compartment under the front flap, the so-called frunk. The adjacent covers and trim parts are made partly from recycled plastic. Another completely new plastic component in the front end is the area below the windscreen surrounding the fresh air intake. Here, a previously used sheet metal has been replaced by plastic components with a large proportion of secondary material.

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<sup>1</sup> Audi understands net-zero CO<sub>2</sub> emissions to mean a situation in which, after other possible reduction measures have been exhausted, the company offsets the carbon emitted by Audi's products or activities and/or the carbon emissions that currently cannot be avoided in the supply chain, manufacturing, and recycling of Audi vehicles through voluntary offsetting projects carried out worldwide. In this context, carbon emissions generated during a vehicle's utilization stage, i.e. from the moment it is delivered to the customer, are not taken into account.

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## **Production processes provide a view to a circular economy**

To produce the steel required for all variants of the outer roof section, Audi uses steel scrap, some of which comes from end-of-life vehicles previously in use by customers. Its proportion of steel production averages up to 15 percent (mass balance approach based on currently planned production figures).

The roof section is a good example of how Audi intends to use more post-consumer secondary materials in its products in the future. At the same time, this process provides an outlook for the [circular economy](#) at Audi. In this way, the Four Rings reduce downcycling, i.e., the loss of the quality of materials in the recycling process, in the best possible way. Audi's vision is to reuse as many materials as possible, for example, from end-of-life vehicles, for the production of new vehicles. Maintaining materials' high quality for as long as possible is a key objective of Audi's strategy.

Audi also sets specific CO<sub>2</sub> targets for the identified hotspot materials and components from its suppliers. Reducing CO<sub>2</sub> emissions in the supply chain will, therefore, become a central goal of future Audi vehicle projects. For example, the suppliers of battery cells for the vehicle projects based on the new PPE have committed to using green electricity in production. In addition, suppliers are using CO<sub>2</sub>-reduced aluminum for selected aluminum components, for example in the body.

## **Integration of the production steps**

The Q6 e-tron family is the first fully electric high-volume model series that Audi is producing at its headquarters in Ingolstadt. In line with the 360factory production strategy, the company is focusing on integrating the individual production steps in body construction and assembly into existing structures and processes. Five-hundred new colleagues have been hired at the Ingolstadt production facility.

## **State-of-the-art production technology in new battery assembly**

One example of how Audi is modernizing production and expanding existing structures is the new battery assembly facility for the PPE models. On an area of around 30,000 square meters (320,000 sq ft), around 300 employees assemble up to 1,000 high-voltage batteries per day in a three-shift operation with an automation rate of almost 90 percent - initially for the Q6 e-tron series. At the same time, the four rings are gaining important experience the company intends to use in production of its own battery modules in the future. The employees are already benefiting from the experience of their colleagues from the production of the Q8 e-tron\* in Brussels and the expertise of the battery technology center in Gaimersheim. "We are not only increasing our vertical range of manufacture but also bringing additional skills and technologies to the site," says Gerd Walker, Member of the Board of Management for Production.

The new facility in a building specially prepared for battery assembly in the Logistics and Transport Center (GVZ) in Ingolstadt is powered exclusively by green electricity. Audi is also achieving even greater flexibility and efficiency in production without having to seal additional land for new buildings.

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## **E-motors for PPE from the world's largest drive plant in Győr**

Ingolstadt receives the [electric motors](#) for the new Premium Platform Electric from the world's largest powertrain plant in Győr, Hungary. Audi Hungaria manufactures electric motors for the PPE on three newly installed production lines, which the transport company DB Cargo delivers to Ingolstadt in a net carbon-neutral way. In manufacturing of the new Q6 e-tron series, [carbon-neutral production](#) is an important milestone. Audi has been producing net carbon neutrally<sup>1</sup> at the Győr site since 2020. "Sustainable production in existing plants is the core of our 360factory manufacturing strategy and an integral step on our path towards building a future-proof production network," says Walker.

## **Retooling and flexible system in car body construction**

In order to produce the Q6 e-tron series sustainably and efficiently, Audi has integrated production areas such as the body shop for the PPE into existing structures. The bodies for the PPE models are produced on an area of around 148,000 square meters (*almost 1,600,000 sq ft*) at the Ingolstadt plant. Shifts of 328 employees and 1,150 robots produce the body components for the Q6 e-tron series with a degree of automation of 87 percent. The highly flexible plant also enables the almost seamless ramp-up of future models. In order to use resources sustainably and synergistically, Audi is reusing 680 robots, which were already used in the production of other Audi models, in the body shop for the production of the PPE bodies. Audi is also commissioning a fleet of more than 40 automated guided vehicles (AGVs) for the Q6 e-tron model series. The AGVs will take over the provision of materials in the facility and automatically supply the systems in the body shop with the necessary parts.

## **Installation of PPE models in existing systems**

Audi consistently uses existing structures and systems in assembly. The Four Rings have seamlessly integrated the Audi Q6 e-tron model series into the existing assembly line for the Audi A4 and A5 models. Combustion-engine models and electric vehicles from different model series are thus produced on a common production line. Audi integrated the PPE models into this assembly line in eight conversion steps.

## **Higher degree of automation in the paint shop**

Production has also extended the paint shop for the new fully electric series. Among other changes, the dryer after the cathodic dip coating (CDC) process step was extended and a new integrated procedure for automatically sealing holes was introduced. After CDC, robots use adhesive pads to seal about 70 holes in the bodies, each of which is measured individually for this step. Previously, employees had to manually perform this part of the process. Audi upgraded the dryer to meet the higher energy requirements for curing the bodies after CDC.

This modification ensures all parts of the body reach the target temperature of 160 °C (320 °F) required for curing the CDC. The Ingolstadt paint shop also uses automated production technology that helps detect, evaluate, and process surface irregularities. This makes it possible to objectively inspect finished surfaces, increasing process reliability and making quality monitoring more transparent.

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In the first step, robots scan the vehicle surfaces using an automated measuring system. This process is the basis for finishing, which is also an automated process. Each finishing robot is equipped with a grinding and polishing tool. In the subsequent step, employees inspect the processed areas on large screens.

### **Flexible system concept for hot forming**

At the press shop in Münchsmünster, many experts worked intensively to upgrade the hot forming process for PPE. This process is primarily used to produce safety-relevant components. This is because sheet metal parts for the body structure of the vehicles on the PPE, such as A and B pillars, as well as parts of the side member, are given special stability and crash safety through hot forming. After being heated to around 950 degrees Celsius (1,742 °F) in a special furnace, sheet metal strips are formed into a component in a forming press with an associated forming tool. By locally cooling the heated metal using air vents, Audi can influence the strength of the components as needed to further optimize crash performance while reducing the weight of the body. The hardness of the material makes it necessary for the components to be subsequently cut to the required contours using special lasers. In addition to components for models based on the PPE, components for models based on the PPC (Premium Platform Combustion) combustion-engine platform will also be manufactured by these production systems in the future. Thanks to their newly achieved flexibility, it will be possible to produce a total of 44 different components in Münchsmünster. Set-up changes at the laser cells and forming presses are fully automatic and take place in the shortest possible time, meaning that around 20,000 individual parts can leave the plant per working day.

## Market launch and prices

With the e-tron, Audi embarked on the path to electric mobility in 2018 and has written a success story with around 150,000 vehicles delivered to customers worldwide. The family of electrically powered models has grown in recent years and months: Audi S e-tron GT\*, RS e-tron GT\*, RS e-tron GT performance\*, Audi Q4 e-tron\*, and Audi Q8 e-tron\* have significantly expanded the product portfolio. The Audi Q6 e-tron\* will be added in 2024 as the first electric model produced in Ingolstadt and the first battery-electric vehicle (BEV) on the Premium Platform Electric. The new Audi Q6 e-tron\* will be launched in Germany and numerous other European countries from the third quarter of 2024. The Audi Q6 e-tron quattro\* and the SQ6 e-tron\* will be available to order from the end of March 2024 and start at EUR 74,700 and EUR 93,800, respectively. The Audi Q6 e-tron performance\* has been available to order since May 2024 and starts from EUR 68,800.

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## The facts

# **The most important facts about the new Audi Q6 e-tron**

## **Positioning**

- > As an all-electric SUV in the premium mid-size segment, the Audi Q6 e-tron\* sets standards in terms of performance, range, charging, driving dynamics, and design.
- > Exterior design: the ratio of long wheelbase and very short overhangs forms the basis for a striking, progressive SUV design
- > Evolution of the typical Audi design for electric vehicles (closed, inverted single frame, e-tron insert on the side)
- > Length 4,771 millimeters (15.6 ft), width 2,139 millimeters (7 ft) (without mirrors: 1,939 millimeters (6.4 ft)), height 1,648 millimeters (5.4 ft), wheelbase 2,899 millimeters (9.5 ft)
- > Interior of the Q6 e-tron\* brings Audi's new design philosophy to series production for the first time; "Digital Stage": experience digitalization in a new way with a new display and operating concept and a fully networked interior
- > Audi Q6 e-tron\* combines a dynamic driving experience with high everyday practicality  
trunk capacity: 526 liters, frunk 64 liters, 2,400-kilogram towing capacity with quattro drive
- > Powerful drives with up to 380 kW (with extra function) for sporty performance and fascinating acceleration from 0-100 km/h in 4.3 seconds in the SQ6 e-tron\* with the extra function
- > Focus on long-range and maximum efficiency: benchmark in the Audi portfolio and in the segment with an electric range of up to 625 kilometers (388 mi) (641 kilometers (398 mi) for the rear-wheel drive version); numerous measures and technical innovations for around 30 percent less energy consumption compared to the current Audi BEV portfolio
- > Short charging stops thanks to high-power charging with up to 270 kW at 800 volts (10-80% SoC in 21 min, up to 255 kilometers (158 mi) recharged in 10 min) for high comfort on long journeys
- > High emotionality in combination with the Audi DNA: innovations in the suspension, steering, and body ensure the premium experience typical of Audi
- > The Premium Platform Electric (PPE) is used for the first time in the Audi Q6 e-tron\*. This marks the start of a new generation of all-electric Audi models and the launch of Audi's largest product initiative
- > The Audi Q6 e-tron\* stands for advanced technical innovations tailored to e-mobility and takes the digital experience to a new level
- > Debut of the electronic architecture E<sup>3</sup> 1.2 as a future-oriented foundation with new hardware and software including new digital functions and software updates/upgrades over-the-air (OTA)
- > The Q6 e-tron\* stands for Audi's commitment to sustainability, from product to production.
- > The model underpins the promise to offer e-models in all core segments by 2027
- > E-mobility comes from Ingolstadt for the first time with the Audi Q6 e-tron\*

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## Highlights of the Audi Q6 e-tron\*

- > Design: powerful, dynamic SUV design with elements reminiscent of the e-tron GT quattro, new design philosophy in the interior with sustainable materials
- > Range: largest range in the Audi model portfolio with well over 625 kilometers (388 mi) range (Audi Q6 e-tron quattro\* with 625 kilometer range according to WLTP)
- > Efficiency: Optimization of the overall system results in a 30 percent more efficient drivetrain compared to the first generation of Audi e-tron models
- > Performance: dynamic acceleration in all models and an impressive 4.3 seconds from 0-100 km/h for the S model (using the extra function); suspension embodies the typical Audi DNA
- > Charging performance: up to 255 kilometers (158 mi) in 10 minutes, charging from 10 to 80 percent state of charge in 21 minutes thanks to 270 kW fast charging (standard), 800-volt architecture (bank charging possible - 2 x 400 volts)
- > Latest lighting technology with the world premiere of the active digital light signature and the second generation of digital OLEDs with communication light
- > Digital Stage: progressive and completely newly developed display operating concept with new Audi MMI panoramic display and MMI passenger display, which is being used for the first time at Audi, as well as new UX/UI
- > Audi Assistant with AI, new UX/UI (GUI design), and augmented reality head-up display as central elements of the new HMI concept
- > New electronic architecture E<sup>3</sup> 1.2: best digital experience, over-the-air updates and upgrades, latest Audi connect functions
- > Typical Audi Q model: high everyday practicality and functionality thanks to 526 liters (18.6 cu ft) of luggage compartment volume, 64 liters of frunk space (2.3 cu ft), 25 liters (0.9 cu ft) of storage space in the interior, 2,400 kilograms towing capacity

## Drive and recuperation

- > Highly integrated components, compact design, and optimized in-house production (engine plant Győr, Hungary): Electric motors for the PPE require around 30 percent less installation space than units of previous generations, weight reduced by around 20 percent
- > Focus on efficiency, acoustics, and modular design (scalable with a wide range of properties, especially in terms of performance)
- > Use of ASM (asynchronous motor) on the front axle and PSM (permanent-magnet synchronous motor) on the rear axle with different lengths and the same diameters
- > New hairpin winding in the asynchronous motor on the front axle maximizes current flow in the and enables a higher number of windings; rotor with innovative direct cooling system
- > Silicon carbide semiconductors in the pulse inverter, as well as dry sump and an electric oil pump in the gearbox, contribute to increased efficiency
- > Optimized acoustics thanks to unit supports cast onto the housing, structurally optimized housing, improved tooth geometries, and segmented staggered electric motor rotor
- > Direct oil cooling of the electric motors for increased power density (plus 20 percent) and largely eliminating the use of heavy rare earths

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- > Two power levels (incl. Launch Control) at market launch:
  - Audi Q6 e-tron quattro\*: 285 kW system output, Acceleration 0-100 km/h in 5.9 seconds
  - Audi SQ6 e-tron\*: 380 kW system output (with Launch Control), Acceleration 0-100 km/h in 4.3 seconds (with Launch Control)
- > Top speed up to 210 km/h, S model up to 230 km/h
- > Significant increase in maximum efficiency and availability: around 95 percent of all braking processes covered by recuperation
- > Up to 220 kW recuperation power possible, recuperation individually controllable, sailing also possible
- > Further development of the Intelligent Brake System (iBS): brake blending ensures a well-controlled pedal feel with a clearly defined and constant pressure point, plus axle-specific blending for the first time

### **Battery, charging, and intelligent thermal management**

- > Completely newly developed lithium-ion battery has a gross storage capacity of 100 kWh (net 94.9 kWh), consisting of twelve modules with 180 prismatic cells (15 cells connected in series)
- > Scalable: an entry-level version of the HV battery with ten modules and 150 cells offers a gross storage capacity of 83 kWh - available after market launch
- > Mixing ratio of nickel, cobalt, and manganese of 8:1:1
- > Cell chemistry enables around 30 percent higher energy density than the previous generation of batteries
- > Battery is better integrated into the vehicle's crash structure and cooling system
- > Cooling plate integrated into the battery housing ensures homogeneous heat transfer and thus improved battery conditioning
- > New underbody protection made of fiber composite material saves weight and thus has a positive effect on efficiency and range
- > Audi assembles the high-voltage battery at its headquarters in Ingolstadt
- > Battery Management Controller (BMCE) takes over the current regulation; twelve Cell Module Controllers (CMC) send data such as the current module temperature or cell voltage to the BMCE
- > HV battery from PPE enables bank charging: Battery is divided into two partial batteries with half the nominal voltage, which are charged in parallel at 400 volts each and allow faster charging
- > Predictive thermal management uses data from the departure timer, usage behavior, route progression, or navigation, including active route guidance with charging stop planning
- > Thermal management of the PPE enables post and continuous conditioning of the HV battery
- > Water heater in the high-voltage central box heats the high-voltage battery to operating temperature more quickly
- > Thermally conductive GAP filler in the battery tray provides a thermal connection to the cold plate
- > Maximum charging power of up to 270 kW for DC charging generates a recharged range of up to 255 kilometers (158 mi) in around ten minutes; around 21 minutes is enough to recharge the HV battery from 10 to 80 percent during HPC charging

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- > The Audi Q6 e-tron quattro\* charges with 11 kW alternating current (AC) at market launch, 22 kW planned in the lifecycle
- > Especially comfortable:
  - The charging port caps on both sides can be opened electrically by touch and MMI and close automatically when the charging cable is disconnected
  - The standard equipment of the Q6 e-tron series includes the Plug & Charge function and the enhanced e-tron route planner

### **Aerodynamics and bodywork**

- > Optimized aerodynamics concept reduces drag and increases efficiency
- > Flow resistance:  $c_w$  0.28, frontal area: 2.73 m<sup>2</sup>
- > Aerodynamic measures include optimized stall elements, AirCurtains, controllable cooling air intake, fully clad underbody leads into a wide diffuser, aero blades on wheels (optional)
- > Body in modern mixed construction: high proportion of hot-formed steels, cast aluminum parts for the front suspension strut mounts, extruded aluminum profiles for the front side members, outer skin of the side walls and roof in steel construction, add-on parts such as the front and tailgate in aluminum, doors and fenders in steel, center floor made of hot-formed sheet steel components, sheet metal parts for the body structure such as A and B pillars, parts of the side member are given special stability and crash safety through hot forming

### **Lighting technology**

- > World premiere of active digital light signatures for headlights and rear lights
- > Second generation of digital OLED combination rear lights take lighting design, functionality, and road safety to a new level
- > Number of segments per digital OLED panel increases from 6 to 60 segments (factor 10); in total, 6 OLED panels with 360 segments are used in the rear lights of the Audi Q6 e-tron\*
- > Area light source requires no additional reflectors, light guides, or other optics
- > Proximity detection is extended to include the communication light
- > For the first time, the digital OLED rear lights can communicate with the immediate surroundings (car-to-x)
- > Second-generation digital OLED rear lights display specific rear light signatures with warning symbols in addition to regular rear light graphics in critical driving or traffic situations
- > Communication light also warns road users approaching the vehicle from behind with a special signature
- > More individuality thanks to eight digital light signatures for the Matrix LED headlights and for digital OLED combination rear lights 2.0 via the MMI and the myAudi app, packages with digital light signatures can also be ordered after the vehicle purchase for the first time

### **Exterior design**

- > Almost perfect proportions with a long wheelbase and short overhangs
- > Evolution of Audi's e-tron design created with the e-tron GT quattro
- > Powerful, dynamic, and a typical Audi SUV: volumes lay the foundation for the soft structure of its shape, which gives the car a sculptural, almost organic appearance
- > Upright front with completely closed, inverted Singleframe follows the e-tron-specific design language

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- > Greenhouse stretched low and taut over the powerful bodywork
- > Taut and precisely drawn quattro blister, familiar from the Audi e-tron GT quattro
- > Dynamically retracted rear creates a mixture of sporty elegance and confidence

## Interior design

- > The interior conveys clear structures and creates a homely ambiance, while three-dimensionally designed applications ensure a generous sense of space
- > The needs and wishes of the inmates are the starting point for the design of the room
- > The Softwrap extends from the doors through the cockpit to the center console and creates a homogeneous and enveloping ambiance
- > Comfort-oriented areas are emphasized with generous surfaces and soft materials
- > The precisely designed operating areas are consistently finished in high-quality, high-gloss black
- > A control element with a black panel look is integrated into the handle of the driver's door and blends seamlessly into the modern interior
- > Generous space with room for five people and the high utility value typical of an SUV
- > 25 liters (0.9 cu ft) of storage space in the interior, plus cup holder in the center console and cell phone charging tray
- > Trunk offers 526 liters (18.6 cu ft) of storage space, 64 liters (2.3 cu ft) of storage space in the frunk under the front hood
- > If the rear bench seat is folded down, storage space increases to up to 1,529 liters (54 cu ft)
- > Digital platform with free-standing Audi MMI panoramic display (curved) and with MMI passenger display ensure clear structures and visual clarity; advanced augmented reality head-up display complements the fully connected cockpit
- > Use of sustainable materials: in the S line version, the Softwrap uses the fabric Elastic Melange, which is made from recycled polyester

## Display and operating concept

- > Freestanding Audi MMI panoramic display with curved design and OLED technology, consisting of 11.9-inch Audi virtual cockpit and 14.5-inch MMI touch display
- > A first for Audi and unique in the premium mid-size segment: optional 10.9-inch MMI passenger display with Active Privacy Mode
- > Optionally available and significantly improved augmented reality head-up display shows relevant information such as speed, traffic signs, assistance, and navigation symbols; displayed elements float visually up to 200 meters (660 ft) away and interact directly with elements in the environment
- > Viewing window for the augmented reality content corresponds to a diagonal of around 88 inches
- > Voice control plays a key role in the new display and operating concept
- > "Audi Assistant" is deeply integrated into the vehicle and is a self-learning system:
  - Context information is used to suggest situational and proactive functions for activation based on this data; smart routines (recurring operating sequences) are recognized, such as the use of seat air conditioning from certain outside temperatures; intelligent lists (such as call lists)

- recognizes more than 800 voice commands; spoken commands are also shown on the display ("See what you speak" principle); the interaction light also provides visualization. The intelligent assistant is presented in the "Audi Assistant Dashboard."
- > Dynamic interaction light (IAL) as part of the ambient light package plus supports interaction of the car with the occupants

### **Infotainment and digital services**

- > Newly developed infotainment system with Android Automotive operating system
- > Improved and new services from Audi connect
- > Store for third-party apps integrated into the vehicle enables use directly on the vehicle display
- > Functions on Demand: subsequent expansion of vehicle functions in the areas of light and sound possible (new)
- > Software updates can be downloaded over-the-air (OTA)
- > Audi Q6 e-tron\* is the first Audi model to be equipped with the newly developed Audi phone box for fast inductive charging: Smartphones can be supplied with up to 15 watts via Qi standard; up to 4 USB-C charging sockets with up to 100 watts charging power
- > Audi smartphone interface brings Apple CarPlay and Android Auto and thus the familiar smartphone environment into the car

### **Assistance systems**

- > Various packages available at market launch: Tech, Tech Pro, Tech Plus
- > With the adaptive driving assistant plus, the Q6 e-tron\* uses high-resolution map data as well as swarm data from other vehicles calculated in the cloud to significantly improve the driving behavior of the Q6 e-tron\*; also supports acceleration, maintaining speed and distance as well as lane guidance
- > Emergency Assist reacts to a lack of driver activity by acting visually, acoustically, and haptically on the driver. If there is no reaction, the car brakes and steers itself to a standstill
- > Park Assist plus enables the Q6 e-tron\* to be parked and unparked effortlessly; the car takes care of steering, accelerating, braking, and parking the drive system
- > Speed limit automatically adjusts the maximum speed based on the map data stored in the system and camera-based traffic sign recognition
- > Active Front Assist includes the following functions: Turn Assist, Evasion Assist, Emergency Brake Assist, Front Cross Traffic Assist
- > Turn assist brakes in the event of an imminent collision at an intersection if the driver does not react in time
- > Evasion assistant provides support in critical situations if the driver fails to react in time
- > Emergency Brake Assist warns of an imminent collision and brakes in an emergency if a person suddenly steps onto the road or the vehicle in front brakes suddenly; the assistant works in the speed range from 0 km/h to the top speed of the Q6 e-tron\*
- > Cross traffic assistant front detects critical cross traffic and warns drivers visually and acoustically

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## Chassis and steering

- > Newly designed front axle with improved steering behavior ensures optimized road holding and driving dynamics
- > Steering system redeveloped: a new mounting concept has eliminated the need for rubber bushings; a more rigid torsion bar is also used. Both result in improved steering precision; improved steering feel thanks to newly developed software
- > In use at Audi for the first time: standard suspension with passive damping system (Frequency Selective Damping) for greater ride comfort
- > Adaptive Air Suspension available as an option, sportier tuning for the S model
- > The different sizing of the electric motors on the rear and front axles enables rear-biased torque distribution even under full load
- > Wider tires on the rear axle in larger dimensions support rear-biased weight distribution
- > The precisely defined set-up philosophy of the chassis (Audi DNA) always applies: safe, confident, and a harmonious driving experience - in every driving situation, on every surface

## Production and sustainability

- > First all-electric model from Ingolstadt:
- > Net carbon-neutral production<sup>1</sup> at the headquarters
- > State-of-the-art production technologies: an in-house battery assembly facility was set up in Ingolstadt for the production of the Audi Q6 e-tron\*
- > Daily assembly of up to 1,050 high-voltage batteries on 30,000 square meters in the Ingolstadt freight village (GVZ)
- > For construction, Audi relies on the integration of individual production steps into existing structures and processes in many production areas
- > In production areas such as the paint shop in Ingolstadt, new automated production technologies support employees
- > Use of recyclates in the interior
- > Use of scrap steel from end-of-life vehicles for all variants of the outer roof section

<b>Audi Q6 e-tron quattro</b>	
<b>Battery energy</b> in kWh gross/net	100 (94,9)
Maximum <b>charging power</b> in kW AC/DC	11 (option: 22 at a later date)/270
<b>Maximum engine power</b> (incl. Launch Control) in kW (hp)	285 (387)
<b>Maximum speed</b> in km/h	210
<b>Acceleration</b> 0 to 100 km/h in sec	5,9
<b>Range</b> in km (WLTP) up to	625
<b>Unladen weight</b> in kg (without driver)	2,350 (without driver)

*\*The collective fuel/electric power consumption and emissions values of all models named and available on the German market can be found in the list provided at the end of this text.*

**Audi SQ6 e-tron**

<b>Battery energy</b> in kWh gross/net	100 (94,9)
Maximum <b>charging power</b> in kW AC/DC	11 (option: 22)/270
<b>Maximum engine power</b> (incl. Launch Control) in kW (hp)	380 (516)
<b>Maximum speed</b> in km/h	230
<b>Acceleration</b> (incl. Launch Control) from 0 to 100 km/h in sec	4,3
<b>Range</b> in km (WLTP) up to	598
<b>Unladen weight</b> in kg (without driver)	2,350 DIN (without drivers)

**Audi Q6 e-tron (performance)**

<b>Battery energy</b> in kWh gross/net	100 (94,9)
Maximum <b>charging power</b> in kW AC/DC	11/270
<b>Maximum engine power</b> (incl. Launch Control) in kW (hp)	240 (326)
<b>Maximum speed</b> in km/h	210
<b>Acceleration</b> (incl. Launch Control) from 0 to 100 km/h in sec	6,6
<b>Range</b> in km (WLTP) up to	641
<b>Unladen weight</b> in kg (without driver)	2.200 DIN (without drivers)

#### Communication Product and technology

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The Audi Group is one of the most successful manufacturers of automobiles and motorcycles in the premium and luxury segment. The brands Audi, Bentley, Lamborghini, and Ducati produce at 21 locations in 12 countries. Audi and its partners are present in more than 100 markets worldwide.

In 2023, the Audi Group delivered 1.9 million Audi vehicles, 13,560 Bentley vehicles, 10,112 Lamborghini vehicles, and 58,224 Ducati motorcycles to customers. In the 2023 fiscal year, Audi Group achieved a total revenue of €69.9 billion and an operating profit of €6.3 billion. Worldwide, an annual average of more than 87,000 people worked for the Audi Group in 2023, more than 53,000 of them at AUDI AG in Germany. With its attractive brands and numerous new models, the group is systematically pursuing its path toward becoming a provider of sustainable, fully networked premium mobility.

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## Fuel consumption and emission values of the models mentioned

### Audi Q6 e-tron quattro

Combined power consumption in kWh/100 km (62.1 mi): 19.6 -17.0 (WLTP);  
CO<sub>2</sub> emissions combined in g/km (g/mi): 0; CO<sub>2</sub> class: A

### Audi SQ6 e-tron

Combined power consumption in kWh/100 km (62.1 mi): 18.4 -17.5 (WLTP);  
CO<sub>2</sub> emissions combined in g/km (g/mi): 0; CO<sub>2</sub> class: A

### Audi Q6 e-tron performance

Combined power consumption in kWh/100 km: 19.1 - 16.5 (WLTP);  
CO<sub>2</sub> emissions combined in g/km: 0; CO<sub>2</sub>-Class: A

### Audi S e-tron GT

Combined power consumption in kWh/100 km (62.1 mi): 20.0 –18.0 (WLTP);  
CO<sub>2</sub> emissions combined in g/km (g/mi): 0; CO<sub>2</sub> class: A

### Audi RS e-tron GT

Combined power consumption in kWh/100 km (62.1 mi): 21.1 –18.4 (WLTP);  
CO<sub>2</sub> emissions combined in g/km (g/mi): 0; CO<sub>2</sub> class: A

### Audi RS e-tron GT performance

Combined power consumption in kWh/100 km (62.1 mi): 21.0 –19.0 (WLTP);  
CO<sub>2</sub> emissions combined in g/km (g/mi): 0; CO<sub>2</sub> class: A

### Audi Q8 e-tron

Combined power consumption in kWh/100 km (62.1 mi): 25.2 –19.5 (WLTP);  
CO<sub>2</sub> emissions combined in g/km (g/mi): 0; CO<sub>2</sub> class: A

### Audi Q4 e-tron

Combined power consumption in kWh/100 km (62.1 mi): 19.5 –15.6 (WLTP);  
CO<sub>2</sub> emissions combined in g/km (g/mi): 0; CO<sub>2</sub> class: A