

# The Compact Crossover for a Refined Luxury Driver: The All-New 2019 Lexus UX

September 12, 2018

[2019 Lexus UX Product Specifications](#)

[2019 Lexus UX Product Press Release](#)

**STOCKHOLM (September 12, 2018)** — Lexus, an innovator in luxury utility vehicles, introduces its newest addition to the lineup, the 2019 UX. It offers the brand's innovative luxury and safety in a package that combines charismatic new design elements and ultra-efficient new powertrains. For many customers, the UX will not only be their first Lexus, but also their first luxury vehicle. Once in dealerships in December 2018, the UX 200 will have a starting Manufacturer's Suggested Retail Price (MSRP) of \$32,000. The UX 250h will follow in January 2019 with a starting MSRP of \$34,000\*\*, adding all-wheel drive, increased power and better fuel efficiency, for only \$2,000\*\* more.

The UX name is derived from the design team's guiding concept and describes the vehicle's mission: Urban + X-over (crossover) = UX.

"The Lexus UX is designed for the modern urban explorer seeking a fresh, contemporary and dynamic take on luxury driving," said Chika Kako, executive vice president of Lexus International and chief engineer of the UX. "We designed the UX to appeal to young buyers who seek not only what is new and exciting, but what is also relevant to their lifestyles."

Infused with dynamic attitude, the 2019 Lexus UX is engineered to deliver quick and engaging driving with a Lexus-smooth demeanor, making it a unique entry in the luxury compact crossover segment.

The 2019 UX is the first Lexus constructed on the new Global Architecture Compact (GA-C) platform. A lightweight yet super-rigid structure, extremely low center of gravity and refined suspension tuning endow the UX with exemplary handling agility and ride comfort, along with a distinctive driving personality.

"I wanted to positively overturn the image of a crossover and offer a car with nimble performance and excellent maneuverability that makes it as easy to drive as a sedan," said Chief Engineer Kako.

The 2019 Lexus UX is available in two versions: the front-wheel drive UX 200 introduces a new high-efficiency 2.0-liter, four-cylinder engine coupled with a new 10-speed Direct Shift Direct Shift Continuously Variable Transmission (DCVT), while the all-wheel drive UX 250h pairs an even higher-efficiency version of the 2.0-liter gas engine with a new fourth-generation hybrid drive system engineered specifically for this platform.

## **EXTERIOR DESIGN AND AERODYNAMICS**

The 2019 Lexus UX is a leap forward in the compact luxury crossover segment. The signature grille, though sharing its basic form with other Lexus models, is unique to the UX. It features a new block-shape mesh pattern with individual elements that gradually change in shape as they radiate out from the central Lexus emblem. The grille creates an intriguing three-dimensional appearance that changes with the viewing angle.

The headlamp design completes the UX's face, giving it a determined, confident gaze. LED daytime running lights arranged in an arrowhead motif above the headlights complement the Lexus L-shaped lighting signature. These appear like brows above the standard single-projector dual-beam LED headlights or the optional ultra-small 3-projector LED units.

The full-width rear lights project a distinctive nighttime signature formed by a sequence of 120 LEDs tapering toward the center, measuring just 1/8" thin at its narrowest point.

The vehicle's basic form flows out from the lines of the signature grille to envelop the cabin. Crisp, prominent sculpted surfaces and dramatically flared front and rear fenders reflect the robust inspiration, while an aerodynamic profile, large wheels pushed to the corners, and an impressive front fascia create the agile, sporty stance.

Takumi (Japanese for "artisan") clay modelers worked with design and engineering to refine all exterior surfaces of the UX. Their work was crucial to refining surfaces down to the 0.01 mm level, pushing the boundaries for what could be produced in the body-stamping presses.

The wheel arch moldings that protect the body from flying gravel from the tires and use airflow over their edges to reduce turbulence and lift, contributing to the vehicle's stability.

A similar contribution is made by the rear combination lamps. Unique Aero Stabilizing Blade Lights begin at the top of the rear fenders and span the rear of the vehicle. By guiding airflow around the rear of the UX, this design also reduces turbulence and lift, benefiting vehicle stability when cornering and driving in crosswinds. A wing-type spoiler at the rear edge of the roof, along with a flat underbody, contribute to vehicle quietness, fuel efficiency and aerodynamics.

### **COLORS AS UNIQUE AS THE UX**

The 2019 Lexus UX is offered in a palette of 12 exterior colors to accentuate its stunning lines. Two of those colors, Ultra White and Ultra Sonic Blue Mica 2.0, are exclusive to the F SPORT.

Two new colors were developed for the UX: Cadmium Orange creates vividness and a sense of depth using a multi-layer painting process that combines a red color base layer with a yellow interference mica layer. Nori Green offers a strong contrast between bright highlights and dark, calm shades. The mica particles have been enlarged as much as possible without creating color unevenness, achieving high brilliance while expressing toughness.

### **F SPORT PERFORMANCE**

The F SPORT package is available for both the UX 200 and UX 250h. Exclusive F SPORT suspension tuning includes revised springs and stabilizer bars for a tighter ride. The 18-inch, five twin-spoke aluminum alloy wheels unique to the F SPORT are even more rigid than standard UX wheels, contributing to responsiveness and handling agility.

The F SPORT transformation includes an exclusive grille design featuring a mesh-pattern created by individual L-shaped pieces. The exclusive F SPORT front bumper features large LED fog lamp bezels with L-shaped chrome moldings, cornering lamps and the same mesh pattern as the grille. A revised rear bumper and jet-black trim on the front and rear moldings complete the F SPORT look.

F SPORT-exclusive interior features include front sports seats made with a highly supportive integrated-foaming technique first developed for Lexus F models. The digitally-rendered instrument meter features a movable ring inspired by the Lexus LFA supercar. A perforated leather-trimmed F SPORT steering wheel with paddle shifters, leather-trimmed perforated shift knob, 8-inch TFT color display, aluminum pedals, aluminum door scuff plates and footrest are also part of the package.

The UX F SPORT driving experience can be further enhanced with Active Sound Control (ASC), which generates the aural effect of up- and down-shifts like those of a geared automatic transmission.

## **INTERIOR DESIGN: PUTTING THE “UX” IN “LUXURY”**

Lexus designed the UX cabin to evoke the feel of a luxury sedan, but with the higher seating position and versatility experienced in a crossover. The materials and workmanship are pure Lexus, combining Japanese traditions in craftsmanship and hospitality with innovative production techniques.

At the same time, the UX interior design creates a sense of security suggested by the exterior’s inspiration. As one example, the form of the interior door shoulders evokes a robust frame, expressing a secure feeling inside the vehicle.

Designers created a feeling of seamless continuity inside the UX. A traditional Japanese concept called *engawa*, creates an effect where the upper section of the instrument panel appears to extend out beyond the windshield into the fenders, giving the driver an excellent field of vision and a clear sense of the vehicle’s dimensions and tire placement. The *engawa* effect makes parking in small spaces an easier task. When viewed from outside the vehicle, the hood appears to connect directly to the instrument panel through the windshield, blurring the boundary between interior and exterior.

Entering and exiting the UX is made easier through optimal placement of the hip-point and unique shaping of the seat cushion. The human-centered approach shows clearly in the instrument panel’s low, unobtrusive design and the slim A-pillar moldings, which are shaped to improve visibility. Even with a higher seating position than a standard passenger car, the reduction in distance between the hip and heel points gives the UX driver a feeling of being closer to the road than in a conventional SUV.

Typical of Lexus, the UX offers a very quiet driving experience with aerodynamic features to reduce common noises for drivers and passengers. Noise reduction is accomplished with a high-strength structure and optimal placement of specially designed sound-absorbing and insulating materials throughout the body. Also in typical Lexus fashion, engineers traced noises to their sources to keep them out of the cabin. Even the sound of water being thrown by the tires is reduced.

## **“SEAT-IN-CONTROL” CONCEPT**

The UX makes the driver feel more in touch with the road thanks to a “seat-in-control” concept. Critical vehicle functions are grouped around the driver’s side of the cabin, and the seatback shape allows the driver to operate them while maintaining a comfortable, natural posture.

The UX offers 8-way power adjustable front seats, with adjustable lumbar support for the driver as well as manual forward/backward adjustment for the headrests. Front seat cushions use springs and foam specially designed to gently envelop occupants while uniformly dispersing pressure under the occupants’ sciatic area.

Lexus luxury extends throughout the UX cabin. The leather-trimmed three-spoke steering wheel and analog clock come from the Lexus LS, for example, and Lexus Climate Concierge, as used in other Lexus models, automatically links heating and cooling airflow with the heated and ventilated seats to optimize interior temperature comfort. Renowned Lexus attention to detail is also evident in a headliner design that eliminates distracting shadows at the windshield header, as well as control switches with a signature “Lexus feel.”

## **LUXURIOUS NEW FINISHES**

From its inception, Lexus has drawn on Japanese traditions in craftsmanship and hospitality to infuse its vehicles with a unique sense of contemporary luxury. Lexus adapted this approach to the 2019 UX to appeal especially to younger customers experiencing their first luxury vehicle.

Chief Engineer Kako drew on her extensive experience in materials development and time spent working in Europe to help define the UX interior’s appearance and quality. The result is an uncluttered “less is more” approach that makes the UX feel more inviting and accessible.

“When it comes to determining whether an interior is good or bad, controlling the overall balance between the continuity, unity and contrast is more important than the relative specifications of individual components,” she said.

The Lexus UX offers a wide choice of interior color combinations, each of which conveys a specific mood and accentuates the premium design. The seating is available in NuLuxe with the standard models offering a choice of four colors, including Black, Glazed Caramel, Birch, and Birch with Lapis. In addition to Black, the F SPORT also offers exclusive Circuit Red seat colors.

The sweeping instrument panel and cabin trim offer a choice of two different grain patterns and three colors. In a Lexus first, the UX offers a new trim finish inspired by the grain of Japanese paper, known as washi. It’s common in traditional Japanese homes and evokes a calm and warm feeling.

### **INTUITIVE CONTROLS AND CLEAR DISPLAYS**

The UX instrument panel design combines unique Lexus traits and intuitive technology. A 7-inch TFT LCD display meter digitally creates realistic, analog gauges in a three-dimensional space.

The F SPORT features a larger 8-inch TFT LCD display that varies depending on the powertrain (gas or hybrid) and the selected drive mode. For the F SPORT only, the movable meter ring, which originated in the Lexus LFA supercar and is also featured in the LC premium coupe, allows displayed content to be easily changed. Pushing a switch on the steering wheel moves the ring to the right and enlarges the multi-information display.

An available head-up display underscores the Lexus UX’s high-tech feel while putting vital vehicle information in the driver’s line of sight. The large color display projects the information to a virtual “screen” 2.5m (8 ft.) in front of the driver, making it easier to focus on the display as well as objects in front of the vehicle. The bright, high-contrast display is easy to see in daylight and in snowy conditions.

The Lexus Remote Touch Interface (RTI) with haptic feedback in the 2019 UX is designed to feel as familiar to use as a smartphone. The RTI utilizes intuitive operations, such as double-tapping and flicking, to mimic common phone gestures. Frameless construction eliminates edges, and a special coating on the touch pad surface lets fingers easily slide over it while minimizing the appearance of fingerprints. The touchpad can recognize numbers and block letters when typing a search name. Touchpad surface haptic vibrations indicate to the user when the cursor is moved, making it easier to align the cursor with the desired function button.

A switch at the base of the touch pad can call up an operation screen with related functions, such as air conditioning and navigation, enabling easier access without going through menus. In a unique touch of high-tech elegance, the Lexus logo on the pad surface is backlit at night.

### **IMAGINATIVE TECHNOLOGY**

Lexus designers created a cabin atmosphere with a “wow factor” and depth of quality that will be especially apparent to those buying a luxury-brand vehicle for the first time. LED cabin lighting is one example; white LEDs illuminate the front footwells, glovebox and console switches, and also serve as the dome light, map lights and cargo area light.

As another example, each of the UX’s air vents uses a new single-knob control for airflow direction and volume; by combining the two functions in a single control, the air passages of each vent could be enlarged, improving airflow while reducing noise.

Luxury-grade models feature illuminated vent controls with distinctive LED light sources wirelessly powered by electromagnetic resonance of two adjacent magnetic coils vibrating at the same frequency. The vent control LEDs use mirror optics in the same design principle as the Lexus LC’s tail lamps to create the effect of deep

floating light sources, even though the light element is just 1/8-inch thick.

### **VERSATILITY THROUGH THOUGHTFUL PACKAGING**

The Lexus UX offers the brand's renowned luxury and comfort in a package ideally suited to making urban exploring easier in cities around the globe. A 103.9-inch wheelbase contributes to a smooth, stable ride and cabin roominess. The 177-inch length and best-in segment 34-ft curb-to-curb turning diameter help make the Lexus UX easy to maneuver and convenient to park.

Fold-down grocery bag hooks remain flush with the side panel surface when not in use. An available hands-free foot-activated power rear gate makes loading the UX more convenient, and standard solid aluminum roof rails allow installation of a variety of accessory carriers.

The UX features newly-developed 2<sup>nd</sup>-generation run flat tires that are quieter and more comfortable than previous designs, while now allowing driving with a flat tire at speeds up to 50 mph for up to 100 miles.

### **IMMERSIVE TECHNOLOGY AT YOUR FINGERTIPS**

The 2019 Lexus UX models offer the latest in the brand's multimedia and navigation technology. A 7-inch Lexus Multimedia System (LMS) display is standard, and a 10.25-inch screen is used with the available Lexus Navigation system.

The standard Lexus Premium Sound System can play back the highest-resolution digital audio formats (WAV, FLAC, ALAC, and OGG Orbis) from a USB device while dual rear-seat USB ports enable passengers to use and recharge their smartphones or tablets.

The standard 6-speaker system and available 8-speaker upgrade system use bamboo charcoal speaker diaphragms to reduce mass and deliver natural-sounding voices and improved mid-range sound. Both systems create a more lifelike soundstage by using tweeters mounted at the sides of the instrument panel reflecting sound off the windshield. The 8-speaker system adds a center-dash tweeter, a subwoofer mounted in the luggage area and a more powerful amplifier.

The versatile Lexus Multimedia System is coupled with the upgraded 10.25 inch display, adding numerous features to support customers' digital lifestyles. Staying connected on the road is essential to today's drivers, so the UX makes it easier and safer with a number of standard technology features. For instance, all UXs drivers will be able to lock/unlock their doors, start their engine, or check their fuel level, all from the convenience of their smartwatch, Amazon Alexa-enabled, or Google Assistant enabled device. It's voice controllable too, and compatible with select Android or Apple devices.

All UX models will also come standard with Apple CarPlay<sup>®</sup> phone functionality. Once a compatible iPhone<sup>®</sup> is connected through a USB cable, drivers can access Apple Music, Google maps, Waze, plus make phone calls and send and receive messages all through the multimedia display or with voice control through Siri<sup>®</sup>.

Apple CarPlay also enables access to the music streaming app Spotify<sup>®</sup>. As a special feature for UX drivers, the music streaming service has compiled its over one million driving-themed playlists into a CarPlay hub. Monday morning commuters receive recommendations for upbeat songs to help energize them for the week ahead. On a Friday, travelers gearing up for the weekend receive brand new music from Spotify's popular Release Radar playlist.

Connected features include:

- Lexus Enform allows linking of smartphone apps.
- Apple CarPlay<sup>®</sup> allows easy iPhone integration using the vehicle's display, expanding multimedia capability. CarPlay supports other apps on your iPhone — like your favorite audio, messaging, and voice

apps as well as new third-party app extensions.

- A 4GB WiFi Hotspot allows a user device to become an internet access point.
- Instant Replay allows the user to capture SiriusXM® content for later playback.
- Dynamic Voice Recognition allows natural voice commands.
- USB Video and RealMedia video formats are supported.
- Favorite Genre for FM and SiriusXM® allow the user to select a preferred music genre to discover new stations.

The available Lexus Navigation system features the brand's latest graphical user interface for greatest ease of use and access to features. In the US, Hybrid Navigation combines onboard map data with the latest satellite information.

## **A SOLID STRUCTURE TO BUILD ON**

Lexus instilled the UX with an outstanding combination of handling agility and smooth, quiet ride comfort that urban customers will find pleasing. Key to achieving that balance is building the UX around the high-strength GAC global architecture platform. Extensive use of high-tensile steel, high-strength adhesives and Laser Screw Welding results in a highly rigid structure, an essential foundation for achieving sporty handling and luxurious ride comfort.

By using aluminum for the side doors, fenders and hood and composite materials for the tailgate, the UX has among the lowest center of gravity of any vehicle in its class at 23.4 inches. As a result, the UX delivers a secure, agile feeling normally associated with lower sport hatches. A unique ring structure around the rear opening and behind the rear seats increases torsional rigidity to enhance crash performance, improve handling and reduce noise and vibration.

The MacPherson strut front suspension and multilink rear suspension with trailing arms, both mounted to sub-frames, are specially tuned to deliver a combination of agility and comfort over well-worn urban street surfaces. Carefully refined details such as the quality of the damper oil, oil seals and friction control in the shock absorbers make a significant positive impact on ride quality.

An upper strut brace increases torsional rigidity of the engine bay, and the steering rack bolts directly to the subframe without rubber bushings for more direct steering feel.

Active Cornering Assist (ACA), a function integrated with Vehicle Stability Control (VSC), helps the vehicle trace the driver's desired line through a turn by applying some brake control on the inside wheels, suppressing the tendency to understeer. As a result, the UX drives through corners with greater precision while maintaining stability.

## **SHARP STEERING AND MULTIPLE WHEEL OPTIONS**

An Electric Power Steering system with a new compact and highly rigid column-assist motor delivers handling with crisp, immediate response to driver inputs, and provides excellent steering feel.

A newly developed electric tilt and telescopic steering column is available for Luxury grade models. In addition on Luxury grade models, ingress and egress are made easier with the auto away / auto return controls linked to the driver's seat belt and the engine start-stop switch or hybrid power switch. Using the switch, the tilt and telescopic motors can adjust the steering wheel up and down or forward and back through 1.6-inch ranges.

Standard on all UX models are 18-inch run-flat tires designed for excellent handling stability while also contributing to increased luggage compartment capacity. The 18-inch wheels in Machined finish + Dark gray metallic offer a combination of a machined finish and dark gray metallic coating.

## **UX 200: INNOVATIVE TRANSMISSION MEETS ULTRA-EFFICIENT ENGINE**

The 2019 Lexus UX 200 delivers a combination of engaging performance and high efficiency from a new 2.0-liter inline four-cylinder engine. Combining revolutionary laser-clad intake valve seats with an all-new intake port profile, high compression ratio (13:1) and D-4S direct plus port fuel injection make this one of the most efficient engines on the market. VVT-iE intelligent variable valve-timing with an electric actuator on the intake side also enhances drivability while reducing emissions.

At 169hp, the UX 200 engine offers output similar to some competitors' 1.5 liter turbo engines, but with less complexity, less under-hood heat, and lower powerplant weight for better vehicle balance. The engine produces 151 lb-ft of peak torque to give the UX excellent responsiveness in all driving situations.

A continuously variable capacity oil pump and a variable cooling system with an electric water pump contribute to ultra-low internal friction, further maximizing engine performance and fuel efficiency. The cooling system also has two flow-shutting valves to ensure quicker cabin heating on cold days and quicker cool-down when the air conditioner is used.

Exhaust heat recirculation enables quick engine warm-up to reduce emissions, while a gas particulate filter provides high-efficiency particulate material removal to EURO6d PN (particulate number) regulations.

The new Direct-Shift Continuously Variable Transmission (DCVT) combines the smooth, fuel-efficient performance of a continuously variable transmission with a more direct driving feel. The key to its distinct performance feel is a mechanical gearset that is used to start from a stand-still and accelerate before handing off to the continuously variable transmission pulley system. The result is direct, linear and quick initial acceleration, while maintaining the benefits of a continuously variable transmission at mid- and higher speeds. Also, because the fixed-ratio first gear reduces the load on the belt and pulleys mechanism for start-off and low-speed driving, the pulleys can be made smaller and lighter while providing a wider range of gear ratios. The result is quicker ratio changes during acceleration and an overall ratio spread that helps maximize fuel efficiency.

Under strong acceleration, the DCVT can freely adjust the transmission ratio to simulate gear changes like a multi-gear automatic transmission. Synchronization of the increasing engine revs and vehicle speed provides a linear acceleration feel.

## **UX 250H: NEW-GENERATION LEXUS HYBRID DRIVE**

Lexus, the world leader in luxury hybrid vehicles, applied its engineering expertise to the 2019 UX 250h with a new-generation Lexus Hybrid Drive powertrain. With 181 total system horsepower, the UX 250h is the fuel-efficient leader with the best MPG of any CUV and SUV without a plug in the U.S. market. This hybrid provides exhilarating driving with high-speed responsiveness and a feeling of smooth, natural acceleration. The UX 250h is equipped with all-wheel drive standard.

The hybrid system combines the same 2.0-liter four-cylinder gasoline engine found in the UX 200 with two electric motor/generators in a new-generation hybrid transaxle that is more compact, lighter and has less internal friction than previous Lexus hybrid systems. Compared to similarly-sized Lexus hybrids, the power control unit of the UX is more powerful yet 20% smaller and 10% lighter.

Optimizing the level of electric motor assistance and engine RPM produces a linear acceleration feel without the engine having to run at high revs. Engine speed is synchronized with vehicle speed to create an immediate and continuous acceleration feel.

The new transaxle mounts the electric motor-generators (MG1 and MG2) coaxially rather than in-line. The resulting smaller and lighter package reduces frictional losses by 25% compared to the previous Lexus hybrids. In addition, MG2 is now a higher-speed motor, yielding better performance and efficiency.

The Sequential Shift feature delivers responsive engine braking force in 10 steps with a shift feel similar to a

manual transmission, using steering wheel paddle shift switches or the S position on the shift lever. The speed at which the hybrid system can shut off the gasoline engine, such as when driving on long downward slopes, has been raised from the 43 mph of previous Lexus hybrids to 71 mph for the UX 250h.

Locating the new compact and lightweight nickel metal-hydride (NiMH) battery and compact cooling system below the rear seat helps maximize cabin and cargo area space, and their location supports the vehicle's low center of gravity.

### **ALL-WHEEL DRIVE**

The UX 250h model offers all-wheel drive (AWD) using a separate, dedicated electric motor-generator with 7hp output integrated into the rear differential. Power distribution between the front and rear axles is automatically optimized by the Vehicle Stability Control (VSC) system when accelerating, cornering, or driving on slippery surfaces. AWD provides stable driving on uphill slopes or snow-covered roads with lower fuel consumption than a conventional all-wheel drive system that employs a power split device and driveshaft. AWD does more than assist traction in slippery conditions; the system can actively improve stability by adjusting rear-wheel power to help correct an over- or understeer condition.

### **DRIVE MODE SELECT**

Both the UX 200 and UX 250h Hybrid are equipped with Lexus Drive Mode Select, which allows the driver to tailor the driving experience by selecting from three different drive modes.

Normal mode provides an optimal balance between driving performance and fuel efficiency; ECO mode maximizes fuel savings across all driving conditions by smoothing the throttle response, and by moderating air conditioning operation; Sport Mode delivers quicker throttle response and increased power steering feel.

### **PREDICTIVE ECO DRIVE CONTROL**

The UX 250h debuts Predictive Eco Drive Control, a world-first system that, coupling with the navigation system, learns driving habits, predicts the expected roadway ahead and analyzes real-time traffic reports to optimize charging and discharging of the hybrid battery. The more miles the UX 250h is driven, the more data is gathered to help optimize fuel consumption. (The system can be turned off if desired.)

Also operational with navigation, Predictive Deceleration Support technology uses accumulated knowledge about a driver's behavior to predict when and where the vehicle is likely to slow down or stop. For example, when the UX approaches a location where the driver has slowed or stopped in the past, and the driver releases the accelerator pedal, Predictive Deceleration Support increases regenerative braking, allowing more efficient energy to be recovered and recharged into the hybrid battery. The system can provide deceleration support up to about 1,000 feet ahead of the vehicle.

Predictive State of Charge (SOC) control for the hybrid battery is a world-first technology that functions on both downhill roads and in congested traffic. Operating when the UX is following guidance from the navigation system, it will predict the route for a distance of up to 6 miles ahead to optimize the conditions under which it can regenerate energy, earning power for future driving.

Here is a real-world example of its benefits: On a long, downhill stretch of road, with the hybrid battery storing a large amount of energy, a full charge could be reached partway down the hill. Beyond that point, any additional regenerated energy cannot be recovered, effectively wasting it. Instead, Downhill SOC control uses gradient information from map data to calculate when a long downhill stretch of road lies ahead and then actively relies on battery-only driving to reduce the level of battery charge prior to that regeneration opportunity. Fuel efficiency improves since the level of battery charging gained on that downhill section is increased.

Conversely, in stop-and-go traffic or low-speed driving, the electric motor is used more, reducing the hybrid battery's charge. In this scenario, Congestion SOC control uses traffic information from the navigation system to



determine if there is any congestion on the planned route. If so, it actively charges the hybrid battery before reaching the congested area, reducing the need of forced engine start to charge the battery in those conditions.

## **SAFETY TECHNOLOGY AND DRIVER ASSIST**

The UX, the new gateway to the brand, features the advanced safety technology expected from a Lexus. UX models are equipped with ten airbags: driver and front passenger airbags; driver and front passenger knee airbags; driver and front passenger seat-mounted side impact airbags and front to rear side curtain airbags.

The standard Lexus Safety System+ 2.0 includes:

- Pre-Collision System (PCS) with Pedestrian Detection
- All-Speed Dynamic Radar Cruise Control
- Lane Departure Alert with Steering Assist
- Lane Tracing Assist
- Road Sign Assist (RSA)
- Intelligent High-Beam headlamps

The Pre-Collision System uses an integrated forward-facing camera and grille-mounted radar system designed to help mitigate or avoid a frontal collision. LSS+ 2.0 enhances this system with the addition of low-light detection for pedestrians, plus daytime detection of bicycles. Under certain conditions, if the Pre-Collision System determines that the possibility of a frontal collision with a pedestrian or bicyclist is high, it prompts the driver to take evasive action and brake by using an audio and visual alert. If the driver notices the hazard and brakes, the system may use Brake Assist to provide additional braking force.

If the driver does not brake in a set time and the system determines that the risk of collision with a pedestrian or bicycle is extremely high, the system may automatically apply the brakes, reducing speed to help mitigate the impact or avoid the collision entirely if possible.

Dynamic Radar Cruise Control uses a front grille-mounted radar and a forward-facing camera to detect vehicles ahead and automatically adjust the vehicle's speed to help maintain a pre-set distance. DRCC operates between 0-110 mph but must be initiated at speeds above 19 mph.

Lane Departure Alert is designed to use the vehicle's forward-facing camera to detect lane departure when traveling on relatively straight roads with clear lane markings, road edges or curbs when DRCC is operating and when two visible lane lines are detected. The system's current operating status is indicated through colored lane marking illustrations on the vehicle's Multi-Information Display (MID). If Lane Departure Alert determines that the vehicle is starting to unintentionally deviate from its visibly marked lane, the system alerts the driver with an audio and visual alert. In addition to the alert function, all UX vehicles are equipped with Electronic Power Steering (EPS) also include Steering Assist. When this functionality is enabled and Lane Departure Alert senses that the vehicle is unintentionally drifting from its lane, the system may automatically make small corrective steering inputs to help the driver keep the vehicle in its lane.

Lane Tracing Assist (LTA) is designed to work with Dynamic Radar Cruise Control to keep the vehicle centered in its visibly marked lane and preemptively avoid unintended lane departures. LTA uses a forward-facing camera to monitor lane markings – as well as the path of the vehicle ahead, if needed – and is designed to automatically make constant steering inputs to help keep the vehicle centered in its lane. LTA does not require the driver's hands to remain on the steering wheel.

Road Sign Assist is designed to read certain traffic signs and display them on the vehicle's Multi-Information Display (MID). The system can read Speed Limit, Stop, Yield, and Do Not Enter signs. Intelligent High Beam is a safety system designed to help the driver see more clearly at night – while reducing glare for other drivers. By using high beams more frequently, the system may allow earlier detection of pedestrians and obstacles.

When activated, Intelligent High Beam is designed to rely on an in-vehicle camera to help detect the headlights of oncoming vehicles and taillights of preceding vehicles, then automatically toggle between high and low beams.

Other available safety systems include Parking Support Alert(PSA) and Parking Support Brake (PSB). PSA can detect crossing vehicles from the sides and static vehicles in front of or behind the UX when parking over a broader range of conditions than previous clearance sonar or rear cross traffic systems, and uses digital camera images on the center display along with audibles to alert the driver to potential risks.

The PSB system adds active drive force (throttle) and braking control to audible and visual warnings to reduce the possibility of contact with moving objects ahead or behind the UX when parking.

*\*UX AWD system only works at speeds up to 43 MPH*

*\*\*Excluding DPH of \$1,025*