Powerful and Adaptable: All-new Uconnect 5 with Android Operating System is Five Times Faster, Tailored to Individual FCA Brands

- FCA’s new global 5th-generation Uconnect platform is the most advanced Uconnect system ever
- Uconnect 5 system is powered by Android and deployed to millions of FCA vehicles, offering owners an intuitive, app-based experience
- Up to 50K MIPS (million instructions per second) delivering five times faster processing speeds
- Firmware Over the Air (FOTA) and Gigabit-class LTE cellular connectivity enables updates on-the-fly without visiting a dealer
- Global platform offers 4G network connectivity and supports evolution to 5G
- New platform offers a broad catalog of applications with room for future growth
- Hardware outputs enable up to four reconfigurable displays, laying the groundwork for future applications
- Improvements in Uconnect system software, strategy and hardware reduce distracted driving
- Most screen area ever offered in an FCA product with the ability to support up to 15 million pixels in Ultra HD
- New Uconnect systems feature global capability for vehicle owners in more than 150 countries
- Two versions of the all-new Uconnect system allow customers to choose the level of features and services

The all-new Uconnect 5 is loaded with an array of innovative and state-of-the-art hardware, making it the most technologically advanced Uconnect system ever. On board, the new Android operating system delivers five-times faster operation, while Firmware Over the Air (FOTA) and 4G LTE connectivity allow software updates and connectivity opportunities. With future capabilities in mind and rapidly developing demand for improved UX, the advanced Uconnect architecture is scalable across all FCA brands globally.

“Our all-new Uconnect 5 builds on the success of the class-leading Uconnect system with all-new hardware and software to accommodate FCA’s global product variations and to continue leadership in the space,” said Mike Hall, Head of Electrical Engineering, FCA – North America. “With five-times faster operating speeds and advanced connectivity upgrades, the 5th-generation Uconnect system is a substantial introduction in the personal electronics realm as an automotive application.”
Components
The performance upgrade starts with hardware. The system processing power, reaction speed and memory have been enhanced to take advantage of the new Android operating system. The Atlantis architecture replaces Powernet as the next generation of FCA core in-vehicle electronics communication. In combination with an upgraded 50K MIP (million instructions per second) chip and 6GB of RAM, the all-new Uconnect 5 delivers five-times faster operating speeds when compared to the previous generation. Faster processing speeds, an advanced electrical architecture and more memory give the all-new Uconnect its lightning-quick response to touchscreen input in as little as .05 seconds.

Transitioning to the Atlantis wiring architecture enables the all-new Uconnect system to proliferate throughout FCA’s brands. Every vehicle line will use a common platform with the Android operating system and benefit from the most advanced in-vehicle solution available in the market. This design provides the customer with a wealth of features and content and assists in consolidated data collection for improved quality and reliability.

Additional outputs enable up to four displays. Screens are available in a variety of aspect ratios – standard, landscape and portrait, offering more flexibility in packaging and design across all FCA brands and can work separately or in harmony, depending on user preference and purpose. Screens are available in 7, 8.4, 10.1, 10.25, 12 and 12.3-inch sizes, depending on the vehicle application. The all-new Uconnect represents the most screen area ever offered in an FCA product at up to 12.3 inches with up to 15 million pixels in Ultra HD. Touchscreen design includes touch sensitivity tailored for use in a moving vehicle. Screens also are developed using a specific combination of coatings to reduce glare, reflection and fingerprints resulting in increased visibility in all lighting conditions.

Eyes on the road
The all-new Uconnect features additional elements to reduce distracted driving. Voice control is improved with new microphone technology and placement. Upgraded software identifies more tone variation and recognizes commands versus background noise such as wind noise from a window rolled down at speed. Auto dimming and strategic use of warning signals and graphic displays have been tested in real-world driving conditions to cover a wide range of responses from individual drivers. For example, there are redundant audio and visual warnings for an automatic emergency braking event. Auto-dimming and night mode on the screen helps reduce eye strain when driving in the dark or in tunnels, with independent settings for each screen. For users who prefer touchscreen controls, redundant HVAC, comfort and radio operations within the touchscreen are improved for ease of use and response time.
Outside connections
The Uconnect experience is becoming less constrained to the vehicle itself, more helpful, content rich and personalized. It offers a strong, proven and intuitive app-based environment that provides fresh content via FOTA updates, fast interaction and seamless wireless integration with mobile devices.

Initially, FOTA improvements will focus on functions related to entertainment and comfort features, with vehicle operational improvements available later. Owners will receive a notification describing the upgrade each time a FOTA update has completed. When compared to a wireless phone or tablet, an automobile has hundreds of additional components and systems that will benefit from FOTA updates to improve overall quality and customer experience.

The global platform offers 4G network connectivity and supports the evolution to 5G. The trusted and secure ecosystem provides an optimal environment for continuous improvement through a built-in cellular network, allowing for new capabilities in FOTA updates, electrification and connected services.

Uconnect’s Android operating system brings access to a broad catalogue of connected features and the adaptability preps the platform for future growth. In planning for additional automated technology, the all-new Uconnect system takes autonomous driving initiatives into consideration for future products with the addition of a Telematics Box Module (TBM). The TBM assists in quickly moving large amounts of data, engineered for the fastest speeds available.

Cybersecurity
The use of a common Android platform, FOTA and more connectivity create the need for greater cybersecurity. To address ongoing efforts to combat hacking, the all-new Uconnect includes a number of layers of new security software and monitoring systems. The code and hardware work together to identify threats and report them for assessment. The ability to see hacking attempts in real-time enables a nearly immediate response.

Audio
The all-new Uconnect system features crisp, clear and powerful audio options. FCA’s next generation of vehicle sound systems will benefit from active noise cancelling (ANC). Previously only offered on premium vehicles and sound systems, the integration of ANC is expanding within FCA’s vehicle offerings.
Durability
Automotive electronics operate in a harsh environment. Because automobiles are exposed to extreme temperatures, the all-new Uconnect has operational capability from -22 degrees F to 185 degrees F with an automatic shutdown to self-protect in extreme overheat conditions. FCA electronics must adhere to the same rigorous durability schedule as the vehicle itself. Dirt, dust, humidity and shock loads are destructive forces and engineers design durability into the components to assure the Uconnect system meets or exceeds quality targets. Touchscreens are designed to take input from a gloved hand, and to resist scratching and impact.

Device Management
Owners can manage and charge their personal devices with a variety of options. Wireless charging is more prevalent with the all-new Uconnect. The Type A and Type C USB ports in the front of the vehicle are fully functioning and communicate with the Uconnect interface. Other Type A and Type C ports in the rear of the vehicle are for charging only with Type C USB ports charging up to four times faster.