

“The Xiaomi SU7”

Information compiled by anp management consulting GmbH, Essen, Germany

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The Xiaomi SU7

Performance



Five Core Self-Developed Core Technologies

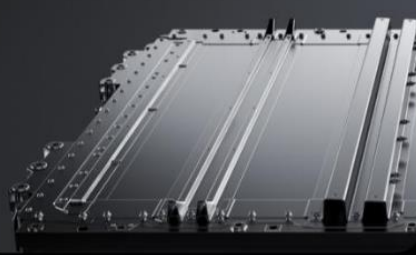
E-Motor



Xiaomi HyperEngine V6/V6s
- In Mass Production
- Industry-leading **21,000rpm**

Xiaomi HyperEngine V8
- Mass Production Planned 2025
- Max Speed **27,200rpm**

Battery



Xiaomi **800V** Silicon Carbide High Voltage Platform
- CTB Integrated Battery Technology
- **150kWh** Peak Power
- **1,200km** Range (CLTC)

Die-Casting



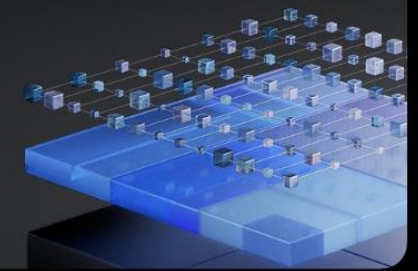
- **9,100t** Locking Force
- 72-in-1 Unit Die-Cast Rear Underbody
- Self-developed Xiaomi Titans Metal

Autonomous Driving



Phase 1 Total Investment **RMB4.7 Billion**
- End-to-End Sensing and Decision-Making AI Model
- All-in-One Lidar System
- Adaptive BEV Technology
- Road-Mapping Foundational Model
- Super-Res Occupancy Network Technology

Smart Cabin



Seamless Cross-device Connection
- Up to **5** Displays
- Xiaomi HyperOS
- Xiaomi CarIoT Open Ecosystem

Xiaomi aims to redefine the technology of the automotive industry.

- Positioned as a "**full-size high-performance eco-technology sedan**," Xiaomi SU7 (SU = Speed Ultra) aims to push the limits of performance, ecosystem, and mobile smart space.
- Lei Jun, the founder, chairman, and CEO of Xiaomi, highlighted that Xiaomi's venture into the car industry represents a major shift away from its smartphone roots and an essential move towards integrating the smart ecosystem encompassing humans, cars, and homes.
- He emphasized the challenges of entering the well-established automotive sector, noting its limited flexibility for newcomers: By dedicating 15 to 20 years to this endeavor, Xiaomi aspires to rank among the top five car manufacturers worldwide.“
- Xiaomi EV has invested over 10 billion CNY in the initial research and development phase.
- The R&D team comprises over 3,400 engineers and over a thousand technical experts in critical domains both in China and abroad.
- At the presentation, Xiaomi SU7 was compared with Tesla Model 3 Performance in terms of battery life at sub-zero temperatures and charging speed. The Xiaomi machine looks better than its competitor in all respects, the company says.
- Suppliers focusing on the luxury car market said Xiaomi did not approach the so-called luxury car supply chain, even though the company said it targets the segment.
- As China strives to foster local supply chains, Xiaomi will likely work primarily with domestic suppliers.

Xiaomi has introduced its electric vehicle in China, with the starting price set at 27,600 EUR.

▪ Launch and availability

- Founders Edition: Limited to 5,000 units, identical pricing to standard and Max editions, with deliveries commencing on April 3.
- Standard and Max Editions: Deliveries start at the end of April.
- Pro Variant: Deliveries commence at the end of May.
- Xiaomi SU7 had 576 test vehicles running in 300 cities, with a total road test mileage of 5.4 million kilometers.

▪ Pricing and model variants

- The standard variant of the SU7 is priced at 215,900 yuan, offering a competitive entry point into the electric vehicle market.
- For those seeking enhanced performance and features, the SU7 Pro is available at 245,900 yuan, aligning its starting price with that of the entry-level Tesla Model 3 in China.
- At the higher end of the range, the SU7 Max starts at 299,900 yuan, reflecting its advanced dual-motor, all-wheel-drive configuration and superior battery capacity.

The Xiaomi SU7 is available in three distinct models ...

Model	Price (RMB)	Motor Configuration	Battery & Range	Acceleration (0-100 km/h)	Top Speed	Notable Features
SU7	215,900	Single-motor, RWD	73.6 kWh, 700 km	5.28 seconds	210 km/h	BYD blade battery, 2,000 MPa body stiffness, 51,000 Nm/deg torsional stiffness
SU7 Pro	245,900	Single-motor, RWD	94.3 kWh, 830 km	-	-	CATL Shenxing Battery, matches entry-level Tesla Model 3 price
SU7 Max	299,900	Dual-motor, AWD	101 kWh, 810 km	2.78 seconds	265 km/h	CATL Qilin Battery, originally planned at 350,000 RMB

- **Xiaomi SU7 Standard Variant:** Priced at [215,900 yuan](#), this model comes with a single-motor, rear-wheel drive setup. It's powered by a [73.6 kWh BYD blade battery](#) based on lithium iron phosphate, offering a range of 700 kilometers. This variant is capable of accelerating from 0 to 100 km/h in 5.28 seconds and can reach a top speed of 210 km/h. It's notable for its high body and torsional stiffness, measured at 2,000 MPa and 51,000 Nm/deg, respectively.

... each with its own pricing structure.

- **Xiaomi SU7 Pro:** With a starting price of **245,900 yuan**, the Pro variant is also a single-motor, rear-wheel drive model. It utilizes a **94.3 kWh CATL Shenxing battery**, achieving a longer range of 830 kilometers. The pricing matches that of the entry-level Tesla Model 3 in China, positioning it as a strong competitor in the market.
- **Xiaomi SU7 Max:** The most premium option, the SU7 Max, begins at **299,900 yuan**. This model boasts a dual-motor, four-wheel drive system and is equipped with a **101 kWh CATL Qilin battery**, enabling an impressive range of 810 kilometers. It stands out for its rapid acceleration, going from 0 to 100 km/h in just 2.78 seconds, and a maximum speed of 265 km/h. Initially planned at 350,000 yuan, its current price offers significant value.

At a conference, Xiaomi introduced its self-made E-motors:

- HyperEngine V6/V6s and V8s, featuring advanced technologies like Bidirectional Full Oil Cooling, S-shaped oil circuits, and staggered silicon steel designs, rivaling traditional V8/V6 engines.
- The V8s, achieving a record 27,200 rpm, 425kW, and 635N·m torque, uses ultra high-strength silicon steel (960MPa) for a two-fold strength increase over standard offerings.
- Its cooling system doubles the stator's heat dissipation area and enhances rotor cooling by 50%, with stator laminations further improving dissipation by 7%.
- Set for 2025 mass production in Xiaomi EVs, the V6/V6s motors lead with a 21,000rpm speed, with the V6 offering 299PS/400N·m and the V6s 374PS/500N·m, setting new industry standards.



SU7 CTB (Cell to Body) Battery Technology

- Xiaomi developed CTB Integrated Battery Technology, featuring Inverted Cell Technology, a multifunctional elastic interlayer, and streamlined wiring, achieving a 77.8% integration efficiency—world-leading for CTB batteries. This results in a 24.4% performance boost and 17mm height reduction, with capacities up to 150 kWh and over 1200 km CLTC range.
- For safety, Xiaomi employs a pressure relief valve and a 14-layer protection system for superior cabin safety. Its heat dissipation uses dual-side water cooling with 7.8m² cooling area, four times above average, and 165 aerogel insulation pieces resistant to 1000°C.
- Xiaomi's EVs include a top-tier Battery Management System (BMS) with ASIL-D safety level, featuring three thermal runaway monitors and continuous early warning systems. Each battery undergoes over 1050 safety checks and 96 times the typical durability testing, ensuring unmatched reliability and safety standards.



SU7 CTB (Cell to Body) Battery Technology

- The battery system is equipped with 17 layers of insulation protection for enhanced security.
- The side of the battery cell incorporates 165 parts of aerogel insulation material.
- Components such as enclosures and beams are manufactured using thermoformed steel, high-strength steel, and other materials.
- Real-time monitoring of the battery's condition is achieved through the Car-Cloud Cooperation Network, which performs 800 detections per second.
- In emergencies, the battery can be disconnected in just 4 milliseconds.
- Inverted-Cell technology allows energy to be discharged downwards in extreme situations, increasing cabin safety.



Xiaomi introduced its Xiaomi Hyper Die-Casting T9100, and its own alloy, Xiaomi Titans Metal.

- Xiaomi is the sole domestic car maker to self-develop both die-casting processes and materials.
- The two T9100 die-casting machines, made by Haitian (according to unofficial sources) span 840m², weigh 1050t, and exert a 9100t locking force.
- Their quality judgment system inspects parts in 2 seconds, increasing efficiency tenfold over manual checks.
- This innovation merges 72 car parts into one, cutting 840 welds, lowering car weight by 17%, and reducing production time by 45%.
- Xiaomi Titans Metal, chosen from over 10.16 million alloy formulas via a "Multi-Material Performance Simulation System," optimizes strength, resilience, and stability.



Xiaomi purchased two 9,100 tons Giga Presses, made by Haitian (acc. to unofficial sources).

- Xiaomi's commitment extends across the die-casting chain, focusing on quality and innovation beyond just clamping pressure tonnage.
- The Titans Metal, a high-strength, high-resilience, heat-treated die-casting material used for manufacturing the rear floor was developed by Xiaomi and is officially named "Xiaomi Titan Alloy."
- This is an alloy material comprising more than 10 elements, including aluminosilicate, rare earths, and zirconium.
- Aluminum content constitutes about 30% of the alloy.



SU7 is among the industry's best by 2024.

- Autonomous driving with 3 innovations:
 - Adaptive BEV Technology
 - Road-Mapping Foundational Model, and
 - Super-Res Occupancy Network Technology.
- Adaptive BEV adjusts perception algorithms by scenario, offering visibility from 5cm to 250m, enhancing high-speed, and parking visibility with 5-20cm granularity.
- The Road-Mapping Model improves driving trajectories in real-time without high-definition maps by learning from complex intersections and driver habits. Additionally, Xiaomi created the "End-to-End Sensing and Decision-Making AI Model" for automated parking, dynamically adjusting to complex scenarios like elevator-equipped facilities. Hardware-wise, the system includes dual NVIDIA Orin chips (508TOPS), one LiDAR, eleven cameras, three radars, and twelve ultrasonic sensors on the SU7 Max.
- Based on the ultra-high resolution occupancy grid technology, the system's detection accuracy for shaped obstacles is only 0.1 m (0.32 m for Tesla), and it is more accurate for small objects like highway toll booth barriers and temporarily placed movable traffic lights.
- Additionally, it can also detect water mist stirred up by the vehicle in front during rain and snow, thereby reducing the likelihood of misidentification.



Xiaomi's EV Smart Cabin features a user-friendly, "human-centric" design.

- Xiaomi's Smart Cabin features a 16.1-inch 3K console, 56-inch HUD, 7.1-inch rotating dashboard, and tablet mounts.
- Powered by the Snapdragon 8295 chip (30 TOPS), it supports an integrated experience across five screens, offering tablet-like usability without a learning curve.
- The vehicle OS boots in 1.49 seconds, facilitating seamless smartphone connectivity and access within the cabin.
- The system integrates the Xiaomi tablet app ecosystem and 5000+ apps, allowing smartphone apps to be used as in-car applications.
- It connects with 1000+ Xiaomi smart home devices for a comprehensive CarIoT ecosystem, supports CarPlay, and accommodates iPads and accessories, enhancing in-car interaction and automation.



Xiaomi offers a full-stack self-developed intelligent Pilot powered by two Nvidia Drive Orin chips.

■ Smart Driving Systems

- Xiaomi Pilot Pro: Utilizes a pure vision solution with one **Nvidia Drive Orin chip** (84 Tops computing power).
- Xiaomi Pilot Max: Adds LiDAR to the Pro setup, equipped with **two Nvidia Drive Orin chips** (508 Tops).



The 400 V platform allows a 350 km range with a 15 Min charge, while the 800 V version achieves 510 km.

- **Charging and infrastructure**

- The 400 V platform allows for a 350 km range with a 15-minute charge, while the 800 V version achieves 510 km.
- The entire system uses an 871-V charging platform, which some other brands may refer to as "quasi-900 V" in their advertising, and it is extremely fast. Data published on the website indicate that 5 minutes of charging time can extend the range by 220 km.
- 15 minutes of charging can extend the range by 510 km.
- Xiaomi's supercharging stations feature a 600 kW liquid-cooled solution, first launching in Beijing, Shanghai, and Hangzhou.

- **Special features**

- The HyperOS system enables seamless connectivity among Xiaomi's AIoT devices supporting wireless CarPlay and iPad.
- The cockpit features a 16.1-inch central screen and a 7.1-inch instrument pane
- 56-inch Head-Up Display, Large canopy glass
- Two additional screens, so-called Xiaomi tablets called Mi Pads, are available for passengers in the rear seat
- Onboard 4.6L refrigerator with a capacity of 4.6L, which can hold up to 6 cans of Coke.
- Various wheel sizes (19", 20", and 21").
- Nine exterior colors and four interior options, with a drag coefficient of 0.195 Cd.

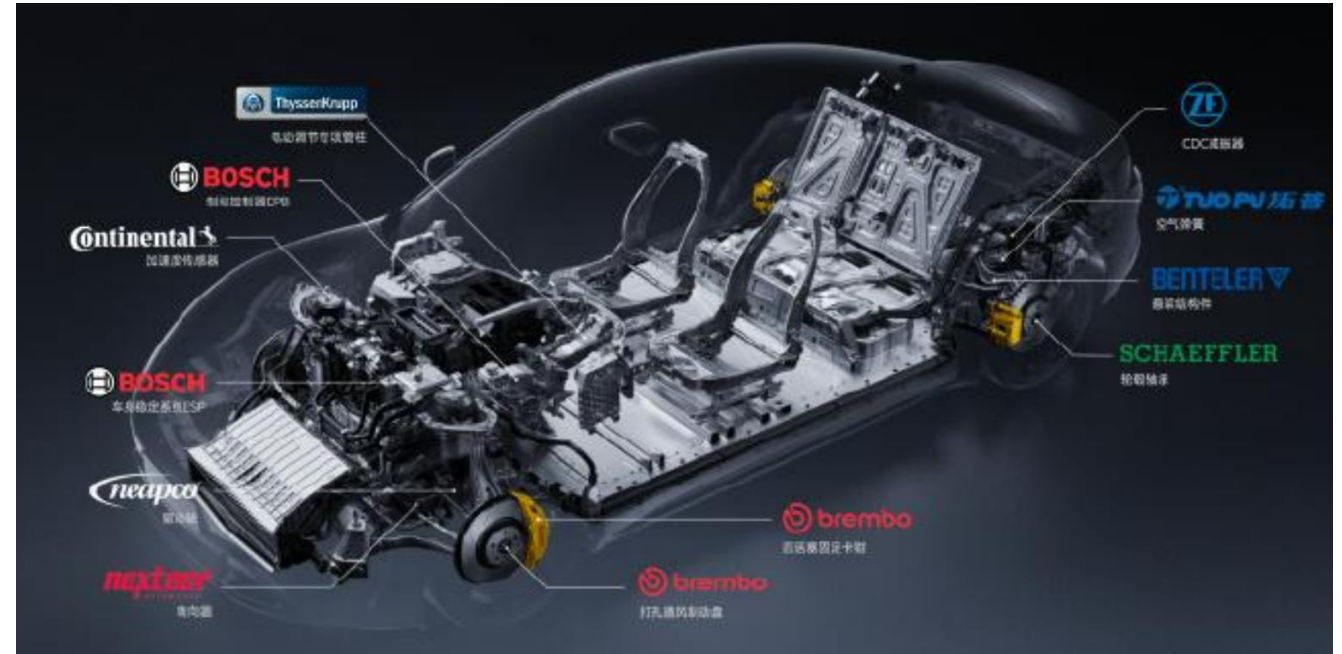
Xiaomi completed the construction of Beijing factory with an annual target production of 200,000 EVs.

- The Xiaomi EV Hyperfactory facility features **six workshops**, including unique die casting and battery workshops, enhancing their manufacturing capabilities and boasts **29 R&D labs** to expedite the development cycle for new vehicles and includes a **2.5 km test track** to ensure each Xiaomi SU7 undergoes testing before delivery, aiming for a production capacity where assembly is completed in just 76 seconds.
- Highlighting automation, the factory uses **269 welding machines** for a fully automated steel and aluminum body frame production, **36 robots for 0.5 mm precision in assembly**, and **700+ robots for various tasks**, achieving 100% automation in production and quality testing, including UV light and LiDAR technologies for exterior and frame inspection with up to 99.9% accuracy.
- Environmental sustainability is a key focus, with the factory's roof equipped with photovoltaic (PV) panels generating 164 million kilowatt-hours annually, alongside stringent controls on wastewater and exhaust emissions, achieving 99% wastewater treatment efficiency and zero discharge of heavy metals, plus the use of 30% recycled aluminum in production.



The architecture includes modules such as electronics and electrical, electric drive system, battery system, chassis, lower body system, thermal management system, etc.

- Benteler
- Bosch
- Brembo Braking System
- BYD Battery
- CATL Battery
- Continental
- Nexteer
- Schaeffler
- ThyssenKrupp
- ZF Friedrichshafen
- Single-motor: United Automotive Electronic Systems, Bosch's JV with Zhonglian Automotive Electronics.



Xiaomi SU7 Series is competing with several challenging market peers:

- Tesla Model 3
- Porsche Taycan Turbo S
- Zeekr 007
- XPENG P7
- XPENG P7i
- NIO ET5/7
- BYD Han EV
- AITO S7

Specifications [1/3]

Trim	SU7	SU7 Pro	SU7 Max
Launch date	March 28, 2024	March 28, 2024	March 28, 2024
Type	BEV (battery electric vehicle)	BEV (battery electric vehicle)	BEV (battery electric vehicle)
Form	Sedan	Sedan	Sedan
Price (RMB)	215,9	245,9	299,9
Basics			
Length*Width*Height (mm)	4,997*1,963*1,455	4,997*1,963*1,455	4,997*1,963*1,440
Wheelbase (mm)	3	3	3
Seats	5	5	5
Minimum turning radius (m)	05. Jul	05. Jul	05. Jul
Frunk capacity (L)	105	105	105
Trunk capacity (L)	517	517	493
Drag coefficient (Cd)	0.195	0.195	0.195
Electric spoiler	Unsupported	Optional	Standard
Performance & Range			
0-100 km/h (s)	Mai 28	Jul 24	Feb 78
Top speed (km/h)	210	210	265
CLTC range (km)	700	830	800
10%-80% charging time (min)	25	30	19
Range from 15-min charge (km)	350	350	510

Specifications [2/3]

	SU7	SU7 Pro	SU7 Max
Powertrain			
Voltage platform	400 V	800 V	800 V
Maximum power (kW)	220	220	495
Maximum horsepower (PS)	299	299	673
Maximum torque (N-m)	400	400	838
Front motor type	NA	NA	Induction asynchronous motor
Front motor maximum power (kW)	NA	NA	220
Front motor maximum torque (N-m)	NA	NA	338
Rear motor type	Permanent magnet synchronous motor	Permanent magnet synchronous motor	Permanent magnet synchronous motor
Rear motor maximum power (kW)	220	220	275
Rear motor maximum torque (N-m)	400	400	500
Battery capacity (kWh)	73.6	94.3	101
Battery type	Blade Battery	Shenxing Battery	Qilin Battery
Battery supplier	BYD FinDreams	CATL	CATL

Specifications [3/3]

	SU7	SU7 Pro	SU7 Max
Cockpit			
Cockpit system	Xiaomi HyperOS	Xiaomi HyperOS	Xiaomi HyperOS
Cockpit chip	Qualcomm Snapdragon 8295	Qualcomm Snapdragon 8295	Qualcomm Snapdragon 8295
Center console	16.1-inch, 3K resolution	16.1-inch, 3K resolution	16.1-inch, 3K resolution
Instrument screen	7.1 inch	7.1 inch	7.1 inch
Head-up display	NA	NA	56 inch
Number of speakers	10	10	25
Virtual voice assistant	XiaoAi	XiaoAi	XiaoAi
Smart driving			
Smart driving operating system	Xiaomi Polit Pro	Xiaomi Pilot Max	Xiaomi Pilot Max
Smart driving chip	Nvidia Drive Orin	Nvidia Drive Orin * 2	Nvidia Drive Orin * 2
Smart driving chip power (Tops)	84	508	508
Number of Lidar	0	1	1
Number of millimeter wave radar	1	3	3
Number of exterior cameras	11	11	11
Number of ultrasonic radars	12	12	12
Sub-meter high precision positioning system	Standard	Standard	Standard
Capability	Highway pilot assisted driving, valet parking assistance	Highway pilot assisted driving, city pilot assisted driving, valet parking assistance	Highway pilot assisted driving, city pilot assisted driving, valet parking assistance

Xiaomi SU7 EV Modena architecture [1/3]

- Xiaomi Auto's Modena platform is Xiaomi's fully self-developed automotive platform.
- **Body**
 - For safety reasons, the entire car features an armored steel-aluminum hybrid body with a cage, achieving a composition of 90.1% high-strength steel and an aluminum alloy.
 - The torsional rigidity reaches 51,000 Nm/degree, which exceeds that of the super sports car Bugatti Veyron (50,000 Nm/degree).
 - The battery cross member and the sill beam are made from 2000 MPa ultra-high-strength steel and an ultra-wide multi-chamber extruded aluminum alloy, respectively, withstanding side impacts of up to 820 kN.



Xiaomi SU7 EV Modena architecture [2/3]

- Featuring groundbreaking aerodynamics with a drag coefficient of 0.195, the SU7 is the world's most aerodynamic production car, thanks to collaborations with renowned automotive designers and engineers previously associated with BMW, Mercedes-Benz, and other premium brands.
- Xiaomi has big ambitions and it wants to become one of the top 5 car companies in the world in the next 15-20 years.




SU7 Technology

xiomi su7


2.78s
0-100 km/h
acceleration

10.67s
0-200 km/h
acceleration


265km/h
Top
speed




Individual drive modes




20-sec boost mode





Launch control





Xiaomi smart chassis


Adaptive ride control


Adaptive aerodynamics



Adaptive roll control in connering



Adaptive flank




Top-Level braking system

33.3m 100-0 km/h braking distance


Brembo® 4-piston
calipers


Bosch DPB
brake controller


Bosch ESP10.0 stability
control system

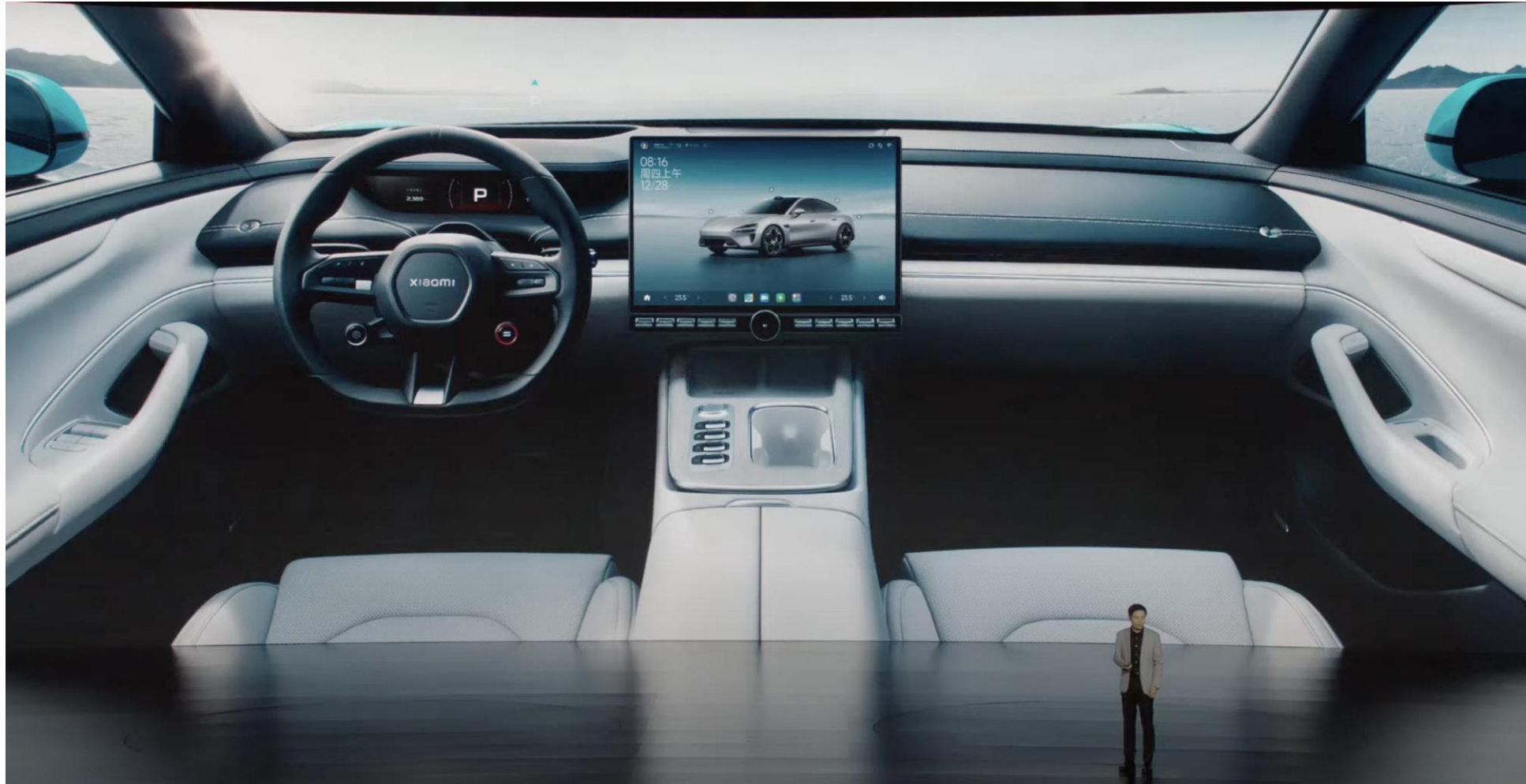
SU7 Exterior Colors



Exterior Dimensions

Wheelbase	118.1 inches
Length	196.7 inches
Width	77.3 inches
Height	57.3 inches

SU7 Interior [1/2]



SU7 Interior [2/2]

The interior of the Xiaomi SU7 is minimalistic - in Tesla style. You can choose the color scheme. Ergonomic chairs are installed.





SU7



SU7 Pro/Max





Do you have any questions or would you like to discuss your project with us?

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