

P2002 SIERRA MkII



SPECIFICATION AND DESCRIPTION



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This document applies only to the Tecnam P2002 SIERRA MKII and is published for the purpose of providing general information for the evaluation of design, powerplant, performance and equipment.



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GENERAL DESCRIPTION

P2002 SIERRA MkII

Next-generation Light Sport Aircraft

Construction

The P2002 Sierra MkII is a two-seater side by side, low wing aircraft. The Sierra MkII features superlative performance and flying qualities, confirmed by hundreds of P2002 aircraft sold throughout the world. The ease of piloting and maintenance make this aircraft an excellent solution for training in flight schools. It is also an ideal platform for surveillance and, of course, for pure recreational and private use. The option to use 100LL AVGas or unleaded automotive fuel (with up to 10% ethanol content) makes this aircraft even more flexible and cost effective.

The P2002 Sierra MkII encompasses the latest developments in Tecnam aircraft. The use of advanced software for design, structural and fluidynamics analysis, and experience in building airplanes using all types of materials, results in continuous aircraft improvement. Due to the tapered laminar airfoil and the slotted flaps the P2002 Sierra MkII is an outstanding aircraft with the perfect mix of aerodynamics, performance, and structural efficiency.

Many flight schools in Europe and all over the world

rely on the P2002 for students' initial training. Many of them continue their training up to the ATPL using the Tecnam P2006T twin, making Tecnam the ideal one-stop-shop for training aircraft all over the world. The Tecnam P2002 Sierra MkII's structure is based on a steel tube cabin truss covered on the forward fuselage by carbon fiber panels while the tail cone is covered by light alloy sheets. The wing is all light alloy built with a single spar and full metal torsion box. The wing's leading edges are easily detachable for repairs and also incorporate the fuel tanks (110 Lt - 29 US Gal in total). They are separated from the cabin in order to maximize passive protection. The sliding canopy allows 360° of vision in the cockpit and has full rollover protection tested via inverted drop tests.

The horizontal stabilator tail design, provides remarkable longitudinal hands-off stability along with minimum drag and weight penalty. This provides balanced two finger flight control. The wide slotted flaps, are electrically activated and allow stall speed lower than 40 Kts, and allow the aircraft to perform steep approaches and easier landings. The all alloy ailerons are effective and ensure a quick roll rate without being overly

sensitive. All control surfaces are made out of light alloy and all, except for flaps and tab, are mass-balanced.

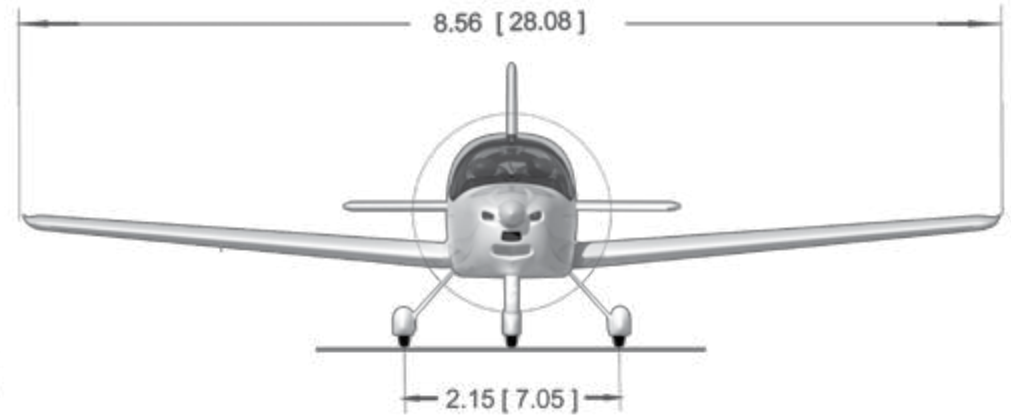
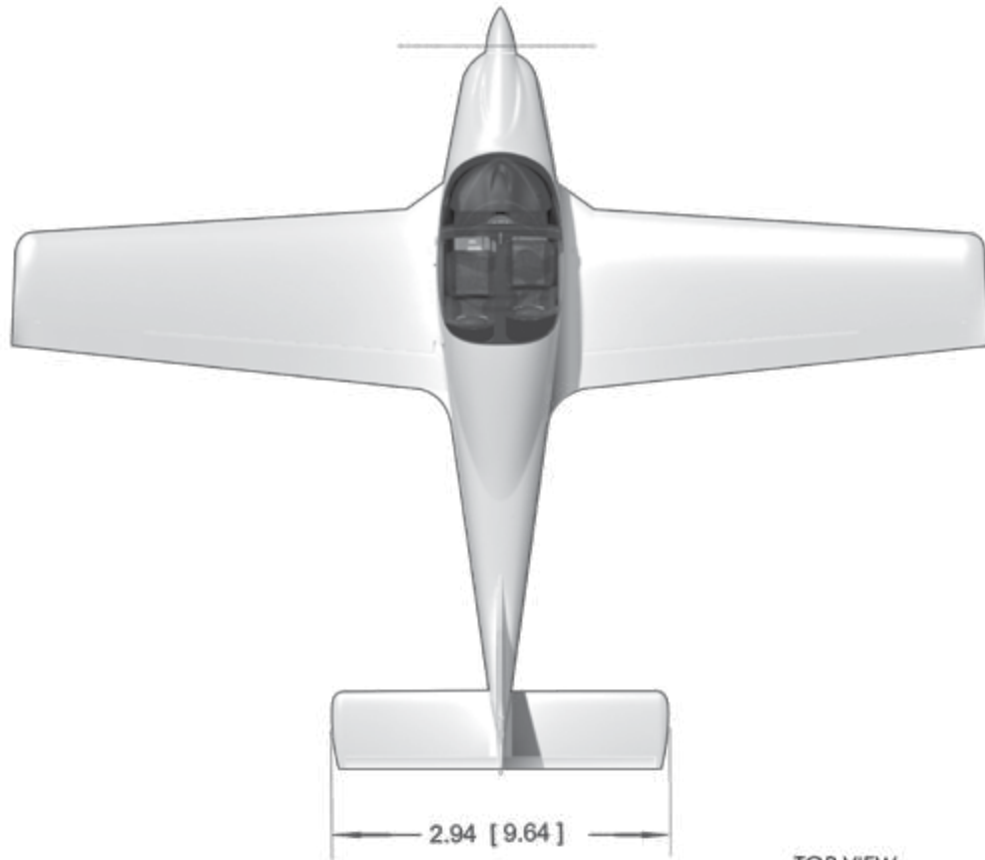
Landing Gear

The main landing gear is composed of light alloy spring. This provides a main gear that is robust for unimproved landing strips and requires no service. The trailing link nose gear uses a rubber shock absorber system that was designed for the rigours of the training environment. The main landing gear wheels and brakes are 5.00x5, providing the facility to use multiple different tire brands that can be chosen in relation to the mission type and expected number of landings per hour. There are toe brakes, with a parking brake valve located on the console between the seats.

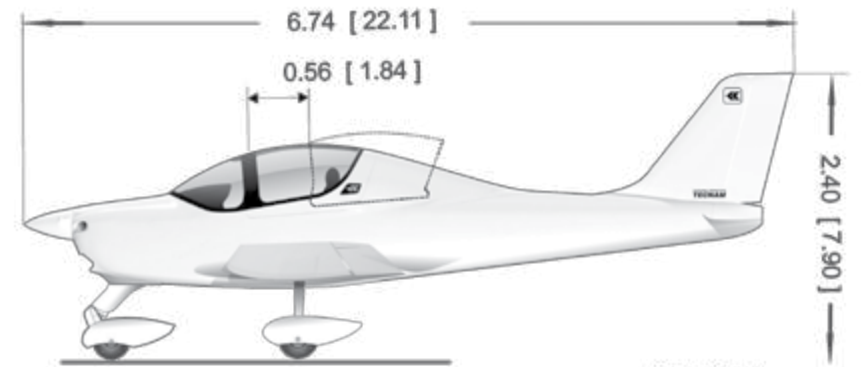
Certification

The Tecnam P2002 Sierra MkII is delivered in full compliance with the requirements of US LSA ASTM F2245.

EXTERIOR



FRONT VIEW



SIDE VIEW

1.00 [3.28]

-Dimensions in meter [feet]-



DIMENSIONS

Wing	ft	m	Dimensions	ft	m
Span (overall)	28.08	8.56	Overall Height	7.9	2,4
Area	123.8ft ²	11,5 mq	Overall Length	22.1	6,74
Dihedral	5°				
Aspect ratio	6.4				

DESIGN WEIGHT AND LOADING

SIERRA MkII LSA

kg lb

Maximum Take-Off Weight	600	1,320
Empty Weight, Standard	367	809
Useful Load	233	514
Baggage allowance	20	44

PERFORMANCE

LSA 912 ULS2

Max Cruise Speed KTAS	120 kts	222 km/h
Stall Speed (Flaps Down Power Off) KCAS	40 kts	74 km/h
Practical ceiling	14000 ft	4267 m
Take off run	489 ft	149 m
Take off distance	984 ft	300 m
Landing Run	620 ft	189 m
Landing Distance	1100 ft	335 m
Rate of climb	923 ft/min	4,7 m/sec
Range	642 NM	1188 km



All estimated performance data are based on airplane weights at MTOW; standard atmospheric conditions; level, hard surface, dry runways, no wind.

POWERPLANT & ACCESSORIES

The top and bottom engine cowls are quickly and easily removable making any maintenance procedure faster to accomplish. The top cowl has two large hinged gull-wing style doors for easy access and effective preflight inspection of the entire engine compartment. The engine is set low and the cowling slopes down from the windshield, so forward visibility is outstanding even with a fully equipped instrument panel. The steel firewall is sound proofed and the power plant is a liquid and air cooled Rotax 912ULS2 four- cylinder, four- stroke engine with an integrated 1:2.4286 reduction gear.

The use of liquid cooled heads and air cooled cylinders allows the engine to maintain safe operating temperatures even if a rapid descent is performed immediately after a prolonged climb. A fixed pitch wooden/composite wrapped Sensenich propeller comes as standard with a ground adjustable pitch propeller; a constant speed V.P. propeller are available as options. The quick drain gascolator is installed under the cabin door and provides easy access for checking fuel. An electric fuel pump is installed to provide an effective back- up to the mechanical one. The battery is located in the rear of the fuselage with easy access through an external hinged door.

ROTAX 912 ULS2

- 4-cylinder
- 4-stroke liquid-/air-cooled engine with opposed cylinders
- Dry sump forced lubrication with separate oil tank, automatic adjustment by hydraulic valve tappet
- Mechanical fuel pump
- Dual electronic ignition
- Propeller speed reduction unit
- Air intake system
- Gearbox Reduction Ratio 2,43:1

ROTAX[®]
AIRCRAFT ENGINES



STANDARD EQUIPMENT

FLIGHT INSTRUMENTS AND INDICATORS

Magnetic Compass
Airspeed Ind., Km
Altimeter
Vertical Speed
Bank Indicator
Pitot System
Static System

ENGINE INSTRUMENTS

Tachometer
Hour Recorder
Oil Press
Oil Temp.
Head Temp.
Fuel Press.
Voltmeter
Lh + Rh Fuel Qty
Stabilator Trim Position Indicator
Flap Indicator

FLIGHT CONTROLS

Hydraulic Toe Brakes
Parking Brake
Electrical Flaps, Preselect
Dual Flight Controls
Steerable Nose Wheel
Engine Controls:
o Central Quadrant With Single Throttle Lever
- Choke
Stabilator Trim, Electric (Controlled From Stick)
Fuel Control Selector With Lh/Rh Off (Andair)

ELECTRICAL SYSTEM

12 VOLT 18A AMP. Battery, Alliant
12 VOLT Alternators-20 AMP.
Starter Key ACS
Split Starter
Rocker Switches:
- Avionic Master
- Fuel Pump

- Landing light
- Nav. Light
- Strobe light
Circuit Breaker Panel
Landing/Taxi Light
Wing Tip Strobe And Position Light LED
12 Volt socket
Warning Lights:
- Alt Out

FUEL SYSTEM

Two Integral Fuel Tanks With 55 Litres /14.53 US Gal Total Capacity
Engine Driven Fuel Pumps
Auxiliary Fuel Pumps, Electric
Fuel Tank Quick Drain , Two
1 X Shut Off Valve

INTERIOR

Pilot And Co-Pilot Seats, Simulated Leather adjustable Fore And Aft
Seat Belts 4 Points, All Seats

Wall To Wall Carpeting
Map & Storage Pockets
Radio Call Plate
Soundproofing
Luggage Compartments
Emergency Hammer

EXTERIOR

Epoxy Corrosion Proofing, All Structure
Canopy, Lock And Key
Tie Down Rings
Main Wheels, 5.00 X 5 - Nose 5,00 X 5

EXTERIORS LIGHTS

Wing Tip Strobe And Position Light LED
Landing/Taxi Light

CABIN COMFORT SYSTEM

Windshield Defroster
Ventilator Adjustable
Heating System

POWERPLANT AND PROPELLER

Inox Firewall
Engine - 1 ROTAX 912ULS2 100 HP
- 4 Cylinders
- Liquid/air cooled
- Integrated reduction gear
Dual Ignition System
Throttle Control (Central)
Tubular Steel Engine Mount
Propeller: Sensenich 2 Blade Fix Pitch
Propeller Spinner
Two Air Filter

Oil Filter
Oil And Water Coolers
Fire Sleeve Fuel And Oil Tubes
Thermostatic Oil Valve

PRODUCT SUPPORT/DOCUMENTS

Manufacturer's Full Two Year Limited
Warranty
Pilot's Operation Handbook
Maintenance Manual
Parts Catalogue



AVIONICS OPTIONS

AVIONICS OPTION 1

SIX PACK PACKAGE

Includes the following equipment:



FLIGHT INSTRUMENTS AND INDICATORS

- Attitude, Electric
- Directional, Electric
- Turn & Bank

ENGINE ANALOGUE INSTRUMENTS

- Tachometer
- Hour Recorder
- Oil Press
- Oil Temp.
- Head Temp.
- Fuel Press.
- Voltmeter
- Ammeter
- Lh + Rh Fuel Qty

AVIONICS PACKAGE

- GMA 240 Audio Panel
- GTR 200 COM
- GTX 335 Transponder with GPS
- AERA 796 GPS XM VERSION
- Stick Push-To-Talk Switch-Pilot/Copilot
- Mic & Phone Jacks-Pilot/Copilot
- Antennas:
 - - Transponder
 - - VHF
 - - GPS

Non-Additive. Replaces all Standard Avionics



AVIONICS OPTION 2

GARMIN G3X PACKAGE

Includes the following equipment:



TWO DISPLAY GDU 460 WITH EIS

- GDU 460
- GDU 460
- GSU 25 ADAHRS
- GEA 24 Engine Instrument Module

- GMU 22 Magnetometer
- GTP 59 Temperature Probe
- LRU Kit
- Installation Kit
- G3X Sensor Kit
- GA 56 Antenna

GSU CONFIGURATION

- Amps (Ammeter Shunt Or Hall Effect)
- Monitor CT
- Aircraft Bus Voltages
- Oil Temperature
- OAT
- Oil Pressure
- Manifold Pressure
- Fuel Pressure
- RPM
- Trim Indicator
- Lh + Rh Fuel Qty

AVIONICS PACKAGE

- GMA 240 AUDIOPANEL
- GTR 200 COM
- GTX 35R Transponder mode S remote mounted
- Stick Push-To-Talk Switch-Pilot/Copilot
- Mic & Phone Jacks-Pilot/Copilot
- Antennas:
 - Transponder
 - VHF

Includes also:

- GDU 465 (Exchange for Std. GDU 460)
- GA55 XM Antenna
- GPS 20A - ADS-B OUT
- Non-Additive. Replaces all Standard Avionics.



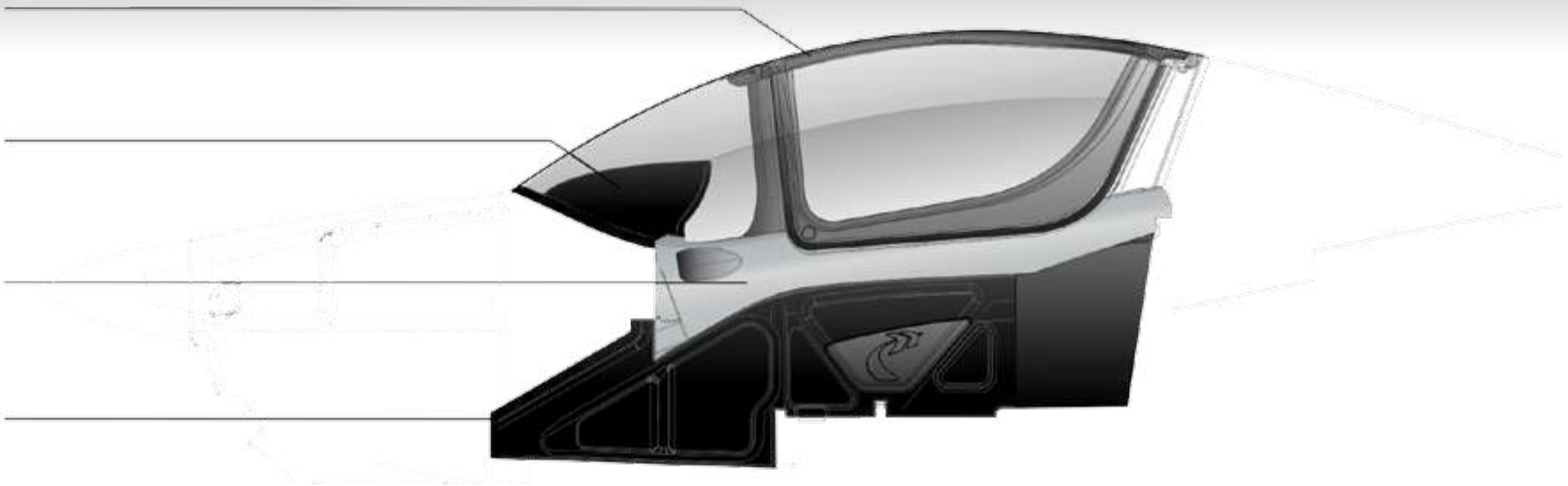
STANDARD INTERIOR

Top Panels
Gray

Glareshield
Black

Side Covers
Light Gray

Lower Panels
Black



Textile logo

P2002 Sierra MkII

Seat Covers_option B
Leather Light Gray



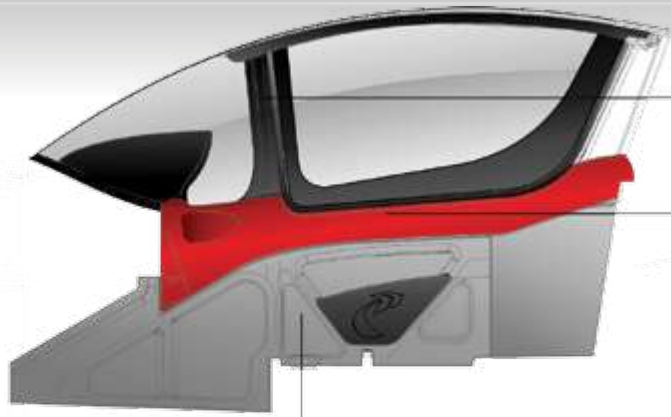
Textile logo

P2002 Sierra MkII

Seat Covers_option A
Leather Anthracite Gray

SPECIAL INTERIOR

PREMIUM



Top Panels *Black or Medium Gray*

Side Covers *Painted as the Exterior*

Lower Panels *Black or Medium Gray*

POWER



Top Panels *Black or Medium Gray*

Side Covers *Painted as the Exterior*

Lower Panels *Black or Medium Gray*

SEATING



Primary Covering
Leather



Black

or



Light Gray

Central Covering
Perforated Alcantara



Medium Gray

Stitched Color
combination with exterior paint

PREMIUM



Primary Covering
Leather



Black

Central Covering
Perforated Alcantara



Medium Gray

Stitched Color
combination with exterior Paint

POWER

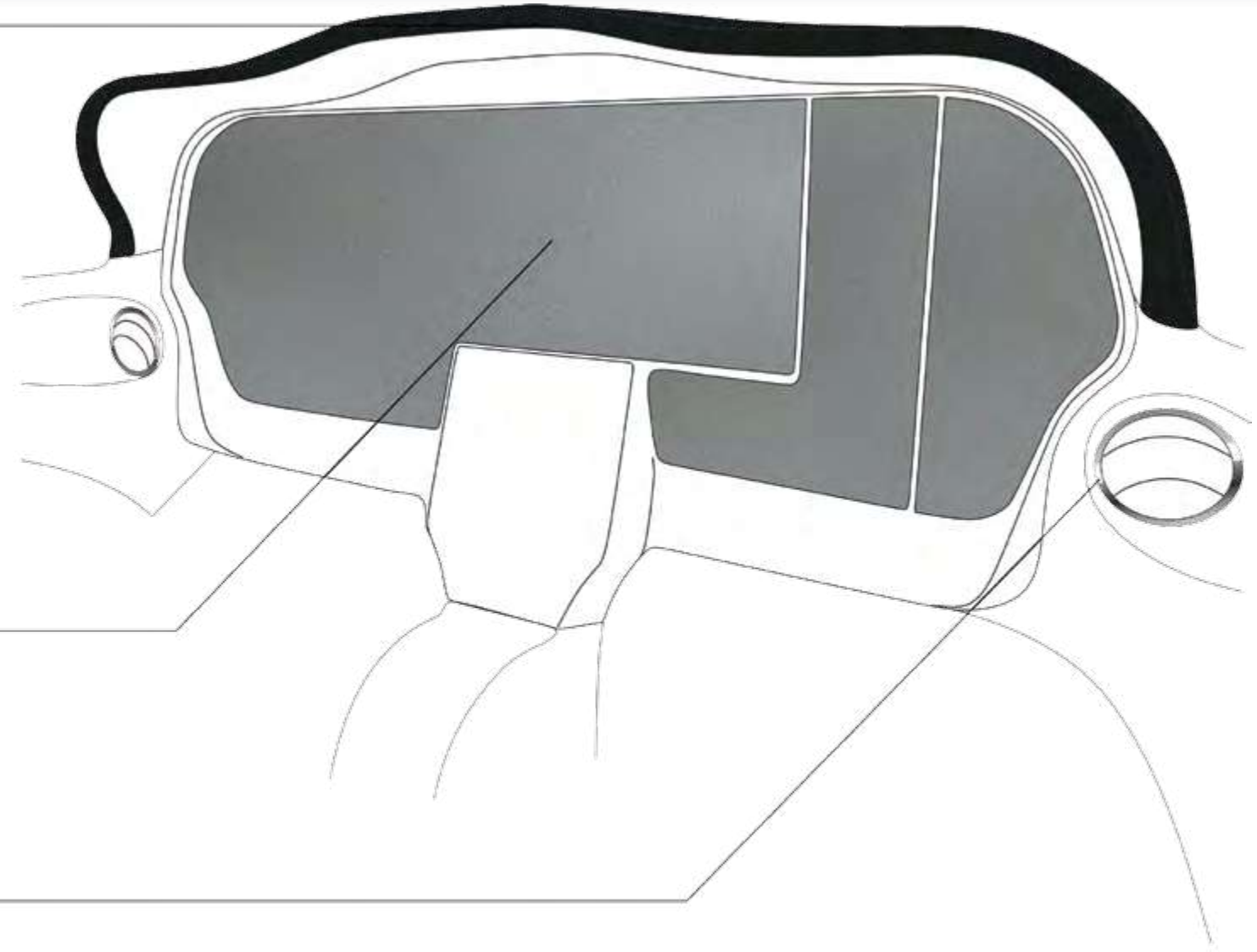
PANEL FINISH

ALL VERSIONS

Glareshield



Mat Black



Instrument Panel Textures



Titanium Metal Gray

Air vent outline



Mirror Chrome

PAINT SCHEMES



Many color options for you to choose: from base Standard livery to the Special Paint Two colors. **More info on:** colors.tecnam.com



Pascale Museum at Tecnam Headquarter Capua

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