

ALL-NEW KIA OPTIMA

Press Information



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1. INTRODUCTION

Kia Optima – the all-new sophisticated and refined sedan

The next generation Kia Optima (formerly the Magentis) made its world premiere at the New York International Auto Show in April 2010 – immediately demonstrating the Kia brand's *Power to Surprise*. It is a completely fresh design from the ground up and consequently Kia's latest generation of its popular mid-size sedan is absolutely transformed, embodying a bold, athletic and yet sophisticated visual energy.

Under the direction of Kia's Chief Design Officer Peter Schreyer, the Kia design teams have now created a third-generation Optima that brings a new level of sophistication and refinement into the Kia product line-up. Longer, lower and wider than the previous generation model, the new Optima features a significantly longer wheelbase (up by 75 mm) and will offer much more space for people and cargo.

"With the all-new Optima, Kia's global design team has created a vehicle with distinctive dimensions and proportions that stands apart from everything else in its segment," Kia Motors Australia President and CEO Mr M.K. Kim explained. "Using an all-new platform and an all-new bodyshell, Optima moves our mid-size sedan product up to the next level of Kia's design revolution.

"In keeping with our commitment to deliver not only style but substance, the new Optima has also been optimised locally by the Kia Motors Australia product planning team to ensure driver satisfaction."

While meeting all of the performance, styling and sophistication criteria demanded by the Australian market, the new Optima continues to deliver Kia's cornerstone value with an RRP of \$36,990 (excl. statutory charges & dealer delivery).

Kia's product concept behind the creation of new Optima had focused on four key areas. Stand-out Styling – a unique exterior with a driver-oriented interior; Class-leading Performance – down-sized but more efficient engines with six-speed transmissions; Superior Packaging – new, longer wheelbase platform; Advanced Features – high-tech options to boost Optima's status and Kia's brand identity.

The sedan which resulted from this product concept has been instantly embraced. Launched on the domestic Korean market in May 2010, new Optima was an instant 'hit' with monthly sales exceeding 10,000 units in June and July to claim the No1 family sedan position for Kia for the very first time.

New Optima is significantly sleeker than the previous model, with an aerodynamic drag figure of Cd 0.29 (down from 0.32) – enhancing refinement, performance and fuel economy.

Sophisticated engine and transmission

The new Optima is powered by a 2.4-litre Theta II unit with GDI (gasoline direct injection). The introduction of GDI technology, which represents the biggest advance in fuel injection technology since the 1980s, allows Kia to achieve three previously incompatible goals – lowering emissions and improving fuel economy, while also increasing the power and torque outputs to 148kW @ 6300rpm and 250Nm @ 4250rpm respectively.

The new 'Theta II' engine features numerous design enhancements over its predecessor, with a two-stage variable induction system (VIS), Dual Continuously Variable Valve Timing (D-CVVT), upgraded electronics and low-friction components, while also featuring lighter construction.

The Optima comes standard with a six-speed automatic transmission which offers two operating modes – fully automatic (ideal for city driving) or 'Sport' which allows for clutch-less manual sequential gear changes for greater driver involvement – using either the centre console selector lever or the new steering wheel-mounted 'shift paddles'.

Enhanced standard features

The new Optima comes packed with a long list of premium features including smart key with push button start, anti-theft immobiliser, leather trim with wood-look interior, heated 4-way power front passenger seat and heated and ventilated 8-way power driver's seat with a 2-position memory, cruise control with steering wheel mounted controls, 7-function trip computer, height and reach adjustable steering wheel, alloy sports pedals and cooling glove box.

Interior comfort is maintained by dual-zone automatic climate-control air-conditioning with floor console mounted rear air vents. The seven-speaker MP3 compatible CD player, AM/FM radio sound system with iPod and Bluetooth connectivity is operated by steering wheel mounted controls.

Exterior features include panoramic electric sunroof, window tinting, dusk sensing HID type front headlamps with washer, body coloured sport bumpers, door handles and outside electric door mirrors (heated) and LED daytime running lights (DRL).

New Optima presents buyers with a range of state-of-the-art active and passive safety systems and equipment as standard. Available 'active' safety technologies to help Optima drivers avoid potential accident situations include ESC (Electronic Stability Control), TCS (Traction Control System), BAS (Brake Assist System) and a new system – HAC (Hillstart Assist Control).

A new rear-view camera is fitted to assist drivers during reversing manoeuvres. The camera uses a wide-angle lens to transmit images to an LCD display set within the interior rear-view mirror. Simultaneously this system enables the driver to check the rear view and the blind spot immediately behind the car.

Appealing to existing and new Optima customers

All Australian bound Optimas will be supplied from Kia's Hwasung factory in Korea and will be available in seven exterior colours: Snow White Pearl, Bright Silver, Ebony Black, Platinum Graphite, Satin Metal, Santorini Blue and Spicy Red.

The first-generation Optima/Magentis was introduced in 2001 and the second, which marked a huge step forwards for Kia, in 2006. Over the next four years, it attracted thousands of customers who had not previously considered buying a Kia, and achieved global sales of more than 110,000 units in 2009.

2. STYLING & DESIGN

Moving to the next level of Kia's design revolution

Designed at Kia's studios in Frankfurt, Germany and Irvine, California, the all-new Optima is longer, wider and lower (by 45, 25 and 25 mm, respectively), than the vehicle it replaces. It is based on an all-new midsize platform that allows for distinctive dimensions and proportions, while also providing a unique canvas for Kia's global design team to pen a vehicle that stands apart from everything else in its segment.

"The all-new Optima is a new strand in Kia's evolving design DNA with a blend of simple and fluid lines and elegant but uncomplicated shapes, that draw the attention of the eye in much the same fashion as a perfectly-tailored fine Italian suit," comments Peter Schreyer, Kia's Chief Design Officer. "With the new Optima, we have created a product that people previously would not have expected from Kia and that's exactly what we set out to achieve!"

"Our new Optima is more than one step ahead of the car it replaces – it's a clean-sheet design that owes nothing to its predecessor. In every detail you will recognize our bold declaration of intent. Through the balance of its muscular proportions and the elegant simplicity of its raked roofline, our design results in a car that radiates self-assurance and confidence from every angle.

"From the very first quarter-scale model I had a gut feeling that the car we were creating was exactly the right car to replace the Optima, and that is an exciting position to be in. Even though the car changed and evolved throughout its three-year long design process, we kept that initial spirit and enthusiasm alive."

The Optima's smooth-flowing lines speak of grace and style and offer a strong hint of European-style luxury. The sedan projects a sporty yet elegant image with its unique silhouette and sleek stance that builds upon Kia Motors' philosophy of creating high quality and dynamic vehicles that evoke passion.

Optima's striking new face features Kia's bold 'signature grille' that is flanked by projector-style headlamps. The coupe-like profile is enhanced by a sweeping chrome arc that flows from the A- to the C-pillars, a distinctive design motif that visually lowers the car further and enhances its 'cab-back' proportions. The roofline connects with its high and pronounced shoulder line that leads to sculpted flanks and the extended (2795 mm) wheelbase.

Boldly flared wheel arches and a steeply sloping rear window create a sedan with a graceful muscular stance.

“From the distinctive sweeping chrome accent that stretches through the C-pillars to the sleek and shallow greenhouse and flared wheel arches, every inch of the Optima projects a distinguished and refined style and demonstrates extreme attention to detail,” says Schreyer.

“The new Optima is an intelligent combination of Korean, European and American design qualities - a visual display of Kia’s new design confidence. It will stand out on the road, in the carpark and in traffic.”

Kia’s new design themes abound. In addition to one of Schreyer’s earlier creations, Kia’s now familiar ‘signature grille’, the Optima features the distinctive castellated windscreen first seen on the new Sportage compact SUV, and the sedan’s side garnish in each front fender forms a bold visual link with those on the award-winning Soul.

Generous visual specification and dramatic ‘Platinum Package’ as standard

The all-new Optima offers numerous standard exterior features including dual exhausts with chrome tips and outside mirror turn signal indicators.

Enthusiastic customers will enjoy the visual impact of their new Optima which comes standard with Kia’s Platinum specification level. This list of extras is comprehensive and features a unique front mesh grille, new front and rear bumpers, sculpted side sills, rear ‘lip type’ spoiler, LED daytime running lights (above the fog lamps set into the front bumper), LED rear combination lamps, aero-blade windscreen wipers, plus high performance dampers, larger disc brakes with black callipers and machine-finished 18 x 7.5-inch, 10-spoke, flush-faced, alloy wheels.

Longer-lasting, the Xenon high intensity discharge (HID) lamps also come with headlamp washers, plus a new ‘static’ cornering lamp which provides additional illumination of the ‘nearside’ road and the verge during cornering.

New Optima owners will be able to experience a real glasshouse effect with a three-piece, full-width panoramic glass sunroof fitted as standard. The front section tilts, the centre section slides and the rear is fixed. Inside, a roller blind blocks out the sun when needed and on the outside, the B- and C-pillar trims are finished in high-gloss black to complement the all-black framing of the roof.

Although the rear overhang of Optima is reduced by 20 mm compared with the previous model, luggage space is a generous 505 litres (VDA) thanks to the more compact design of the rear suspension with less intrusion into the trunk. The trunk aperture is 1,080 mm wide and the 'lift-over' height for loading luggage is reduced by 40 mm, down to 690 mm.

Exterior Dimensions Comparison (mm)

	New Optima	<i>Difference</i>	Previous Optima
Length	4845	+ 45	4800
Width*	1830	+ 25	1805
Height	1455	- 25	1480
Wheelbase	2795	+ 75	2720
Front overhang	965	- 10	975
Rear overhang	1085	- 20	1105
Front track	1601	+ 38	1563
Rear track	1601	+ 49	1552
Ground clearance	135	- 25	160

**excluding door mirrors*

3. COMFORT & CONVENIENCE

Wrap-around driver's cockpit and cossetting passenger space

Since it first went on sale in Korea in May 2010, the all-new Optima has been achieving record-breaking monthly sales – often more than 10,000 units. Kia Motors Australia is equally confident that when potential customers visit its dealer showrooms all around the country to view the new sedan, they will share in the excitement. The Optima's showroom 'presence' will be both surprising and impactful, its interior attractive, cossetting and generously equipped.

First impressions will be enhanced by Optima's coupe-like profile and its unique sweeping chrome arc that flows from the A- to C-pillars, a distinctive design motif that visually lowers the car and enhances its proportions – creating a premium appearance and showcasing the precision and care that has been applied to the entire vehicle.

Inside all-new Optima, the styling echoes the new kind of dynamic aesthetics created by the exterior appearance. Kia's latest sedan reinvents the driver's space by adopting an 'aircraft cockpit' inspired theme, with the addition of discreet styling touches, to achieve a chic and high-tech look and feel throughout the cabin.

First impressions of the interior create an immediate sense that this is a driver's car. The centre stack instrument panel is contoured toward the driver (at a 9.6 degree angle) to produce a wrap-around cockpit feel, with precise gauges and controls for an overall sporty performance experience without sacrificing comfort or roominess. A high centre console with paddle-shifters behind the steering wheel convey that Optima is built for people who are passionate about driving their cars. The shapes of the centre console and centre armrest are also angled towards the driver.

The longer bodyshell and longer wheelbase, plus the extra interior width, ensure that all occupants of the new Optima will enjoy its spacious cabin. Driver comfort is enhanced by the adoption of a floor-hinged, organ-type accelerator pedal that allows smooth control with reduced fatigue. Comfort for rear seat occupants is improved by lowering the central 'tunnel' in the floorpan by 70 mm to just 32 mm above the cabin floor, liberating more foot room.

Full-leather seat trim

New Optima's interior is full-leather seat trim in black to match the black monotone cabin finish. 'Mood' lights in the door trims and centre console bathe the interior in a soft red hue and foster a high-tech ambience, while a discreet wood grain 'look' trim around the gear selector provides an elegant touch.

Front and rear, the Optima's seats are generously proportioned to offer maximum support and comfort. Both front seats offer power adjustment (driver 8-way / passenger 4-way), and a heated cushion and backrest. In addition, the driver's seat features powered lumbar support and ventilation as standard. The 60/40 folding rear seat backrests can be folded down for greater seating and cargo carrying versatility, depending on driver and passenger needs.

The IMS (Integrated Memory System) retains the seat settings for two drivers and provides an 'easy access' function which slides the seat back when turned off, and forward to the original position when the vehicle is started.

Managing temperature, humidity and visibility

New Optima is equipped with dual-zone, fully automatic temperature control with twin adjustable air vents in the back of the centre console supplying ventilation to rear seat occupants.

'Feel-good' steering wheel and instrument cluster

The leather-trimmed, four-spoke steering wheel, which is adjustable for both height and reach, is equipped with remote controls for the audio system, cruise control, ECO mode, trip computer, and the Bluetooth hands-free system.

Optima comes standard with Kia's cutting-edge technology Supervision™ instrument cluster which features twin cylinders with a 3.5-inch TFT-colour LCD screen to show a selection of core information, plus numerous user-settable menus as text and images.

Infinity™ Premium Sound System option and a host of features

Further enhancing the sophistication of the Optima is the latest Infinity™ Premium Sound System which runs seven speakers, including a 4-inch centre speaker plus an 8-inch sub-Woofer, through an external amplifier.

In addition to a Radio/CD player with MP3, USB and iPod connectivity, it features a 6-CD changer and Bluetooth wireless connectivity. The radio antenna is discreetly integrated within the rear window glass.

Other standard high-tech 'comfort and convenience' features include a Smart Key (for keyless entry, together with an engine start/stop button), 'welcome home' escort lights, LED side repeaters, electric door mirrors, a tailgate-mounted reversing safety camera with interior mirror display monitor and illuminated door scuff plates.

Storage space within the cabin includes the large glovebox (with cooling function as standard), a large centre console, and four door pockets. Two large cup-holders are located (beneath a discreet slide-away cover) between the gear selector and the centre console, while the folding centre armrest in the rear seat has twin cup-holders. The centre stack houses a storage tray and the AUX, iPod and USB connections, while an overhead storage space is provided for sunglasses.

4. ENGINE

New GDI technology tops line-up of improved gasoline engines

Kia's all-new Optima sedan is powered by a 2.4-litre unit with GDI (gasoline direct injection) 'Theta II' engine.

The introduction of GDI technology, which represents the biggest advance in fuel injection technology since the 1980s, allows Kia to achieve three previously incompatible goals – lowering emissions and improving fuel economy, while raising power and torque output.

Compared with the 2.4 'Theta II' MPI (multi-point injection) engine the new GDI-equipped engine features a raised compression ratio – 11.3:1, up from 10.5:1. Power is increased by 11.6% and torque by 8.2%. The new engine delivers 148kW at 6300rpm and 250Nm at 4250rpm.

Despite the rise in power and torque output, fuel economy and CO₂ emissions are lowered. Powered by the silky-smooth GDI engine the new Optima accelerates from standstill to 100kph in 9.0 seconds. Top speed is 210kph.

GDI technology allows Kia engineers to achieve the 'impossible'

A serious limitation of conventional fuel injection is that the engine's valve opening and closing times get progressively shorter as engine revolutions increase, reducing the time available to inject fuel. GDI avoids this problem by locating the fuel injector directly inside the combustion chamber. This ensures unparalleled injection precision and far greater control over the combustion process.

A high pressure pump injects fuel at pressures up to 150 bar and injection is split into two phases to achieve optimum combustion. This technique is particularly beneficial during cold starts when it enables the catalytic converter to reach the optimal operating temperature faster, thus reducing emissions by up to 25% during this period.

The new 2359cc Theta II GDI engine, which was developed over a two-year period at a cost of US\$145 million, is the forerunner of other GDI-equipped engines that will appear in a variety of forthcoming Kia models.

Compared to a conventional engine of similar displacement, GDI delivers 7% more torque at low revolutions (for better take-off) and 12% more torque at high revs (for better overtaking performance), with an average 10% improvement in fuel consumption when compared to a vehicle equipped with a conventional multi-point fuel injected engine.

The six-speed automatic transmission is equipped with Kia's new 'Active ECO System'. Controlled by an on/off button on the steering wheel, this electronic system is programmed to optimize the settings of the engine's ECU and the transmission's TCU to achieve fuel savings of up to 7.5% whenever maximum performance is not required.

The availability of Gasoline Direct Injection technology in a production vehicle, and the popularity of Kia's highly competitive 'R' family diesel engine in many countries in other Kia models, highlight the world-class standards that the company's advanced powertrain engineering division has now achieved.

New Kia Optima / Powertrain

<u>Type</u>	<u>Capacity</u>	<u>Power</u>	<u>Torque</u>	<u>Transmission</u>
Gasoline	2.4 GDI	148kW	250Nm	6-sp Auto

5. TRANSMISSION

Compact 'world-class' six-speed automatic

Developed in-house by the Hyundai-Kia Group for fitment in a wide range of future vehicles, the all-new six-speed automatic transmission is now available for the new Optima. Already available in the Sorento, Cerato, Koup, Grand Carnival and Sportage, this transmission demonstrates Kia's world-class engineering skills and has been highly praised by automotive media.

The driver can choose from two operating modes – fully automatic or 'Sport'. For city driving, fully automatic mode is ideal, while 'Sport' mode allows for clutch-less manual sequential gear changes for greater driver involvement – either using the centre console selector lever or the new steering wheel-mounted 'paddles' which enable the driver to change gear without taking their hands off the steering wheel. Pulling the right-hand paddle towards the driver changes 'up', while pulling the left-hand paddle changes 'down'.

Although the six-speed transmission is a regular 'torque converter' automatic, it incorporates a unique 'flat' torque converter, with three planetary gear sets and four pinion differentials – ensuring ultra-fast, smooth and precise gearshifts throughout the engine speed range.

Its innovative layout makes this transmission the most compact six-speed unit currently available anywhere in the world. It has 62 fewer parts than a five-speed unit, is 54 mm shorter, weighs 12 kilos less and boosts fuel economy by up to 12%. The transmission, which is filled with low-viscosity oil, is maintenance-free and requires no servicing during the life of the vehicle.

With this transmission the Hyundai-Kia Group has joined an elite group of just three automotive manufactures (Toyota and a GM/Ford joint venture), which have designed, developed and built their own six-speed automatic transmissions.

Automatic transmission-equipped Optima cars will feature cruise control and Kia's 'Active Eco System' economy indicator to assist with fuel-efficient driving.

6. SUSPENSION & RUNNING GEAR

A confident drive with genuine ride refinement

Kia's Optima chassis engineering team were given the challenge of exploiting the robust all-new bodyshell structure and the new model's greatly extended wheelbase, to ensure that the new sedan's steering and ride/handling balance delivered a sporty agile drive, with rewarding responsiveness and refinement to rival the established class-best.

A new hydraulic power steering system was developed. The rack and pinion system is speed-sensitive and requires just 2.94 turns of the steering wheel from lock-to-lock, with a turning circle of 10.9 metres. Weighted to provide confident steering feel and precise vehicle control, the system offers substantial feedback during out-of-town motoring and with low effort during parking and city driving.

To reduce NVH, both the front and rear suspension systems are mounted on a lightweight hydro-formed subframe, with carefully fine-tuned rubber bushes to help isolate the cabin and its occupants from irregularities in the road surface.

Compact, lightweight MacPherson Strut suspension is employed at the front, with off-set, side-load springs to reduce friction and ensure smooth operation for enhanced ride quality.

An all-new, multi-link, fully-independent suspension system was engineered for the rear. Similar to the system adopted for New Sportage, it features dampers and coil springs which are mounted separately to more effectively disperse input loads and to minimize intrusion into the cabin and trunk space.

Both the front and rear systems have their suspension geometry and set-up optimized to gain maximum traction and ride benefits from the new sedan's 43 mm wider track and its 75 mm longer wheelbase.

Every Optima is equipped with an all-disc braking system, backed up by ABS anti-lock, EBD brake-force distribution and Brake Assist systems as standard. For maximum stopping power, 12.6 inch ventilated front discs and 11.2 inch solid rear discs are fitted.

Black coloured front brake callipers and large parking brake dust rings fill the gap between the disc and wheel rim of the 18-inch wheels.

Optima Optimised Locally

Like the Sportage and Cerato before it, the all-new Optima received months of intensive fine tuning to ensure it met the high standards demanded by the discerning Australian driver.

Headed by Kia Motors Australia Senior Product Manager Nick Reid and consulting engineer Graeme Gambold, the Australian ride and handling team worked with KMC's headquarters-based development team to review all the global components, including the US and domestic market settings.

"We quickly learned that the key area we needed to focus on was shock absorber tuning. We were very lucky to get the full support of Sachs, the supplier of Optima's High Performance Dampers," Reid said.

A Sachs' senior engineer travelled to Australia and began experimenting with the shocks in an attempt to satisfy KMAu's preferred outcome. Using a mobile workshop with shock dyno, the team conducted around 10 rebuilds at each end of the vehicle, finally arriving at the optimum damper settings, sway bar and spring rate combination.

"The testing was extremely comprehensive," said Reid. "We completed dozens of test drives and rebuilt the shocks a total of 20 times. The Sachs High Performance Dampers (HPD) feature a floating valve which is designed to improve ride comfort, while not compromising handling. We spent a majority of the time searching for a balance between the two. We believe in the end we were successful."

On the road, new Optima is significantly quieter and more refined than its predecessor. The all-new bodyshell design and greater use of high tensile steels in its structure have resulted in a stiffer and safer vehicle in which occupants will be aware of fewer vibrations from the road surface or from the car's mechanical components.

7. SAFETY

New 'active' and 'passive' technologies ensure a safer drive

To ensure that owning, driving and travelling in Kia's latest sophistication leader will be a rewarding, satisfying and safe experience for all occupants, the new Optima presents buyers with a range of state-of-the-art safety systems and equipment as standard.

Available 'active' safety technologies to help Optima drivers avoid potential accident situations will include ESC (Electronic Stability Control), TCS (Traction Control), BAS (Brake Assist System) and a new system – HAC (Hillstart Assist Control).

HAC prevents roll-back during stop-start driving up inclines by maintaining brake pressure for two seconds while the driver moves his/her foot from the brake pedal to the accelerator pedal.

During extreme conditions three technologies boost the performance of Optima's all-disc braking system. The regular ABS (anti-lock system), is supported by EBD (Electronic Brake-force Distribution) to accurately adjust the front/rear brake pressure depending on load, and BAS (Brake Assist System) which recognises when the driver is braking suddenly in a 'panic' situation and applies maximum stopping power.

To assist drivers during reversing manoeuvres, two active systems are included as standard. A back-warning sensor helps the driver to avoid contact with pedestrians and other vehicles by triggering an audible warning whenever the Optima is approaching an obstruction.

A second system, the new rear-view camera fitted with a 130-degree wide-angle lens, transmits images to an LCD display set within the interior rear-view mirror. It simultaneously enables the driver to check the rear view and the blind spot immediately behind the car.

Enhanced protection against impacts from all sides

The new Kia Optima has been designed to achieve the maximum score in the USA's two crash-test programmes and a 5-Star rating in Euro NCAP's crash tests. The all-new platform and bodyshell structure employ a much greater proportion (59.4%) of high-tensile and extra-high strength steels than the previous model.

Structural improvements include stronger and straighter longitudinal side members in the engine bay floor; an enhanced B-pillar design that links to upper and lower cross-members to form an internal rollover hoop and reinforced members in the rear floor.

For additional strength without extra weight, some panels are produced using a hot stamping method which heats the material to 900 degrees and then rapidly cools the component – resulting in panels that are three times stronger than unprocessed items.

New Optima is fitted with six airbags – dual front airbags, dual front side airbags and full-length side curtain airbags offering head protection for all occupants. Active head restraints for the front seats protect occupants against whiplash injuries. Seatbelt reminders for all five seats are also standard.

Child safety is enhanced by child seat anchorage points fitted in the rear seat and by speed-sensing automatic door locks which 'lock' when the car has reached a certain speed, securing both child and adult occupants.

For improved pedestrian safety, the hood design incorporates a multi-cone structure beneath its outer surface that absorbs energy, reducing the impact forces to the head.

8. STANDARD EQUIPMENT

All-new Kia Optima

Safety

Active Safety

- ABS (Anti-lock Braking System) with EBD & BA
- ESC (Electronic Stability Control) with TCS
- HAC (Hill-start Assist Control)
- Seatbelt warning chime & light on all positions
- Reverse parking sensors
- Rear view camera with mirror display & parking guidelines
- Electrochromic rear view mirror (auto dimming)
- High-mounted rear stop light
- LED daytime running light (DRL)
- Dusk-sensing automatic headlamps
- Static cornering lamps
- Front & rear fog lamps
- Speed sensing auto door lock
- Child restraint anchorage points (3)
- 3-point ELR seatbelts on all positions

Passive Safety

- Driver & front passenger SRS airbags
- Front side SRS airbags (pelvis & thorax protection)
- Curtain SRS airbags (head & upper torso protection)
- Front seatbelt pre-tensioners with load limiters
- Active front headrests
- Side door impact beams (front & rear)
- Child-proof rear door locks
- Impact sensing auto door unlocking

Security

- Battery saver
- Anti-theft immobiliser
- Remote central locking with keyless entry & trunk release
- Smart key with push button start
- Headlamp escort function
- Remote fuel lid release

Seating

- Seat capacity
- Leather trim
- Wood-look interior trim
- Driver's seat lumbar support (powered)

- 8-way power driver's seat
- IMS driver's seat with 2 seating position memory & easy access function
- 4-way power front passenger's seat
- Split fold flat rear seats (60:40)
- Rear centre armrest
- Height adjustable headrests (all seats)
- Height adjustable front seatbelts

Exterior Features

- Black chrome two-tone 'Schreyer' radiator grille
- Body coloured sport bumpers
- Body coloured door handles with chrome accents
- Body coloured outside door mirrors
- Electric folding outside door mirrors (heated)
- Outside mirror-mounted side indicators
- Rear spoiler
- HID type front headlamps with washer
- LED rear combination lamps
- Dual chrome tip rear muffler
- Panoramic sunroof (powered)
- Tinted glass
- Windscreen with sunband
- Front intermittent wiper & washer (variable /2-speed)
- Aero-blade type front wipers

Interior Features

- Cruise control with steering wheel mounted controls
- Leather wrapped steering wheel & shift knob
- Colour TFT Supervision instrument cluster
- Dual trip meter
- 7 function trip computer
- User selectable options (Auto door lock/unlock, headlamp escort, easy access)
- Steering wheel position indicator
- Digital clock
- Ambient temperature display
- Front power windows auto up & down with safety function
- Alloy door scuff panels with illumination
- Alloy sports pedals
- Driver's foot rest
- Metal look interior door handles
- Interior lights (front & rear)
- Interior light delay out
- Mood lamps (door/centre fascia trim)
- Rear window defroster with timer

- 2 x 12 volt power outlets
- Cigarette lighter and ashtray
- Driver & passenger sunvisors with vanity mirrors
- Sunvisor illuminations & extensions

Storage

- 4 x cup holders (front & rear)
- 4 x bottle holders (front & rear doors)
- Map pockets in front & rear doors
- Sunglass holder
- Glovebox with lock & illumination
- Cooling glovebox
- Centre console storage
- Front seat back pockets

Audio

- MP3 compatible CD player with AM/FM tuner
- 6 CD changer
- Premium sound system (Infinity® brand)
- 7 speakers (front door, rear door, front tweeters & centre speaker)
- External amp & sub-woofer
- AUX/USB input with iPod® compatibility
- Bluetooth functionality (phone/media stream)
- Steering wheel mounted audio controls
- SDVC (Speed Dependent Volume Control)
- Glass antenna

Ventilation

- Dual-zone climate control air-conditioning
- Rear air vent
- Ventilated driver's seat
- Front seat warmers

COLOURS

Exterior Colours

- Snow White Pearl (SWP) #
- Bright Silver (3D) #
- Ebony Black (EB)
- Platinum Graphite (ABT) #
- Satin Metal (STM) #
- Santorini Blue (HO) #
- Spicy Red (IY) #

Interior Colours

- Black (VA)

Premium paint at additional cost

9. TECHNICAL SPECIFICATIONS

New Kia Optima

Body & Chassis

Four-door, five-seater mid-sized sedan, with all-steel unitary construction bodyshell. Transversely-mounted gasoline engine driving the front wheels (2WD) via a six-speed automatic transmission.

Engine

2.4-litre GDI / 148 kW Gasoline

Name	'Theta II'
Type	DOHC, four-cylinder in line, with GDI and dual CVVT
Capacity	2.4-litres, 2359 cc
Max power	148kW @ 6300rpm
Max torque	250Nm @ 4250rpm
Bore x Stroke	88 x 97 mm
Compression ratio	11.3:1
Fuel system	GDI (gasoline direct injection)
Construction	Aluminium cylinder block and head
Emissions class	Euro4

Transmission

	2.4 GDI
Automatic	6-sp

Gear Ratios (Automatic)

	2.4 GDI
1st	4.212
2nd	2.637
3rd	1.800
4th	1.386
5th	1.000
6th	0.772
Reverse	3.385
Final Drive	2.885

Drivetrains

<u>2WD</u>	Delivers 100% of torque to the front wheels. Safety aided by electronic Traction Control, ABS anti-lock braking and ESC with Hill-start Assist Control.
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Suspension & Damping

Front	Fully independent by subframe-mounted MacPherson Struts, with coil springs and twin-tube gas-filled shock absorbers. 24 mm diameter anti-roll stabiliser bar.
Rear	Fully independent by subframe-mounted multi-links, coil springs and twin-tube gas-filled shock absorbers with high performance dampers. 18 mm diameter anti-roll stabiliser bar.

Steering

Type	Hydraulic power-assisted rack and pinion
Overall ratio	15.3:1
Gearing	2.94 turns lock-to-lock
Turning circle	10.9 metres

Brakes

Power	Single 10.5-inch booster
Front	320 x 28 mm ventilated discs
Rear	284 x 10 mm solid discs
Parking brake	Foot operated pedal
ABS	4-channel anti-lock system with EBD
BAS	Boosts braking power during emergency stops

Wheels & Tyres

Standard	Alloy 18 in x 7.5J	225/45 R18 tyres
Spare (Standard)	Full size alloy wheel and tyre	

DIMENSIONSExterior (mm)

Overall length	4845	Overall width*	1830
Overall height	1455	Wheelbase	2795
Front track	1601	Rear track	1601
Front overhang	965	Rear overhang	1085
Ground clearance	135		

*excluding door mirrors

<u>Interior (mm)</u>	Front	Rear
Headroom	1015	955
Legroom	1155	880
Shoulder room	1455	1415
Hip room	1388	1384

Capacities

Fuel tank	70 litres
Luggage (VDA)	505 litres

Weights (kg)

	2.4 GDI AT
Kerb weight (min.)	1473kg
Gross weight	2030kg

Performance

	2.4 GDI AT
Top speed / kph	210
0-to-100 kph / sec	9.0
100-to-0 kph / m	44.7

Fuel Economy (litres/100 km)

	2.4 GDI AT
Combined cycle	7.9
CO ₂ g/km	189 (Combined)