# MOBILITY REDEFINED















# MORE ENERGY MORE MOBILITY

Daily operations can easily be achieved with e-ATAK extended range and superior technology.







# **ESTHETICS REDEFINED**

Every city dreams of e-ATAK. e-ATAK adapts itself to toughest city conditions with its dynamic and compact design.





# **DRIVING PLEASURE REDEFINED**



### **ERGONOMIC COCKPIT WITH MODERN DESIGN**

With the very first step into e-ATAK, an enchanting atmosphere welcomes you. LED ambiance lights that create a futuristic atmosphere and leather and stitch detailed steering wheel raise e-ATAK up from a public transportation vehicle. e-ATAK becomes the ambassador of the modern design concept.

e-ATAK takes the comfort to the highest level and makes its driver desire to drive longer with its spacious and ergonomic cockpit. Creating a refreshing atmosphere with its superior airflow, e-ATAK makes its driver work easier in every road condition.

#### **WIDE ANGLE VIEW**

e-ATAK wide angle of view provides total control of the road. Set the level upon road conditions or kneel while passengers get on and off the bus, with Electric Controlled Air Suspension (ECAS).

### **EVERY DRIVER WANTS TO OWN e-ATAK**

Every detail has been taken care of in e-ATAK in order to ensure driver comfort to allow focus on the road.













#### **SPACIOUS INTERIOR**

e-ATAK: Best place to daydream. With its wide leg room that increases comfort and wide window area that offers a panoramic view of the city, e-ATAK takes its passengers to a journey that they will never want to end.

#### **POWERFUL AIR CONDITIONER & HEATER**

The powerful air conditioner and heater that can handle any extreme climate, makes the passenger feel as comfortable as they are at home.

## PROFITABILITY REDEFINED

With e-ATAK you also maximize the utilization of passenger capacity. This ensures more profitability for your enterprise or municipality.

#### How?

e-ATAK reduces operational costs during off peak hours where oversized empty buses have redundant capacity. Fulfilling both peak and off-peak capacity demand of cities, e-ATAK brings an efficient approach to public transportation.



8 mt e-ATAK | 52 Passenger Capacity



Peak Hours **%100** 

Off-Peak Hours **%100** 



12 mt Bus | 105 Passenger Capacity

Peak Hours **%100** 

Off-Peak Hours **%50** 



## TECHNOLOGY REDEFINED

### **FULL DIGITAL CLUSTER**

You have a co-pilot in e-ATAK! e-ATAK provides all vehicle information you need like charge status, remaining range and average consuption, through its 12.3" digital cluster. All you need to do is to enjoy a smooth ride.







#### **KEYLESS START & STOP**

Technological solutions which make life easier are in e-ATAK. With Keyless Start & Stop, drivers can easily get in the bus with keys in their pocket and simply push the Start & Stop button to activate low voltage battery powered systems.

#### WI-FI & USB PORTS

Time flies in e-ATAK. Stay connected at all times via Wi-Fi technology and allow your passengers charge their mobile phones with USB ports and travel at home comfort.

#### **10.1" TOUCH SCREEN**

To ensure you have a joyful journey, e-ATAK is equipped with a wide touch screen including various functions such as trip computer, tire pressure monitoring, rear camera view, air-conditioning, diagnosis, charging energy flow, multimedia and bluetooth.

Basic controls such as ECAS, lights and defroster are at your fingertips in e-ATAK to create a comfortable journey for your passengers while e-ATAK high-resolution camera views in additional 7" LCD screen ensure a safe driving experience.





## 100% ELECTRIC 0% EMISSION

Thinking about the future needs cutting-edge technology. Just like the technology e-ATAK has.

e-ATAK considers the future of nature and humanity with its 100% electric motor. And its 0% emission level takes the first steps in forming a greener and cleaner city.



## PERFORMANCE REDEFINED

e-ATAK, with electric motor and much stronger than diesel!

The city is full of tough conditions. e-ATAK challenges and overcomes them with its strong 230 kW electric motor. Designed to operate in all climates, e-ATAK adapts itself to every condition, no matter burning summer or freezing winter.

Doesn't matter whether the roads are steep or narrow, if you own e-ATAK you are at ease. Steep or narrow streets cannot challenge e-ATAK, you will always drive at ease.





**230 kW** Max. Power



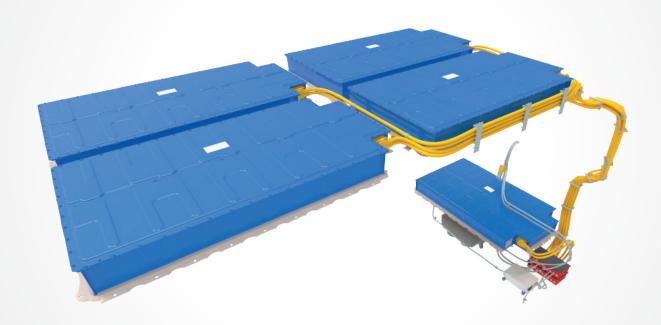
**2.500 Nm** Max. Torque



#### **BMW i. BATTERY**

Proven BMW Li-lon batteries vitalize e-ATAK. With e-ATAK, a seamless journey begins in the city from one end to the other. The driver goes on without interruption with e-ATAK unrivaled range of up to 300 km. This range enables to finish more rounds during the day without losing time charging, thus transforms the public transport with increased ease.









in cooperation with





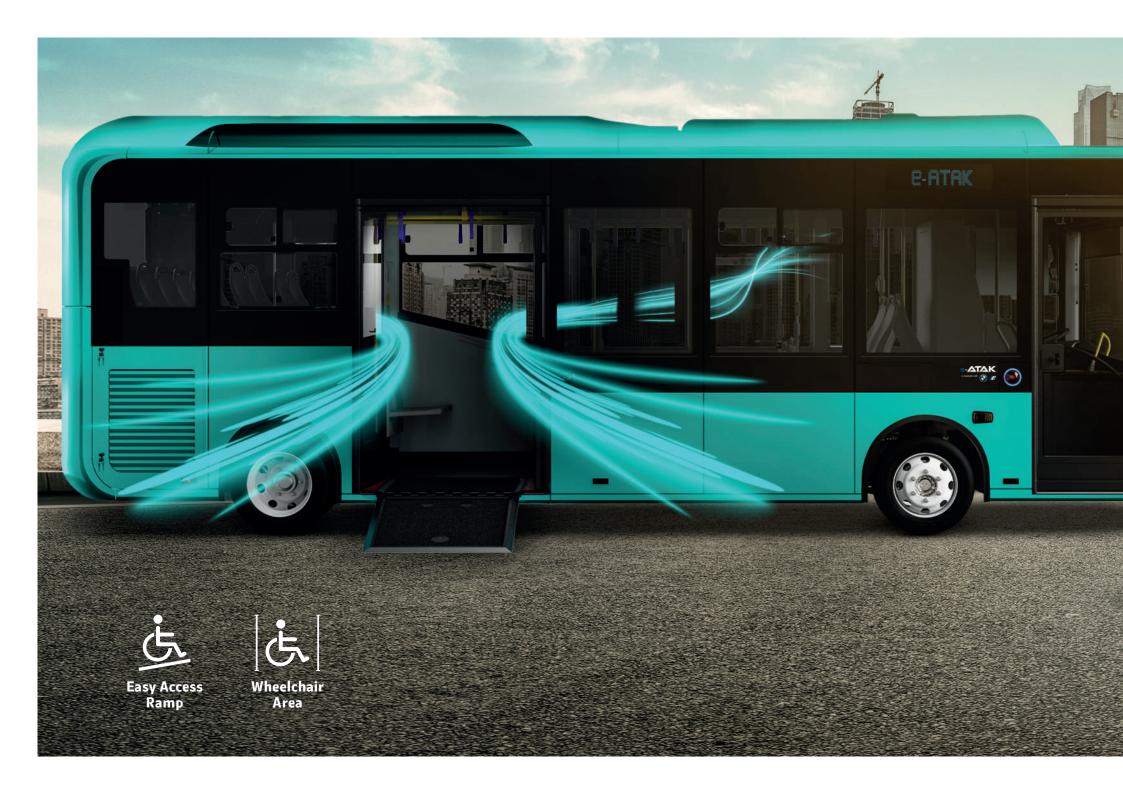


#### **REGENERATIVE POWER**

With regenerative brake system, e-ATAK can recover the kinetic energy during braking and use it to charge its batteries and extend the range. You can select one of the 2 regenerative brake modes according to preference of kinetic energy re-gain amount.

### **QUICK AND EASY CHARGING**

e-ATAK is easily charged through the connection on front right side. e-ATAK can charge its battery in 5 hours by AC or in 3 hours by DC.





# **SERVICE REDEFINED**

If you have e-ATAK, you serve everyone in the best way possible. Manual ramp enables wheelchairs to get on the vehicle without any hassle. Furnished with various disabled-oriented features, e-ATAK has a wheelchair area which is designed for utmost safety during the journey. Passengers can reach the seats that are mounted on the low floor without any extra steps after getting on the vehicle.



e-ATAK offers technological active and passive safety systems in order to protect its valuable driver and passengers.

















e-ATAK becomes one of the most important element of the city and future you dreamed of. While world population is increasing, natural resources are diminishing day by day. The only way to handle the problems come up with this situation is through sustainable solutions. Respecting historical cities' unique texture with its zero emission level, e-ATAK is here to accompany you. With its compact design, e-ATAK complies with the dynamic of cities with narrow streets and protected historical sites. It doesn't pollute the city and the nature, on the contrary, it sustains a more liveable future.

Beyond advanced technology trends, e-ATAK provides unique solutions like low-floor and disabled ramp for the residents of the city and puts their comfort first. Becoming an essential piece of the livable city with decreasing the need of personal vehicles, it encouraces usage of public transport. Moreover, with its 300 km range, e-ATAK reduces the dependency of its user to charging station and it starts a new era for urban transportation allowing to travel longer distances with only one charge in a day.





## **KARSAN... FROM PAST TO PRESENT**



Karsan's adventure began in 1966 with 269 independent entrepreneurs.



In the first 15 years, it continued to work as a part supplier for Original Equipment Manufacturers (OEMs).



From 1981 onwards, it began manufacturing J9 minibuses for Automobiles Peugeot. Later, it manufactured the first minivan in collaboration with Peugeot.



In 2006, Karsan manufactured J9 Premier, which was completely its own product. In the following year, it established strategic alliances with Hyundai, Renault and Citroen.

2021

2019



Karsan expands its product range with 10-12-18 meter buses and offers a full range of electric buses.



Karsan signed a 5-year contract with Oyak Renault for the production of Megane Sedan models.



Karsan introduced Autonomous e-ATAK, the first serial-production level 4 bus in Europe and America.



Karsan now manufactures e-ATAK for a sustainable future and preserve natural resources of historical cities.



In line with its vision updated in 2009 as "Limitless Transportation Solutions", Karsan developed the V1 project in response to New York's Taxi of Tomorrow tender.



Starting to manufacture buses in 2011, Karsan manufactured the first big bus for Rome Municipality.



In 2013, it re-developed its product portfolio with its own vehicles, namely Jest, Atak and Star.



Jest+ was relaunched with an esthetic look and enhanced features.

2018



Karsan's first electric vehicle e-JEST, which is electrified by BMW i, was launched in Munich, in cooperation with BMW.



Karsan's factory, located in Hasanağa, Bursa, Turkey, having 90.000 m2 of indoor space on a total area of 200.000 m2, has a capacity of manufacturing 65.000 vehicles/year. Today, in its modern facilities Karsan has been producing for more than 50 years for the world's leading brands and its own brand.



Karsan became one of the 6 finalists in the prototype design contest for a next generation delivery vehicle at US Postal Service and remained in the evaluation stage for five years and the tender was awarded to another bidder in February 2021.

#### TECHNICAL SPECIFICATIONS

/ehicle Category & Class	Low Floor Electric Bus, M3 Category, Class I, LHD		
POWERTRAIN SYSTEM			
Drive Type	Direct Drive		
Engine	TM4 Electric Motor		
Maximum Power (kW)	230		
Maximum Torque (Nm)	2.500		
PERFORMANCE & ELECTRIC SYSTEM			
Range*	Up to 300 km		
High Voltage Battery (Type - Capacity)	Li-ion 360V - 220 kWh		
	AC Type 2 - 22 kW Single – 10 h**		
Charging (Type - Power - Time)	AC Type 2 - 44 kW Double - 5 h**		
	DC Combo 2 - 80 kW - 3 h**		
BODY			
Body Type	Carbon Steel: Space Frame Steel Tube Structure		
Corrosion Resistance	Cataphoresis & Underbody Coating		
SUSPENSION			
Suspension	Air Suspension + Electronic Level Control + Kneeling		
Front Axle	Independent		
Rear Axle	Rigid Drive Axle		
BRAKE SYSTEM			
Front & Rear Brakes	Pneumatic Disc Brake System		
Steering Wheel	Tiltable & Telescopic Electro Hydraulic Steering Wheel		
CAPACITY			
Gross Vehicle Weight (kg)	11.500		
DIMENSIONS			
Overall Length (mm)	8.315		
Overall Width (mm)	2.436		
Overall Height (mm)	3.090		
Front Overhang (mm)	2.040		
Rear Overhang (mm)	1.695		
Wheelbase (mm)	4.580		
Standing Height (mm)	2.372		
Step height, Door 1 (mm)	340 (with Kneeling) & 270 (with Kneeling)		
Step height, Door 2 (mm)	340 (with Kneeling) & 270 (with Kneeling)		
Approaching / Departure Angles (°)	7,8 / 8,8		
Turning Radius (Kerb to Kerb) (Standard Mirors) (mm)***	6.312		
TIRES			
Front Tire Sizes & Rim Sizes	245/70 R17.5 & 6.75"x J17.5" Single		

#### PASSENGER CAPACITY ALTERNATIVES





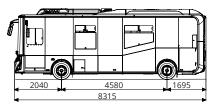






	Seated	Max. Standing	Foldable	WheelChair	Max. Total Passenger****
18+4	18	34	-	-	52
	18	28	-	1	47
	18	29	4	-	51
21+2	21	31	-	-	52
	21	25	-	1	47
	21	25	2	-	48
	21	31	-	-	52
21+4	21	25	-	1	47
	21	25	4	-	50

<sup>\*\*\*\*</sup>Passenger capacity depends on selected optional features & wheelchair area utilization. Wheelchair is valid only when foldable seats are not being used.









<sup>\*</sup> Range may vary depending on various factors, in particular: individual driving style, route characteristics, outside temperature, heating/air conditioning, seated & standing passenger weight.

<sup>\*\*</sup> From 0% to 80% battery capacity in ideal conditions.

<sup>\*\*\*</sup> May change in case of using Mirror Camera option.

#### **EQUIPMENT FEATURES**

#### STYLE

STILL	
Exterior Design	
LED Front & Rear Lights	S
LED Day Time Running Lamps	S
Front Fog Lamp	S
3 <sup>rd</sup> Stop Lamp	0
Electrical and Heated Mirrors	S
Mirror Cameras	0
5 Sliding Side Windows	S
Light Tinted Color Side Glass	S
Dark Tinted Color Side Glass	0
7 Sliding Side Windows <sup>1</sup>	0
Heated Windscreen	S
Sliding Heated Driver's Window	S
Heated Front Door Window	S
Monocolor LED Destination (Front + Side + Rear)	S
Front & Rear 17.5" Steel Wheels	S
Wheel Covers	S
Cataphoresis & Underbody Coating	S
Spare Tire	0
Standard Body Color: White	S
Optional Body Colors: (Opac Colors)	0
Interior Design	
Anti-Slip PVC Floor Cover, Green Patterned	S
Handrail Tubes, Stainless Steel	S
Handgrips	S
Stop Signs + Digital Clock + Temperature Indicator	S
Billboard <sup>2</sup>	0
Outdoor Billboard (Right & Left Side)	0
TECHNOLOGY	1
Charging Infrastructure	
Single On-Board Charger	S
Double On-Board Chargers	0
Driver Compartment	
12" Full Digital Cluster	S
Rear Park Sensors	S
Ticket Validator Preparation (Front)	S
Smart Tachograph	0
2 x Driver Area Speakers	S
Manuel Locking System	S
Start & Stop Button (Keyless)	S
External Speaker	0
Coat Hook	S
	S S
FMS Gateway	) 5

Audio & Video Systems	
Radio + USB Port + Bluetooth Connections	S
Announcement System for Passenger Area - 5 x Passenger Speakers + Goose Neck Microphone + Amplifier	0
10.1" Multimedia Touchscreen	S
Rear Camera	S
Wi-Fi Router	0
Roof Mounted Fixed 19" LCD Screen with USB	0
DVR (1 TB) ; Front, Driver, Inside, Service Door Cameras (Touchscreen Integrated)	0
DVR (1 TB) ; Front, Driver, Inside, Service Door Cameras (7" LCD Screen Integrated)	0
COMFORT	. 0
Cooling & Heating	
Passenger A/C with Heating Function	S
Driver A/C with Heating Function	S
Passenger Area Heater 12 kW	S
Passenger Sidewall Heater	S
Pre-heater <sup>3</sup>	0
Driver Compartment	'
8-Way Pneumatic Driver Seat with 3-Point Seat Belt (ISRI)	s
Driver Seat with Heating Function	0
Isolated Cabin (Rear as Glass)	S
Seperated Driver Cabin with High Glass	0
Driver Side Window Manual Sun Visor	0
Front Manual Sun Visor	S
Alcoholmeter Preperation	0
Passenger Area	'
Plastic Type Passenger Seats	S
Plastic Type Passenger Seats (with Pad & Fabric)	0
Shuttle Type Passenger Seats (Seat Back Plastic)	0
Backrest Totem and Wheelchair Designations	S
Manual Wheelchair Access Ramp	S
USB on Sidewalls	S
Door Compress Prevention	S
SAFETY	
ESP - Electronic Stability Program	S
EBS - Electronic Brake System	S
ABS - Anti-Lock Braking System	S
ASR - Anti-Slippage System	S
RBS - Regenerative Brake System	S
HSA - Hill Start Aid	S
Front Anti Roll Bar	S
E-Motor Room Fire Detection System	S
Fire Supression System <sup>3</sup>	0
Reverse Gear Buzzer	S

S:Standard O:Option

<sup>&</sup>lt;sup>1</sup> 7 Sliding Side Windows can be selected with Dark Tinted Color Side Glass.
<sup>2</sup> Only without Rear (Cabin) Separation Window.
<sup>3</sup> Options can not be selected separately from each other. Pre-heather with standard heating system.

Authorized Dealer

