# IVECO

Drive the road of change

IVECO

CROSSWAV

## CROSSWAY LOW ENTRY

All a start

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## CROSSWAY Low Entry

Designed with transport productivity in mind, Crossway Low Entry is a bus that performs perfectly in both city and intercity operations.

- The Low Entry concept guarantees inclusivity with an excellent accessibility for all passengers entering and exiting the vehicle
- The power train, based on the proven Crossway normal-floor vehicle, enables fast and economical transport on intercity high-speed roads as well as in the city environment
- In addition to the current Diesel, CNG and Hybrid versions, the new Crossway Low Entry Electric is designed to support the energy transition.

#### Crossway Low Entry is available in:

Two versions: Crossway Low Entry City dedicated for urban missions and Crossway Low Entry Line fully adapted for interurban missions Four lengths: 10.8 m, 12 m, 13 m and 14.5 m with three axles Six drivelines: Full Electric, Tector 7 Diesel / XTL, Cursor 9 Diesel / XLT, Cursor 9 CNG, Hybrid Diesel / XTL, Hybrid CNG.



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# The CROSSWAY Low Entry

## at a glance

#### **1** ACCESSIBILITY

- Easy in and out access
- Easy passengers flow
- 3° door configuration possibility
- Electrically or pneumatically operated door

#### **2** NEW DRIVER AREA

- VDV compliant
- New dashboard, new cluster, new steering wheel
- Generous space & thermal comfort
- Optimised storage

#### **3** EFFICIENCY

- Electric, CNG, HYBRID and HI-SCR engines
- 2 automatic gearboxes
- Cross range standartisation for maintenance optimization

#### **4** VERSATILITY

- Four lengths (10.8 m 12 m 13 m 14.5 m)
- Best-in-class height 3,21 for both Diesel and CNG versions
- High level of personalization with up to 1200 possible configurations





## Driver area

## **Driving** the Crossway is easy

The dashboard has been redesigned with new control commands at short distance from driver. Steering wheel controls are close to fingers with no need to release the steering wheel to have under control all the main functions. More space and a new look make the driver cabin a comfortable place for everyday operations. Fully colored display cluster 7" shows more driving information: the Driving Style Evaluation, engine oil level, gearbox info and speed set up for cruise control. Dashboard commands are fully customizable, Driver's comfort is not forgotten with multiple storage space, charging plugs, double USB and cup and bottle holder.

## VDV driver's workplace

The use of the VDV\* standards in the driver's workplace guarantees that drivers will always find buttons and switches in the same place and have the same ergonomic impression regardless of the vehicle type.

The main purpose of these international standards is to provide higher comfort and safety. The IVECO BUS driver's workplace fully meets the parameters required in the fields of ergonomics, workplace accessibility, heating and ventilation, and is among the best performers in terms of visibility, internal noise level and stowage space.

 $^{*}\mathsf{VDV}$  options available for Crossway Low Entry, city and intercity versions, all lengths.

- **1** Space for operator's mobile phone, wallet etc.
- 2 New waterproof central climate control, position according to VDV/EBSF: intuitive & multiple choice
- 3 Seat rotation: easy accessibility

- Space for operator's bagVolume according to VDV/EBSF, integrated in driver door
- Space dedicated to operator's system terminal (VDV/EBSF specs)



# Innovative design

## New front face

The new front face of Low Entry is now hosting the specific driving assistance systems ADAS for safety driving front face is now hosting the specific driving assistance systems ADAS for safer driving:

- **BSIS** Blind Spot Information System
- **MOIS** Moving Off Information System
- **ISA** Intelligent Speed Assistant
- **DDAW** Driver Drowsiness Attention Warning



Those sensing tools are incorporated in a radar installed in the front face and a camera lens covering the whole frontal area from the inner side behind the windscreen. Its combination is able to detect Vulnerable Road Users approaching frontally and from lateral directions, as well as road signals. The camera is packed with a light sensor allowing the automatic switching on of front headlights.

# Accessibility

## Low Entry, high flexibility

The Low Entry transport mission is led by two models:

- Low Entry LINE for intercity operations
- Low Entry CITY for urban and suburban routes

The low floor between the front and middle doors allows for easy access for all passengers.

Vehicles can be equipped with manual or electric ramps with a dedicated internal area for disabled persons.

Low Entry CITY comes in two- and three-door versions.



# Versatility

## A complete range for all missions

Crossway Low Entry can easily satisfy all customer needs in every passenger transport mission thanks to its versatility and the range of available versions.

#### **City version**

One of the best vehicles on the market for low-entry public transportation, primarily designed for urban traffic, with easy passenger access thanks to the low floor between the front and middle doors.

#### Line version

The ideal choice for short-distance and medium-distance passenger transport, featuring low fuel consumption, longer service intervals and a driver area designed to meet the highest ergonomic standards, all in a safe and comfortable environment.

The Crossway Low Entry range is versatile enough to accommodate different engine layouts: Full Electric, Cursor 9 CNG or Biomethane, Cursor 9 Hybrid CNG, Cursor 9 Hybrid Diesel, Tector 7 for Diesel / HVO / XTL, Cursor 9 for Diesel / HVO / XTL.



			DIESEL		CNG	HYE	BRID		ELEC	
Length (m)	Versions	Tector 7		Cursor 9	Cursor 9 Natural Gas	Cursor 9 Diesel / XTL	Cursor 9 Natural Gas	5 packs	6 packs	7 packs
		286 hp 210 kW	320 hp 228 kW	360 hp 265 kW	360 hp 265 kW			346 kWh	416 kWh	485 kWh
10.8		•	•	•		•				
12		•	•	•	•	•	•	•	•	•
13	CITY -	•	•	•		•		٠	•	•
14.5				•		•				
10.8			•	•		•				
12	LINE		•	•	•	•	•		•	•
13			•	•	•	•	•		•	•
14.5				•		•				

# **CROSSWAY Low Entry ELEC**

The launch of the Crossway Low Entry ELEC marks a new step forward in IVECO BUS' intercity vehicle offering towards even more sustainable mobility. The new Crossway Low Entry ELEC is available in 12 m and 13 m long versions in its city variant (Class I) and will also be available in an intercity version (Class II). It is equipped with a central electric motor (310 kW output for a maximum torque of 3000 Nm) and powered by an NMC Lithium battery pack assembled by FPT.





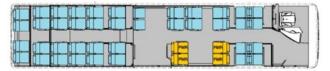
#### Main new components

- 1 Pantograph bottom up or rails for pantograph top down
- 2 Battery (3 to 5 packs)
- **3** Front axle 7,5 t
- 4 A/C unit with integrated compressor
- 5 Cooling system for drive-line and electric engine
- 6 Rear battery pack (2 packs)

#### CROSSWAY LOW ENTRY ELECTRIC

	City (	Class I	Intercity Class II					
Length	12 m	13 m	12 m	13 m				
Motor	Siemens central motor 310 kW							
Traction batteries	FPT 346 kWh 416 kWh 485 kWh	FPT 346 kWh 416 kWh 485 kWh	FPT 416 kWh 485 kWh	FPT 416 kWh 485 kWh				
Charging interfaces	CCS c2 plug Pantograph	CCS c2 plug Pantograph	CCS c2 plug Pantograph	CCS c2 plug Pantograph				
Max seats	42 + 2	48 + 2	42+2	48+2				
Doors	2 D electric	2 D electric	2 D electric	2 D electric				
Movable DB	•	•	•	•				
Flat floor	•	•	•	•				

#### 12 m Line – 42+2



13 m Line – 48+2



# **New batteries**: the widest choice for your specific needs

This latest-generation modular battery concept offers an excellent standard in terms of energy density and charging capacity. The 5-, 6- or 7-battery packs distributed between the roof and the rear compartment offer 346, 416 and 485 kWh respectively for the Class I version and 416 and 485 kWh for the Class II version.

The Crossway Low Entry ELEC can be recharged in 5 hours at the depot using an individual COMBO CCS2 socket and is also available with optional charging by ascending or descending pantograph. It delivers a high performance with a range of around 400 km – enough autonomy to fully ensure missions beyond the city limits without local emissions.

## Charging system availability

	346 kWh (5 packs)			416 kWh (6 packs)			485 kWh (7 packs)		
	PLUG-IN	TOP DOWN	BOTTOM UP	PLUG-IN	TOP DOWN	BOTTOM UP	PLUG-IN	TOP DOWN	BOTTOM UP
12 m City	•	•	•	•	•	•	•	•	
13 m City	•	•	•	•	•	•	•	•	•
12 m Intercity				•	•	•	•	•	
13 m Intercity				•	•	•	•	•	•



# **The CROSSWAY Low Entry** Hybrid

#### **1** COMFORT FOR THE DRIVER,

PASSENGERS AND PEDESTRIANS:

Engine off when stationary

No exhaust gas emitted when stationary

Greater passenger comfort:

- Quiet when stopping
- Less vibration (no vibration when stationary)

Easy to handle:

- Operation of the vehicle similar to a Diesel or CNG model
- No specific clearance required for maintenance

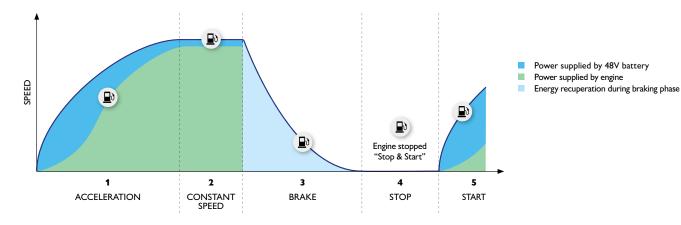
#### **2** ENVIRONMENTAL BENEFITS:

- Up to 16% reduction in CO<sub>2</sub> emissions
- Removal of emissions when stationary using Stop&Start system

#### **3** ECONOMIC BENEFITS:

- Improved TCO with up to 16% reduction in energy costs
- Consistently cost-effective hybrid technology

## HYBRIDISATION THAT GENERATES FUEL EFFICIENCY DURING EVERY OPERATING PHASE, FROM START-UP AT THE DEPOT TO RETURN







# Simple, efficient, cost-effective

# The sustainable transport solution the city needs

#### Complete Hybrid Range

- 10.8-, 12-, 13- and 14.5-meter **Crossway Low Entry** equipped with Diesel Cursor 9 engine, XTL compatible, available in **Class I and II**
- 12-meter **Crossway Low Entry** (Class I) with a Cursor 9 Natural Gas engine, Biomethane compatible
- 12- and 13-meter Crossway Low Entry (Class II) Natural Gas versions

#### Simplicity

The Crossway Low Entry Hybrid is characterised by its ease of use and maintenance, very similar to the traditional Diesel and CNG versions.

#### Important benefits

With its ability to assist the combustion engine, recover energy when braking and enable Stop&Start, the Crossway's hybridisation provides a significant reduction in its fuel consumption, TCO and environmental impact.

- 48 V BATTERY
- 5 24/48 V CONVERTER
- 6 ELECTRIC ENGINE

The hybrid system mainly consists of a 48 V battery and a 35 kW generator connected to the gearbox. The entire system is driven by a control unit providing smart and efficient energy management during the various operating phases.

# **CROSSWAY Low Entry** CNG

## Sustainable by nature

Over the last 25 years, IVECO BUS has developed CNG as an alternative driveline to fight urban pollution. With around 8.000 buses currently in service through Europe, IVECO BUS is a strong leader fully involved in ecological transition.

#### The bus that makes people transport sustainable

The benefits are particularly impressive in terms of particles. With Natural Gas, particle levels are close to zero and NOx emissions are reduced by more than one third.

#### 100% Biomethane compatible

Also available in a Biomethane version, the Crossway Low Entry CNG ensures an excellent carbon footprint and represents a tangible step towards energy transition, with emissions reduced by up to 95%.

These new features allow the Crossway Low Entry CNG to perform easily even in complex city environments with restricted traffic areas.



## Smart design

The Crossway Low Entry CNG implements technical solutions inherited from City Bus CNG long lasting expertise, such as optimisation of vehicle weight and passenger capacity. The exceptionally smart design of this sustainable vehicle is largely due to the fact that the patented integrated gas tanks have been integrated into the roof space. This compact design allows Crossway Low Entry CNG to achieve the best vehicle height in its class, measuring 3,210 mm from wheel to roof and guarantees maximum stability on the road due to its low centre of gravity.

This makes the Crossway Low Entry CNG the perfect bus for any route, regardless of road infrastructure constraints such as bridges for instance. Thanks to this smart design, the maximum internal headroom remains high enough and identical to a Crossway coach.

## **Optimised** TCO

#### TCO of an intercity bus and functionality of a citybus

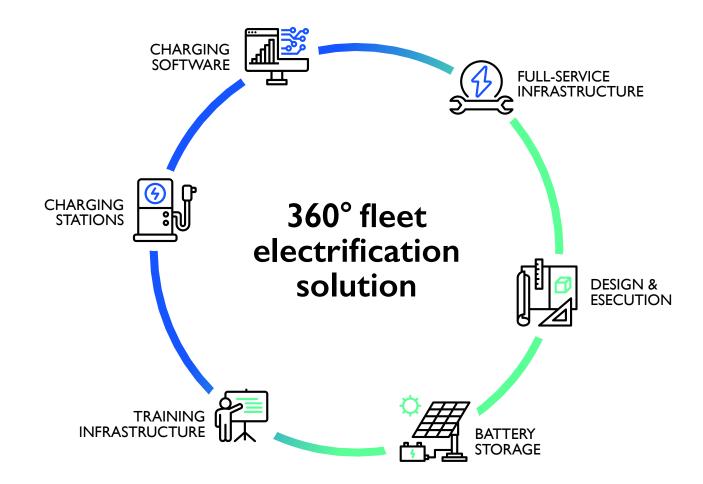
The Crossway Low Entry CNG is designed for growing suburban missions and powered by the Cursor 9 NP/360 hp engine for high performance and low emissions.

Natural Gas is a real alternative to Diesel. It is cheaper with greater price stability, which is a further benefit when calculating fuel costs, one of the biggest TCO factors.

The vehicle's proven reliability is inherited from the Crossway range. Easy opening of the reinforced roof structure facilitates CNG bottle maintenance since no specific tools are required, significantly reducing work times.



# **Energy Mobility Solutions (EMS)**



Energy Mobility Solution is a new dedicated team created to support IVECO BUS customers in **transitioning their fleet to full electric** with a **comprehensive solution**.

Through this offer, IVECO BUS aims to provide the **best user experience** of its **zero-emission** vehicles. With this step, the brand extends its offer to transport operators **beyond the supply of electric vehicles** to provide a comprehensive solution with **expert advice**, vehicle and facilities design, and advanced services.

**ONE GOAL**: facilitate the energy transition in public transport.



# **Powerful model** of electric mobility solutions



#### **Complexity Management**

Designing and operating a zero emissions bus depot requires a higher level of complexity. EMS aims to offer a **single point of contact** to develop your solution both in electric and hydrogen.



We have the same interest as yours at heart: the vehicles need to be ready to perform service. We take care of it, managing the charging infrastructure and the vehicles so that they are **100% ready every day**.



#### **Energy Optimization**

We have always been at your side to optimize vehicle consumption.

Now we want to help you **optimize the energy consumption** of the entire ecosystem, both the bus and the infrastructure.



# A new world of connectivity

The most advanced connectivity on the new IVECO BUS RANGE puts you in full control of your Bus fleet, allowing you to operate efficiently by optimizing the fleet's uptime, energy consumption and Total Cost of Ownership (TCO).

Reduce your costs, improve your performance and make your bus operation & maintenance smarter than ever by choosing our connectivity and selecting the solution that best meets your requirements.



## Smart Pack

The Smart Pack is included as a series equipment in all IVECO BUS heavy range vehicles. It provides you with Digital services on your Bus Fleet through the following features:

#### IVECO ON Customer Portal

- Dashboards and reports available about any bus fleet operation
- Driving style evaluation dashboards



#### **Control Room Reports**

- Online, dynamic technical reports
- Monitor your buses' daily KPIs and recurring faults
- Find all the information you need to manage your maintenance more proactively
- Keep an eye on your e-buses with a dedicated traction battery report



Directly from your mobile device, you can benefit from the following features:

- **Driving Style Evaluation:** The user experience is enhanced thanks to the real-time driving style KPIs and to the possibility to compare scores between several trips
- **Remote Assistance Service:** This feature enable your dealer to perform diagnosis and programming remotely in case of software problem on your vehicle. Thus it improves the vehicle's uptime and limits travels and costs
- Over the Air update: You are able to perform software recall campaign by yourself in the vehicle without stopping at workshop. It will also increase your vehicle's uptime and enable you to have a vehicle always up to date. You can choose the right moment to update the software
- Easy Pairing to your vehicle





## Premium Pack

Select a fleet management service to help you monitor in real time many indicators such as geolocation, energy consumption, traction battery state of charge or remaining range. New services will support your e-bus fleet operation, providing charging station monitoring, Smart Charging and Depot Management.

#### TiGR Web API

The TiGR Web API (specified by the European ITxPT association) is a standardized multi-brand fleet management data stream. It allows you to integrate the data into your own systems and receive real-time events and alerts, vehicle diagnostic trouble codes and all needed KPIs about your fleet performance.

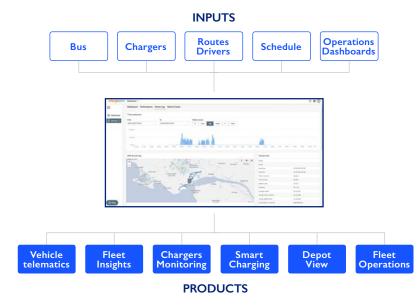




#### FLEET MANAGEMENT by ChargePoint

Choose among ChargePoint products the solution that best fits your needs for your ICE or e-bus fleet, including charging stations, Smart charging and depot management. Services are part of IVECO Bus offering and can be activated via the IVECO ON Portal.

### -chargepoin+



#### FLEET MANAGEMENT BENEFITS

- Key features for Vehicle telematic license are real time position, battery SoC, FMS data and more
- Adding the Insights license gives more features such as Analysis functionality or detailed battery
- Chargers monitoring for fleets

consists of different packages. It covers the essentials for fleet depot customers

 Smart charging makes sure that energy gets distributed to the chargers within the site limits while also limiting energy costs
 Depot View provides a visual overview of the depot with all chargers and vehicles

 Fleet Operation is the final step, where variables like route planning and state of charge of the vehicles are taking into account to allocate vehicles to specific chargers in order to optimize depot operations

## **Tailored** service solutions

When selecting IVECO BUS you have made a quality choice: you can rely on the best maintenance, high performance parts, and skilled experts ready to help you whenever and wherever you need it, allowing you to be focused just on your business.

### **Customised service** packages

With the aim of offering you the service you need, IVECO BUS has a wide range of tailored service packages, designed to keep your vehicle on the road with minimal interruptions for maintenance and, if needed, repairs.

#### Tailor-made service

Specialised high-quality service packages aim to ensure a long life for every vehicle in all sectors. Combine the packages that best fit your needs in order to create your own tailor-made service solution! Choose your Planned Maintenance Contract and Extended Guarantee, by combining the major Elements that make up the offer (Maintenance, Drive Line, Extra Drive Line, Wear) that perfectly suits your business.

The table below summarises all the possible combinations:

#### PLANNED MAINTENANCE CONTRACTS

	Maintenance	Drive Line	Extra Drive Line	Wear
3XL • LIFE	•	•	•	•
M • LIFE	•			•
S • LIFE	•			

#### MAINTENANCE

- Maintenance
- Lubrication
- Oil and fluid changes according to the maintenance and repair handbook

#### DRIVE LINE

- Engine
- Fuel injection
- Gearbox
- Propeller shaft and axle repairs

#### EXTRA DRIVE LINE

- Components not already covered by the drive line element e.g. Electrical System

#### WFAR

- Clutch
- Brake pads
- Brake discs - Brake drums
- Brake linings
- for drum brakes

#### **IVECO** 00800|4|8|3|2|6|000 Assistance Non-Stop

**IVECO ASSISTANCE NON-STOP** means 24 hours a day, 7 days a week assistance on the phone to keep your Crossway Low Entry and your business running. **IVECO NON-STOP** is the original IVECO smartphone application that you can use to communicate with IVECO if your vehicle breaks down.





IVECO CAPITAL is the captive financial services Brand of Iveco Group, and offers a full range of financing, leasing, rental and ancillary services for commercial vehicles. Extended warranty, maintenance and repair services, and various types of insurance, can be included in the pack\*. Iveco Capital supports all your business needs with a dedicated bundle offer, an expert consultant in the IVECO BUS dealer will propose not only an efficient financial offer but a full range of tailored services to guarantee you a real peace of mind solution. Discover more on www.ivecocapital.com finding the right solution for all your business needs.



\*Subject to credit approval. Offerings and products may vary by country depending on the local fiscal and accounting regulations



**GENUINE PARTS** assure your Crossway Low Entry keeps running in service and with cost efficiency. The wide offering ranges from new and remanufactured parts to service kits and telematics solutions.





**CERTIFIED PRE-OWNED** is the IVECO BUS certification label, guaranteeing quality and excellence to customers wishing to buy a safe, reliable and warranted pre-owned bus.

The **CERTIFIED PRE-OWNED** European team has six centres across four countries: France (Mitry-Mory, Corbas and Rorthais), Germany (Ulm), Italy (Verona) and Spain (Madrid), all offering a wide range of solutions for any people transport need.

#### SERVICE NETWORK

No matter where you are located, you will never be far from an IVECO BUS workshop or authorised service point. Thanks to a widespread network of more than 600 service points in Europe, with fully trained technicians and diagnostics experts, IVECO BUS is always ready to help you and sort out any problems you may encounter, wherever you are, whenever you need us.



PUBLICATION CROSSWAY LE\_EN 10/23

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