

Intelligent safety system for unregulated pedestrian crossings

iCrosswalk



SmartC

Value

The integration of iCrosswalk
realizes government priorities
to ensure road safety



Government priorities



Safety

The creation of safe road conditions, eliminating traffic accidents, reducing road fatalities



Automatization

The integration of intelligent systems that automate a number of traffic management processes



Energy efficiency

The installation of modern technologies for roads lighting to improve energy saving

Russian Federal road safety initiatives

National project "Safe and high-quality roadways"

Federal project "System-wide measures for road sector development"

Government program "Transport system development"

Technical Committee 194 "Cyber-physical systems" (TC 194)

Project Technical Committee 703 "Comfortable road" (PTC 703)

The emplacement of intelligent system

- unregulated pedestrian crossings
- insufficient lighting conditions
- increased risk of accidents with pedestrians



Capabilities of intelligent system



Information ahead

Informing in advance the driver about the presence of a pedestrian on the crossing.



Remote access

The ability to monitor system functionality remotely.



Lighting

Good illumination of the pedestrian zone in the dark and bad weather.



Focusing attention

No driver distracting elements.



Visibility

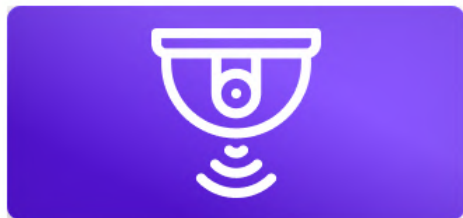
Good visibility of a pedestrian on the road in the dark and bad weather.



Stable work

Uninterrupted operation in 24 × 7 × 365 mode in all weather conditions.

Elements of intelligent system iCrosswalk



Video detectors

Pedestrian recognition using deep learning neural networks with the accuracy of 97% .

Video recording of the pedestrian movement process.



Information LED-panel 690x690x90

Warns the driver about the approaching a pedestrian crossing - 60 m. before him.

Warns the driver about a pedestrian presence on the crossing - 60 m. before him.



Information LED-panel 1001x370x90

Warns the driver about the presence of a pedestrian - directly at the crossing.



Floodlighting

Extra lighting for the pedestrian crossing zone.



Traffic lights T7

Drawing drivers attention to the pedestrian crossing.



The projection of the zebra and the pedestrian crossing sign

Drawing drivers attention to the pedestrian crossing.



«Smart Monitoring» software

Remote monitoring of the system functionality.

Configuration plans of intellegent system iCrosswalk

	Basic	Standart	Optimum	Smart	Smart +
1. Traffic lights T7 - 2 units.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2. Floodlighting - 2 units.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3. Video detectors - 2 units.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4. The unlimited licence for "Pedestrian detection" software - 1 unit	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5. "Pedestrian crossing" sign - 8 units.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6. Control cubicle - 1 unit.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
7. Information LED-panel "Pedestrian" - 2 units.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
8. Remote access to cameras - 1 unit.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9. Road markings projection "Zebra" - 1 unit.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10. Server control - 1 unit.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
11. The unlimited license to "Smart Monitoring" software - 1 unit.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
12. Road markings projection 1.24.1 - 2 units.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
13. Information LED-panel 690x690x90 (3a 60m before a pedestrian crossing) - 2 units.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Zebra crossing projection Road marking 1.14.1



Projection
examples
on the
pedestrian
crossing

Road marking projection «Pedestrian crossing» Sign 1.22





Visualization of an unregulated pedestrian crossing

Pedestrian crossing "AS IS" - low visibility, high risk of accidents



Visualization of an unregulated pedestrian crossing

iCrosswalk system installed - no pedestrian, sleep mode



Visualization of an unregulated pedestrian crossing

iCrosswalk system warns about the pedestrian presence on the crossing



Visualization of an unregulated pedestrian crossing

60 m before pedestrian crossing - iCrosswalk system in sleep mode, there is no pedestrian on a crossing



Visualization of an unregulated pedestrian crossing

60 m before pedestrian crossing with iCrosswalk system – ahead informing



**SmartC – first Russian
development company
of intelligent systems
for pedestrians safety**



Unique

iCrosswalk – unique intelligent pedestrian crossing safety system on the Russian market.



Patent

Technology development iCrosswalk are patented.



Accuracy

iCrosswalk driver warning system only responds when a person appears on the pedestrian crossing.



Efficiency

System response efficiency is up to 97% with video detectors.



Expertise

iCrosswalk is maintained by an experienced team of highly qualified professionals.

iCrosswalk system integrated in 24 regions during 2012 to 2019

Our Customers

Ministries and departments of transport and road facilities, road management, Rosavtodor.

73%
repeat
purchases



Pedestrian safety is in professional hands!

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