



# SMART SERVICE

LLC SmartService

INN 1660289180 KPP 166001001

JSC CB Modulbank

Routing Number: 044525092 Correspondent account:

3010181064525000009

Account Number: 40702810970210001427

Tel. +7 (917) 293-33-39 Email: [ger@smart3d.pro](mailto:ger@smart3d.pro)

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**Dear sirs!**

The company "**SmartService**" offers to You consider the application of a high-speed and maneuverable unmanned aerial vehicle the tilt-rotor ORKUS-15 for solve the task on surveillance, search and target tracking in different weather (Sunny, rain, snow) and climatic conditions (high and low temperatures, humidity, drought).

The UAV ORKUS-15 allows you to perform tasks set by the operator in automatic mode with the transmission to the base station the telemetry data and video signal in the visible and infrared range.



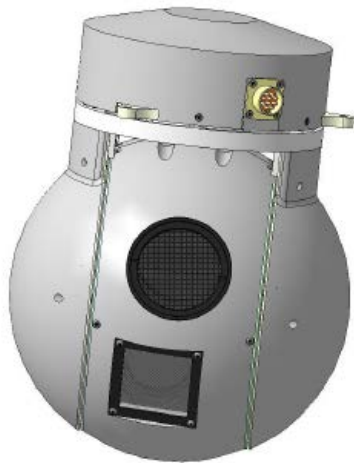
## UAV Extended Fuel Tank Version

Parameter	Measure unit	Extended Fuel Tank Version
Maximal take-off weight	<i>kg</i>	29
Weight payload	<i>kg</i>	Up to 3
Flight altitude	<i>m</i>	0-2000
Flight speed: - Minimal speed - Maximal speed	<i>km/h</i>	0 120
Flight time	<i>h</i>	Up to 3,5

Flight distance	<i>km</i>	Up to 200
Overall dimensions of the UAV: - Length - Wingspan - Height	<i>mm</i>	1400 2100 510
Fuel	-	Gasoline Euro-95
<b>Cost, including VAT</b>	<b>USD</b>	<b>\$50 350</b>

The cost of the monitoring and support software and hardware complex includes adaptation of the software of the gyro stabilized platform with UAV systems, adaptation of facial recognition software with UAV systems, adaptation of information received from the communication channel; creation of special software for monitoring and flight according to customer requirements.

Depending on the nature of the tasks, the ORKUS-15 convertiplanes may be equipped with additional equipment and their modifications, but for the customer request we can offer these:



### Gyrostabilized platform

Gyrostabilized platform, video and thermal imaging (3 stabilization axes; 1x-30x optical video zoom; 1x-10x thermal imaging module; weight up to 2.5 kg; resolution of thermal imaging 640x480; target lock supported, fire detection supported in day & night by the thermal imaging function.	<b>\$60 330</b>
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<b>Advantage Table where we see Full HD more expedient and better for UAV monitoring and online video translation</b>		
Resolution	Full HD	4K
Optical zoom	<b>30x**</b>	12x
Digital zoom	<b>12x (360x with optical)</b>	12x (144x with optical zoom)
Required speed link	<b>less</b>	above
Resolution* <b>(1080p x 2 Zoom = 2160p)</b>	1080p	<b>2160p</b>
Frame rate	<b>8 Mbit/s</b>	35 Mbit/s
Online monitoring	<b>Yes (HD)</b>	<b>No (4K Recording on HDD)</b>
Signal processing	<b>easier</b>	more difficult
Extra signal processing to convertade 4K in less resolution for video translation in real time	<b>no</b>	yes, if wanna look video signal in real time
Make a face photo	Yes (with zoom for better quality)	<b>Yes</b>
Make a Vehicle number	Yes (with zoom for better quality)	<b>Yes</b>
Cost	<b>\$60 330 USD</b>	\$65 330 USD

\*You can reach 4K in Full HD just needed use x2 zoom - it would be twice resolution (reached 4k)

\*\* bold style means better

### Options for completing the ground control station:

Specification	Unit Price, USD
Telescopic antenna, mechanical, 4 m	1 450
Telescopic antenna, automatic mechanization, 6 m	3 150
3D Link (The modem of the communication channel) of the ground control center with a signal transmission range of up to 100 km	10 490
Base station (laptop) Panasonic	8 390
Base station (laptop) iROBO	5 250
Hardware-software complex for monitoring and tracking targets	47 200

If it's necessary to use ORKUS-15 complex in remote areas from the control center, it's possible to install monitoring and control equipment on a vehicle platform such as SUVs "Buran".

### Data Link Solution in Mountain Area

#### 1. Satellite link

This way is not a best for the watching video in real time, because it's very expensive and you will be have a delay of your connection. Usually satellite link uses for telemetry.

Satellite Link*		
*For this realization we need in an extra equipment such as transceiver, modem & antenna		
Equipment		Cost
<b>Transceiver, modem</b>		<b>\$2000 USD****</b>
Satellite Contract as a plan	Connection fee	\$60
	Cost per flight (telemetry)	\$30
	Cost per flight (video)**	\$4,50 per 1 MB (very expensive) ***
	Can be subscription	up to \$4500 USD (with video)

\*\*Satellite link makes a delay of the link also (for camera's operating in real time its very bad)

\*\*\*Can be used different plan of operator

\*\*\*\*Increases the cost of UAV for this amount

#### 2. Rebroadcasting (Retranslators)

It's possible to use two UAVs (one is like retranslator also). It's can help to use normal radio link in the mountains for telemetry and for the watching video in real time also.

*COST: free.*

If You are interested in buying ORKUS-15, could you provide additional information about the tasks that the UAV will have to perform and make a detailed technical task indicating the flight range and monitoring, flight time, etc.

Director of the company Smart Service



Rogozhnikov Vyacheslav