

# DiSPLAY

PROTECTING THE FUTURE

RUGGEDIZED  
COMPUTERS



| CATALOG

FOR MORE THAN 30 YEARS «DISPLAY» DESIGN OFFICE», OJSC, HAS BEEN SPECIALIZING IN ENGINEERING AND MANUFACTURE OF DISPLAY DEVICES DESIGNED FOR OPERATION IN SEVERE CONDITIONS AND IS CONSIDERED TO BE ONE OF THE MARKET LEADERS IN THIS INDUSTRY.

COMPANY PROFILE:

- Design and production of video monitors.
- Design and production of panel and portable computers.
- Design and production of avionic displays.
- Design and production of micro display systems.
- LCD ruggedization.

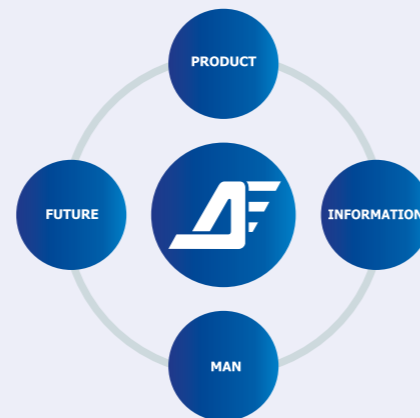
OUR PRODUCTS OPERATE SUSTAINABLY IN THE FOLLOWING CONDITIONS:

- low temperatures, -55 °C;
- high temperatures, +70 °C;
- 100% humidity, fog, spatter, rain;
- aggressive environment influence, salt spray fog, fungi, sand;
- vibration up to 5 g;
- single shocks up to 500 g;
- high ambient illumination (up to 100,000 lux).

OUR KEY COMPETENCE: HIGH PRODUCTS CUSTOMIZATION TO APPLICATION ENVIRONMENT.

«DISPLAY» DESIGN OFFICE», OJSC, IS OPEN FOR COOPERATION, PARTICIPATION IN NEW PROJECTS. R&D WORK IS ALWAYS OF GREAT INTEREST TO OUR COMPANY.

Designing our products for operation in severe conditions we protect them from environmental exposure. By that we protect the displayed information and the people who receive the information. Protecting the person, giving the chance to it to more operatively correct decisions, on the basis of the received information, we protect the future.



Being aware of all the responsibility, in our activity we are guided by the following principles:

- Personal approach to every customer.
- Unique technologies, developed by our highly skilled specialists.
- Responsibility for manufactured products.

One of the most high-tech directions of «Display «Design Office» is engineering and production of computers designed for operation in harsh environments. Having extensive experience in engineering of videomonitors and avionic displays, our engineers have designed and put into production a number of ruggedized computers for various tasks:



- panel computers 8,4" up to 24" in diagonal;
- mobile computer for harsh environments 15" in diagonal;
- tablet computer 6,5" in diagonal;
- avionic computers;
- IT solutions.

All computers can be customized by adding complementary options.

CUSTOMIZED OPTIONS (PROVIDED UPON REQUEST)

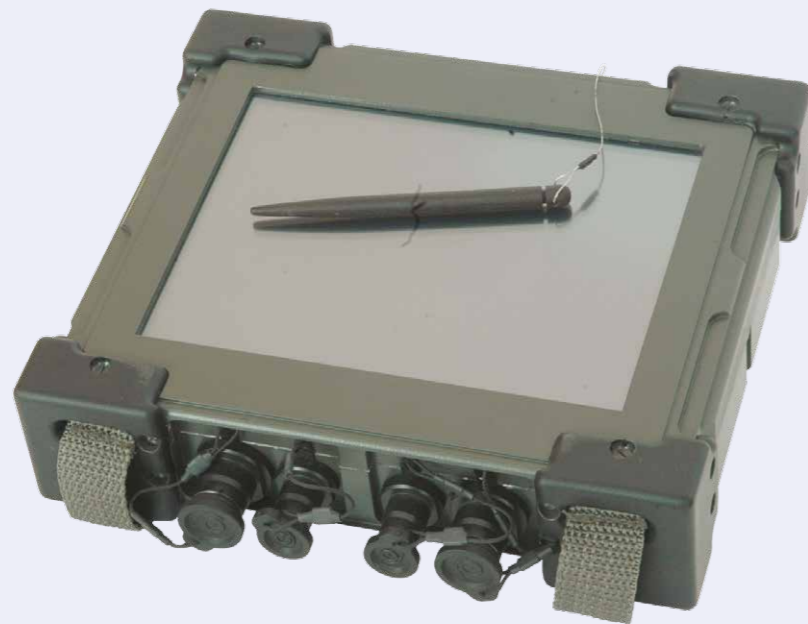
OPTION	OPTION ORDER CODE
Touch screen – RS-232 interface	01
Touch screen – USB interface	02
Increased light intensity of the screen	10
Enhanced contrast – glass to LCD bonding	11
Wandal proof modification	12
Rack	14
Rack; simplified climatic, shock and vibration requirements	15
Required IP rating	17
Climatic requirements	18
Shock and vibration requirements	19
Processor	22
RAM	23
Flash memory type	24
Flash memory capacity	25
Type and number of interfaces	26

When making an order please specify the product and the required options.

## > PC-065

Tablet computer (6,5" in diagonal) is designed for personal usage. Thanks to such features as light weight, compact dimensions, touch screen, GPS/GLONASS, built-in autonomous

power supply, it fully complies with the required operating conditions.



**DELIVERY KIT:**

- Bag • Tablet (with stylus) • Power supply unit (220V) • Helmet mounted display
- Solar panel with power supply unit

MODEL	PC-065
<b>DISPLAY</b>	
Display size	6,5"
Resolution: one-screen mode dual-screen mode	1024x768 800x600
Viewing angle, ° horizontal vertical	±75 ±75
Contrast	400:1
Brightness, cd/m <sup>2</sup>	500
Touch screen	resistive
<b>COMPUTER UNIT</b>	
Processor	NVIDIA Tegra 2 (1 GHz)
RAM, MB	400
OS compatibility	Windows CE 6.0, Windows Embedded Compact 7, Linux
Internal flash memory, MB	512
Memory card slot	Micro SD-1 slot
<b>INTERFACES</b>	
Interfaces	1 port RS232; 1 port Ethernet; 1 port USB 2.0; 1 port SVGA; 1 port GPS/Glonass
Input methods	touch screen, port for external USB keyboard or port for external USB mouse
Compatibility with helmet mounted display	+
Built-in Bluetooth	+(class 2)
<b>POWER SUPPLY</b>	
Power supply, V	from storage battery
Built-in storage battery	li-polymer 4000 mAh
Storage battery charge	AC ~220 V 50 Hz DC 10... 30 V from external flexible solar panel (OPTION)
Runtime from storage battery in normal conditions	up to 6 hrs of continuous operation
<b>DIMENSIONS</b>	
Dimensions: width/height/depth, mm	182/179/45
Weight, kg	1,2
<b>AMBIENT CONDITIONS</b>	
Temperature, °C operating storage	-40...+55 -40...+70
Vibration	1... 80 Hz, 3 g
Shocks single repeated	75 g, 1... 5 ms 15 g, 5... 10 ms

## > Toughbook BU-15

Toughbook BU-15 designed for operation in extreme conditions. The main features are: embedded autonomous power supply and a lot of interfaces such as video-inputs, analog

and digital input –outputs. Is possible to supply with avionic interfaces ARING429 and MIL-STD-1553B.



MODEL	BU-15
<b>DISPLAY</b>	
Display size	15"
Resolution	1024x768
Viewing angle, ° horizontal vertical	±55 ±45
Contrast	700:1
Brightness, cd/m <sup>2</sup>	400
Touch screen	– (option; provided upon request)
<b>COMPUTER UNIT</b>	
Processor	Intel Core i7, 2 GHz
RAM, GB	4
OS compatibility	Windows, MCBC, Linux
Video	64 MB (supports two displays in DVI mode)
Flash memory	SSD 32 GB
<b>INTERFACES</b>	
Interfaces	1 DVI output 7 ports RS-232 2 ports Gigabit Ethernet 16/48 analog/digital input-outputs
Audio	4 ports USB 2.0 4 ports Video microphone input line output line input
<b>POWER SUPPLY</b>	
Power supply, V	+22... 30 or ~220, 50 Hz from charge unit
Built-in storage battery	+
Runtime from storage battery in normal conditions	2 hours
Power consumption, W	90
Power consumption with heating, W	130
<b>DIMENSIONS</b>	
Dimensions: width/height/depth, mm	367/350/113
Weight, kg	10
<b>AMBIENT CONDITIONS</b>	
Temperature, °C operating storage	-50...+55 -50...+70
Humidity	98%, 35 °C
Vibration	1... 80 Hz, 4 g
Shocks single repeated	75 g, 1... 5 ms 15 g, 5... 10 ms

Customized options are provided upon request

## > Toughbook BU-15.2

Toughbook BU-15.2 is a laptop with screen size 15.0", designed for operating in harsh environ-

ment. Light weight and embedded autonomous power supply allow to use it outdoors.



MODEL	BU-15.2
<b>DISPLAY</b>	
Display size	15"
Resolution	1600x1200
Viewing angle, ° horizontal vertical	±55 ±45
Contrast	400:1 (option 600:1)
Brightness, cd/m <sup>2</sup>	400 (option 600)
Touch screen	- (option; provided upon request)
<b>COMPUTER UNIT</b>	
Processor	Intel Core i7, 2 GHz
RAM, GB	4
OS compatibility	Windows, MCBC, Linux
Video	64 MB
Flash memory	SSD 32 GB
<b>INTERFACES</b>	
Interfaces	7 ports RS-232 2 ports Gig. Ethernet 4 ports USB 2.0 Interface DVI (output)
Audio	microphone input line output line input
<b>POWER SUPPLY</b>	
Power supply, V	+ 27... 30 or ~220, 50 Hz from charge unit
Built-in storage battery	+
Runtime from storage battery in normal conditions	not less than 3 hours
Power consumption, W	100
Power consumption with heating, W	130
<b>DIMENSIONS</b>	
Dimensions: width/height/depth, mm	367/82/350
Weight, kg	9
<b>AMBIENT CONDITIONS</b>	
Temperature, °C operating storage	-50...+55 -50...+70
Humidity	98%, 35 °C
Vibration	1... 80 Hz, 3 g
Shocks single repeated	75 g, 1... 5 ms 15 g, 5... 10 ms

Customized options are provided upon request

## > PC-084

Panel computer (8,4" in diagonal) designed for operation on marine facilities.

PC-084 is provided with capacitive touch screen and a wide voltage range.



MODEL	PC-084
<b>DISPLAY</b>	
Display size	8,4"
Resolution	1024x768
Viewing angle, ° horizontal vertical	±70 ±55
Contrast	600:1
Brightness, cd/m <sup>2</sup>	600
Touch screen	PCAP
<b>COMPUTER UNIT</b>	
Processor	Intel Atom N450, 1,6 GHz
RAM, GB	2
OS compatibility	Windows, Astra Linux
Video	64 M6
Flash memory	Compact Flash 16 GB
<b>INTERFACES</b>	
Interfaces	1 port PS/2 (Keyboard/Mouse) 1 port RS-232 1 port Ethernet 1 port USB 2 ports RS-485 with galvanic isolation
Audio	-
<b>POWER SUPPLY</b>	
Power supply, V	+12... 35
Power consumption, W	25
Power consumption with heating, W	60
<b>DIMENSIONS</b>	
Dimensions: width/height/depth, mm	234/205/95
Weight, kg	3,5
<b>AMBIENT CONDITIONS</b>	
Temperature, °C operating storage	-40...+50 -50...+60
Humidity	98%, 35 °C
Vibration	1... 35 Hz, 1 g
Shocks single repeated	100 g, 0,5... 2 ms 15 g, 5... 15 ms

Customized options are provided upon request

## > PC-121

A computer (12,1" in diagonal) with a touch screen and processor Core 2 DUO.

It has compact dimensions and a wide voltage range.



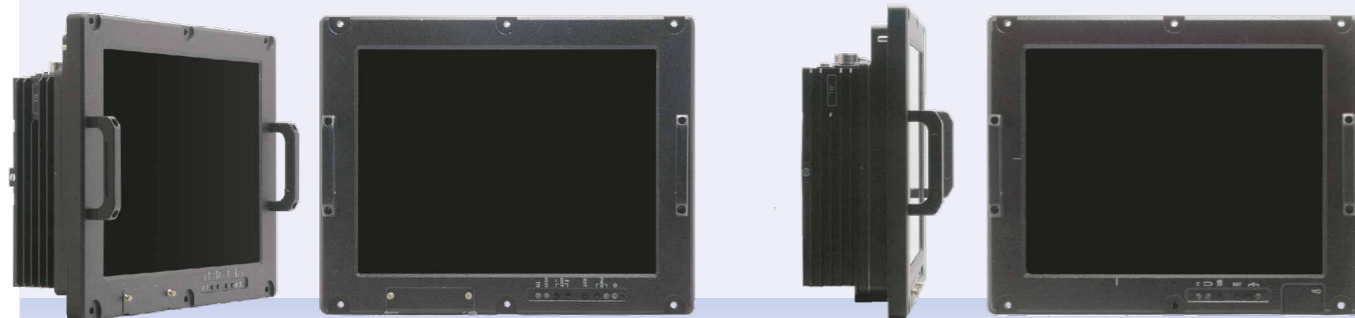
MODEL		PC-121
<b>DISPLAY</b>		
Display size		12,1"
Resolution		1024x768
Viewing angle, ° horizontal vertical		±75 ±75
Contrast		500:1
Brightness, cd/m <sup>2</sup>		600
Touch screen		resistive
<b>COMPUTER UNIT</b>		
Processor		Intel Core 2 Duo, 2,0 GHz
RAM, GB		2
OS compatibility		Windows, MCBC 3.0 (MCBC 5.0), Linux
Video		128 MB
Flash memory		Compact Flash 8 GB
<b>INTERFACES</b>		
Interfaces		1 port CNS (user interface) 2 ports RS-232 2 ports Ethernet 2 ports USB 1 port PS/2 (Keyboard/Mouse)
Audio		microphone input line output
<b>POWER SUPPLY</b>		
Power supply, V		+11... 35
Power consumption, W		50
Power consumption with heating, W		130
<b>DIMENSIONS</b>		
Dimensions: width/height/depth, mm		330/275/58
Weight, kg		4,3
<b>AMBIENT CONDITIONS</b>		
Temperature, °C operating storage		-40...+55 -60...+65
Humidity		100%, 35 °C
Vibration		1... 500 Hz, 6 g
Shocks single repeated		75 g, 1... 5 ms 15 g, 5... 15 ms

Customized options are provided upon request

## > PC-150 / PC-150M

Panel computer (15" in diagonal) provided with a touch screen and an autonomous power supply. Light weight, vibration- and shockproof, wide range of operating temperatures make it possible to use the computer in harsh environments.

PC-150M is provided with a more powerful processor core. The configuration can be customized.



MODEL	PC-150	PC-150M
<b>DISPLAY</b>		
Display size	15"	15"
Resolution	1024x768	1024x768
Viewing angle, ° horizontal vertical	±75 ±75	±75 ±75
Contrast	250:1	700:1
Brightness, cd/m <sup>2</sup>	350	700
Touch screen	resistive	– (option; provided upon request)
<b>COMPUTER UNIT</b>		
Processor	Intel Core 2 Duo, 1,6 GHz	Intel mobile Core i7, 2,53 GHz
RAM, GB	2	4
OS compatibility	Windows, Linux	
Video	128 MB	1,7 GB
Flash memory	Compact Flash 16 GB	SSD 2,5", 64 GB
<b>INTERFACES</b>		
Interfaces	6 ports USB 1 port PS/2 (Keyboard) 1 port PS/2 (Mouse) 2 ports RS-232 2 ports Ethernet	1 port PS/2 (Keyboard) 1 port PS/2 (Mouse) 1 port VGA-output 4 ports RS-232 2 ports Ethernet Gigabit 4 ports USB
Audio	microphone input line output	line input microphone input line output
<b>POWER SUPPLY</b>		
Power supply, V	+11... 35	+22... 29
Built-in storage battery	Ni-Cd 3000 mA/h	–
Runtime from storage battery in normal conditions	30 min	–
Power consumption, W	60	70
Power consumption with heating, W	90	100
<b>DIMENSIONS</b>		
Dimensions: width/height/depth, mm	387/308/133	387/300/110
Weight, kg	10	7,7
<b>AMBIENT CONDITIONS</b>		
Temperature, °C operating storage	-40...+55 -50...+60	-25...+55 -40...+70
Humidity	100%, 35 °C	98%, 35 °C
Vibration	1... 500 Hz, 6 g	1... 300 Hz, 2 g
Shocks single repeated	20 g, 10 ms 15 g, 5... 10 ms	15 g, 0,2 sec 15 g, 5... 10 ms

Customized options are provided upon request

## > PC-150T

Panel PC with screen size 15", designed for marine application, doesn't have vibro-active elements (fanless), IP65.



MODEL	PC-150T
<b>DISPLAY</b>	
Display size	15"
Resolution	1024x768
Viewing angle, ° horizontal vertical	±70 ±55
Contrast	100:1
Brightness, cd/m <sup>2</sup>	250
Touch screen	capacitive
<b>COMPUTER UNIT</b>	
Processor	Intel Atom N450 1.66 GHz
RAM, GB	2
OS compatibility	Windows, Astra Linux Special Edition 1.3
Video	224 MB
Flash memory	SSD 32 GB
<b>INTERFACES</b>	
Interfaces	3 ports Ethernet 2 ports USB 5 ports RS-485 (with decoupling)
Audio	-
<b>POWER SUPPLY</b>	
Power supply, V	+12... 35
Power consumption, W	50
Power consumption with heating, W	100
<b>DIMENSIONS</b>	
Dimensions: width/height/depth, mm	424/344/160
Weight, kg	8,5
<b>AMBIENT CONDITIONS</b>	
Temperature, °C operating storage	-40...+50 -50...+60
Humidity	98%, 35 °C
Vibration	1... 35 Hz, 1 g
Shocks single repeated	100 g, 0,5... 2 ms 15 g, 5... 15 ms
IP Rating	IP 65

Customized options are provided upon request

## > PC-201M

Panel PC with screen size 20.1" and resolution 1600x1200 with a lot of input-output interfaces,

and with high brightness designed for avionic application.



MODEL	PC-201M
<b>DISPLAY</b>	
Display size	20,1"
Resolution	1600x1200
Viewing angle, ° horizontal vertical	±88 ±88
Contrast	700:1
Brightness, cd/m <sup>2</sup>	700
Touch screen	– (option; provided upon request)
<b>COMPUTER UNIT</b>	
Processor	Intel Core i7, 2,53 GHz
RAM, GB	4
OS compatibility	
Video	1,7 GB
Flash memory	SSD 64 GB
<b>INTERFACES</b>	
Interfaces	1 port PS/2 (Keyboard) 1 port PS/2 (Mouse) 1 port VGA-output 4 ports RS-232 2 ports Ethernet Gigabit 4 ports USB
Audio	line input microphone input line output
<b>POWER SUPPLY</b>	
Power supply, V	+22... 29.7
Power consumption, W	100
Power consumption with heating, W	200
<b>DIMENSIONS</b>	
Dimensions: width/height/depth, mm	482/399/73,5
Weight, kg	13,5
<b>AMBIENT CONDITIONS</b>	
Temperature, °C operating storage	-40...+55 -50...+70
Humidity	98%, 35 °C
Vibration	1... 500 Hz, 2 g
Shocks single repeated	15 g, 1... 5 ms 15 g, 5... 10 ms

Customized options are provided upon request

## > UPC-150

Panel computer (15" in diagonal) is designed for operation in automatic control systems or independently for data processing and infor-

mation real-time display. UPC-150 can be used on mobile land vehicles and naval objects.



MODEL	UPC-150
<b>DISPLAY</b>	
Display size	15"
Resolution	1024x768
Viewing angle, ° horizontal vertical	±70 ±70
Contrast	300:1 (option 600:1)
Brightness, cd/m <sup>2</sup>	300 (option 600)
Touch screen	+
<b>COMPUTER UNIT</b>	
Processor	Intel Core i7, 2.53 GHz
RAM, GB	4
OS compatibility	Windows, Linux, Astra Linux Special Edition
Video	1,7 GB
Flash memory	SSD up to 512 GB, HDD up to 1 TB
<b>INTERFACES</b>	
Interfaces	4 ports RS-232 2 ports Gigabit Ethernet 4 ports USB 1 port VGA 1 port KB (PS/2) 1 port MS (PS/2)
Audio	line input microphone input line output
<b>POWER SUPPLY</b>	
Power supply, V	+22...29.7
Power consumption, W	45
Power consumption with heating, W	115
<b>DIMENSIONS</b>	
Dimensions: width/height/depth, mm	387/308/100
Weight, kg	9,5
<b>AMBIENT CONDITIONS</b>	
Temperature, °C operating storage	-40...+55 -50...+70
Humidity	98%, 35 °C
Vibration	1... 300 Hz, 2 g
Shocks single repeated	50 g 15 g

Customized options are provided upon request

## > UPC-190

Panel computer (19" in diagonal) is designed for operation in automatic control systems or independently for data processing and infor-

mation real-time display. UPC-190 can be used on mobile land vehicles and naval objects.



MODEL	UPC-190
<b>DISPLAY</b>	
Display size	19"
Resolution	1280x1024
Viewing angle, ° horizontal vertical	±80 ±80
Contrast	300:1 (option 600:1)
Brightness, cd/m <sup>2</sup>	250 (option 600)
Touch screen	+
<b>COMPUTER UNIT</b>	
Processor	Intel Core i7, 2.53 GHz
RAM, GB	4
OS compatibility	Windows, Linux, Astra Linux Special Edition
Video	1,7 GB
Flash memory	SSD up to 512 GB, HDD up to 1 TB
<b>INTERFACES</b>	
Interfaces	4 ports RS-232 2 ports Gigabit Ethernet 4 ports USB 1 port VGA 1 port KB (PS/2) 1 port MS (PS/2)
Audio	line input microphone input line output
<b>POWER SUPPLY</b>	
Power supply, V	+22...29.7
Power consumption, W	50
Power consumption with heating, W	165
<b>DIMENSIONS</b>	
Dimensions: width/height/depth, mm	457/372/102
Weight, kg	12
<b>AMBIENT CONDITIONS</b>	
Temperature, °C operating storage	-40...+55 -50...+70
Humidity	98%, 35 °C
Vibration	1... 300 Hz, 2 g
Shocks single repeated	50 g 15 g

Customized options are provided upon request

## > UPC-201

Panel computer (20,1" in diagonal) is designed for operation in automatic control systems or independently for data processing and infor-

mation real-time display. UPC-201 can be used on mobile land vehicles and naval objects.



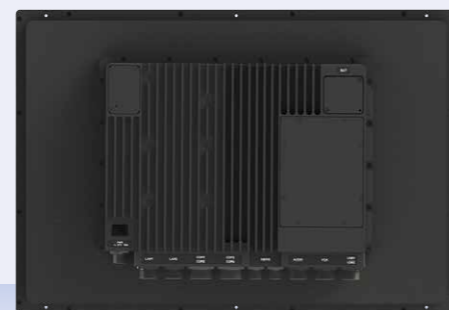
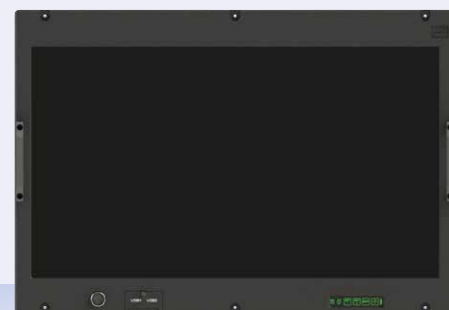
MODEL	UPC-200
<b>DISPLAY</b>	
Display size	20,1"
Resolution	1600x1200
Viewing angle, ° horizontal vertical	±80 ±80
Contrast	200:1 (option 600:1)
Brightness, cd/m <sup>2</sup>	250 (option 600)
Touch screen	+
<b>COMPUTER UNIT</b>	
Processor	Intel Core i7, 2.53 GHz
RAM, GB	4
OS compatibility	Windows, Linux, Astra Linux Special Edition
Video	1,7 GB
Flash memory	SSD up to 512 GB, HDD up to 1 TB
<b>INTERFACES</b>	
Interfaces	4 ports RS-232 2 ports Gigabit Ethernet 4 ports USB 1 port VGA 1 port KB (PS/2) 1 port MS (PS/2)
Audio	line input microphone input line output
<b>POWER SUPPLY</b>	
Power supply, V	+22...29.7
Power consumption, W	50
Power consumption with heating, W	120
<b>DIMENSIONS</b>	
Dimensions: width/height/depth, mm	482/399/102
Weight, kg	14
<b>AMBIENT CONDITIONS</b>	
Temperature, °C operating storage	-40...+55 -50...+70
Humidity	98%, 35 °C
Vibration	1... 300 Hz, 2 g
Shocks single repeated	50 g 15 g

Customized options are provided upon request

## > UPC-240

Unified panel computer with screen size 24.0". Designed for using in automatic control systems. Can be used on land vehicles and sea

vessels. Installation of Mini PCI Express module upon request.



MODEL	UPC-240
<b>DISPLAY</b>	
Display size	24"
Resolution	1920x1080
Viewing angle, ° horizontal vertical	±80 ±80
Contrast	200:1 (option 600:1)
Brightness, cd/m <sup>2</sup>	250 (option 600)
Touch screen	+
<b>COMPUTER UNIT</b>	
Processor	Intel Core i7, 2.53 GHz
RAM, GB	4
OS compatibility	Windows, Linux, Astra Linux Special Edition
Video	1,7 GB
Flash memory	SSD up to 512 GB, HDD up to 1 TB
<b>INTERFACES</b>	
Interfaces	4 ports RS-232 2 ports Gigabit Ethernet 4 ports USB 1 port VGA 1 port KB (PS/2) 1 port MS (PS/2)
Audio	line input microphone input line output
<b>POWER SUPPLY</b>	
Power supply, V	+22...29.7
Power consumption, W	70
Power consumption with heating, W	195
<b>DIMENSIONS</b>	
Dimensions: width/height/depth, mm	580/399/102
Weight, kg	16
<b>AMBIENT CONDITIONS</b>	
Temperature, °C operating storage	-40...+55 -50...+70
Humidity	98%, 35 °C
Vibration	1... 300 Hz, 2 g
Shocks single repeated	50 g 15 g

Customized options are provided upon request

## > BC-45C

Open-architecture computer designed for mounting into a 19" rack. Additional modules

(Compact PCI) can be mounted.



MODEL	BC-45C
<b>COMPUTER UNIT</b>	
Processor	Intel Core Duo, 1,2 GHz
RAM, GB	2
OS compatibility	Windows, Linux, QNX
Video	128 MB
State memory	HDD 2,5", 320 GB Compact Flash Card Type II, 512 MB
Resolution	2048x1536, 60 Hz, 16 bit
Bus	2-bit interface CompactPCI, 33 MHz, compatible with PICMG 2.0 R3.0

INTERFACES	
Interfaces	1 VGA videooutput 1 port PS/2 Keyboard 1 port PS/2 Mouse 1 port RS-232 (RS-422, RS-485) 3 ports Gigabit Ethernet 2 ports USB 2.0
Audio	microphone input, line input, line output, headphone output
Free slots Compact PCI	6 slots, VI/O +3,3 V, 6U 4HP

POWER SUPPLY	
Power supply, V	+22... 31
Power consumption, W	80
Power consumption with heating, W	300

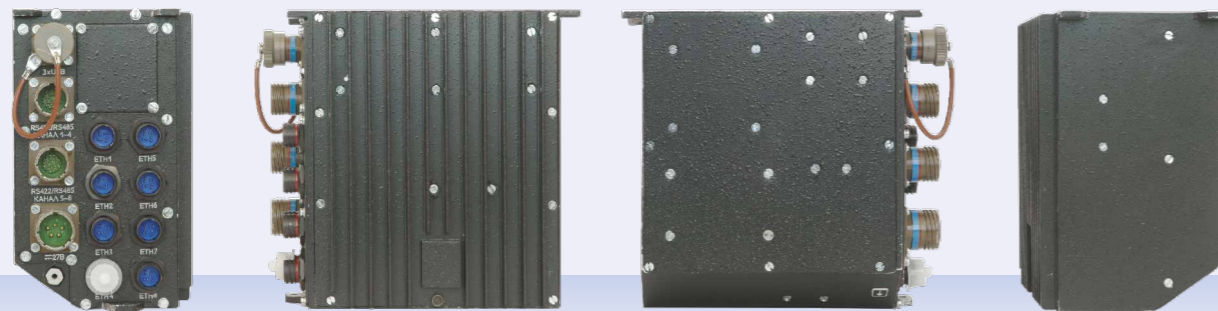
DIMENSIONS	
Dimensions: width/height/depth, mm	483/185/315
Weight, kg	10,5

AMBIENT CONDITIONS	
Temperature, °C operating storage	-25...+50 -40...+65
Humidity	98%, 25 °C
Vibration	1... 200 Hz, 2 g
Shocks single repeated	10 g, 5... 10 ms

Customized options are provided upon request

## > Computer Block

Designed for operation in mobile automatic control systems, it provides realtime computer information processing.



MODEL	
Computer Block	
<b>COMPUTER UNIT</b>	
Processor	Intel Core i7, 1,7 GHz
RAM, GB	2
Video	128 MB
Flash memory	SATA 32 MB
OS compatibility	Windows, Astra Linux Special Edition

INTERFACES	
Interfaces	1 port VGA 3 ports USB 2.0 8 ports Ethernet 8 ports RS422/RS485

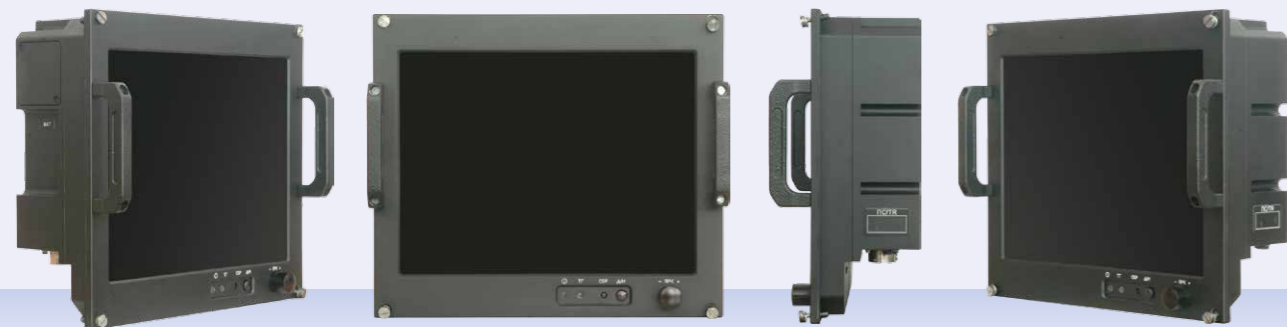
POWER SUPPLY	
Power supply, V	+18... 36
Power consumption, W	100

DIMENSIONS	
Dimensions: width/height/depth, mm	115/190/203
Weight, kg	3

AMBIENT CONDITIONS	
Temperature, °C operating operating short-time (30 min) storage	-60...+55 +65 -50...+65
Humidity	98%, 35 °C
Shocks single repeated	5 g, 40 ms 6 g, 20 ms
Broad band random vibration	10... 2000 Hz, 4,5 g
Sinusoidal vibration	10... 150 Hz, 3 g

## > PC-121MA

Avionic Panel Computer PC-121MA – with display size 12.1", compatible with NVIS-glasses, integrated GPS/Glonass system.



MODEL	PC-121MA
<b>DISPLAY</b>	
Display size	12.1"
Resolution	1024x768
Viewing angle, ° horizontal vertical	±80 ±80
Contrast	750:1
Brightness, cd/m <sup>2</sup>	750
<b>COMPUTER UNIT</b>	
Processor	Intel Core i7, 2.5 GHz
RAM, GB	2
OS compatibility	Windows, Astra Linux, MCBC 5.0
Video	512 MB
Flash memory	SSD 64 GB – 2 ps
<b>INTERFACES</b>	
Interfaces	1 port RS-232 2 ports Gigabit Ethernet 2 ports USB 2 avionic ports GPS / Glonass input
Audio	microphone input, line output
<b>POWER SUPPLY</b>	
Power supply, V	+18...32
Power consumption, W	120
Power consumption with heating, W	200
<b>DIMENSIONS</b>	
Dimensions: width/height/depth, mm	295/256/120
Weight, kg	6
<b>AMBIENT CONDITIONS</b>	
Temperature, °C operating storage	-25...+60 -60...+70
Humidity	98%, 35 °C
Vibration	1... 500 Hz, 6 g
Shocks single repeated	4.5, 20 ms 15, 10..15 ms

Customized options are provided upon request

## > Rugged all-in-one PC «tactical desk»

Designed to be used as interactive control center and for displaying of information . Possible positions: from horizontal and up to

vertical. Option: stand with remote controlling of height (from 510 mm up to 1300 mm) and inclination (0-90°).



MODEL		TACTICAL DESK	
DISPLAY			
Display size	46"	55"	65"
Screen orientation	horizontal/vertical		
Resolution	1920x1080	3840x2160	
Viewing angle, °			
horizontal	±70		
vertical	±70		
Contrast	1000:1		
Brightness, cd/m <sup>2</sup>	700 (option: 1500)		
Touch screen	multitouch		

COMPUTER UNIT	
Processor	Intel Core i3 (option: i5/i7)
RAM, GB	4
OS compatibility	Windows, Linux, (Android – option)
Flash memory	not less than 60 GB

AUDIO	
Built-in stereo system, W	10

INTERFACES	
Interfaces	10BASE-T/100BASE-TX (Ethernet) Wi-Fi 4 USB 2.0 (optionally DVI-output; RS232; aux 3,5 mm jack)

POWER SUPPLY			
Power supply, V	220, 50 Hz		
Power consumption, W	250	350	450
Power consumption with heating, W	1050 (option -30 °C)	1250 (option -30 °C)	1350 (option -30 °C)

DIMENSIONS	
Dimensions: width/height/depth, mm	upon request

AMBIENT CONDITIONS	
Temperature, °C	+5...+45 (option -30 °C) -40...+55
operating	
storage	
Humidity	100%, 25 °C

**DiSPLAY**  
PROTECTING THE FUTURE



210605, Republic of Belarus ,Vitebsk, P. Brovki Str., 13 a  
Tel.: + 375 212 **57 55 92** • Fax: + 375 212 **58 81 19** • e-mail: [info@kbdisplay.com](mailto:info@kbdisplay.com)  
[www.kbdisplay.com](http://www.kbdisplay.com)