

SPECTR 4.0



Personal Biometric Data Registration Complex (PBDRC)



General description

The PBDRC «SPECTR» 4.0 is a compact device developed on the basis of the «LIME 5B» system board. It is designed to photograph applicants during the processing of identity documents.

It is powered from a 110/220 V AC mains supply. Most of the device's structural components are designed and manufactured in Russia.

It holds compliance certificates under the EAEU CU technical regulations for electrical safety and electromagnetic compatibility.

Features and advantages:

[1] Ability to capture multiple photos of the applicant using two cameras built into the housing. The optimal camera is selected automatically based on the person's height.	[2] Illumination of the subject's face using movable built-in lights with adjustable brightness and color temperature.	[3] Evaluation of the resulting images using built-in neural network models trained on the company's test bench, incorporating accumulated expert experience. Recommendations are provided to the user before and during the capture process.
[4] Interactive engagement with the applicant via a built-in touchscreen display, speakers, and microphone.	[5] A mounting slot for optional sensors — an applicant temperature sensor or a rangefinder.	

Supported standards

The device prepares the applicant's photo in accordance with the requirements of GOST 19794-5, ISO/IEC 39794-5, and ICAO 9303.



TECHNICAL SPECIFICATIONS



The device runs on the open-source Linux operating system. It uses proprietary in-house software. The photo complex is controlled by the «LIME 5B» system board, a compact single-board computer with a powerful modern processor. The device runs on AC mains power and is additionally equipped with a battery that protects it in case of unstable power supply. The PBDRC housing has a VESA-standard mount, with adjustable LED lighting units on extendable arms located at the top and bottom.

Key specifications

Housing	Back cover – steel, Front panel – aluminum
Display	10.1" touchscreen, 1280 × 800 resolution
System board	LIME 5B
Processor	Rockchip RK3588S, 8 cores, 2.4 GHz
RAM	8 GB LPDDR4
Storage	128 GB eMMC
External memory	MicroSD card slot
USB	1 × USB-A port 2.0 1 × USB-B-OTG 2.0
Ethernet	1000 Mbps
Optical module	2 × 8 MP sensor resolution
Battery	Capacity 6 Ah
Other components	Speakers, microphone for communication with the applicant
Software	Linux OS (on MicroSD) PBDRC software (on MicroSD) Control software (on user's PC)
Additional sensors (optional)	• Proximity sensor • Temperature sensor

External specifications

Dimensions	9 × 34 × 40 mm (L × W × H)
Weight	3 kg

