



# ASTRA-LAN (PAK Astra) Communication module User Guide



This User Guide is intended to study the principle of operation, operating conditions and maintenance of the communication module "Astra-LAN (PAK Astra)" (Pic. 1). The manufacturer reserves the right to make changes to the design, firmware, circuit solutions and product packaging that do not worsen its technical parameters, do not violate mandatory regulatory requirements, without prior notice to the consumer. The technical features of the product not listed in the User Guide in terms of design, firmware and circuit solutions are standard for the product, if they do not worsen the declared technical characteristics.

### Abbreviations:

**CrossARM** – automated workplace of the centralized security monitoring software;

**BAT** – accumulator battery;

**Tutorial** – PKM Astra Pro software embedded manual, or Astra-812 Pro setup manual from the keypad;

**Module** – communication module "Astra-LAN (PAK Astra)"

**PAK Astra** – TEKO cloud server platform;

**PKM Astra Pro** – Astra Pro configuring and monitoring software package (see on the website [www.teko.biz](http://www.teko.biz));

**Control Panel** – control panel "Astra-812 Pro" or "Astra-8945 Pro".

## 1 FUNCTION

**1.1** The module is designed for operation as part of the Astra control panel of the Pro series: Astra-8945 Pro, Astra-812 Pro.\*

**1.2** The module provides information exchange with the PAK Astra server via the Ethernet 10/100 Base-T network interface for the purpose of remote control and monitoring of the Control Panel (Pro series). Via the Internet by means of client services (mobile and web applications or monitoring software workplace).

**1.3** The module is designed for continuous 24h operation.

## 2 SPECIFICATIONS

Average current consumption of 812 Pro, 8945 Pro at voltage

12V (24V) with installed module, mA, not more..... 170 (120)\*\*

Communication line..... Ethernet channel

Overall dimensions, mm, not more..... 65×28×14

Weight, kg, not more..... 0,013

### Operating conditions

Temperature range, °C..... from - 10 to + 55

Average air humidity, %..... up to 93 at + 40 °C  
without moisture condensation

## 3 DELIVERY SET

Communication module Astra-LAN (PAK Astra) ..... 1 pc.

Terminal Board (for Control Panel 812 Pro) ..... 1 pc.

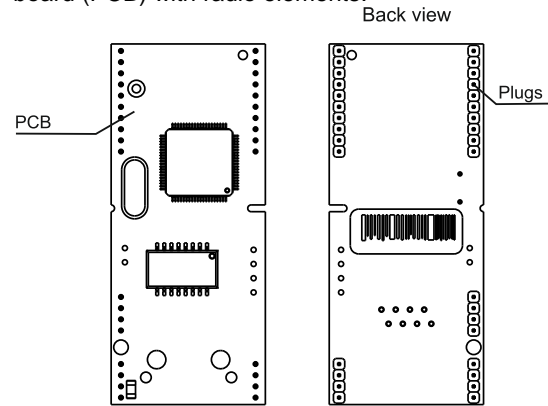
Sticker ..... 2 pc.

\* Starting from Firmware v4\_0

\*\* For the Control Panel Pro to operate with any set of modules, the rated current of the power supply must be at least 0.7 A (recommended 1 A)

## 4 DESIGN

Structurally, the module is made in the form of a printed circuit board (PCB) with radio elements.



Picture 1

## 5 INSTALLATION

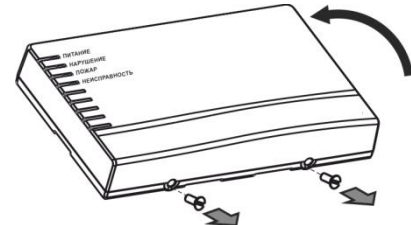
**5.1** After transportation under conditions different from the operating conditions, keep the module unpacked under operating conditions for at least 4 hours.

**5.2** Only persons who have studied this user guide and are allowed to work with electrical installations up to 1000 V are allowed to work on the installation, maintenance and operation of the module.

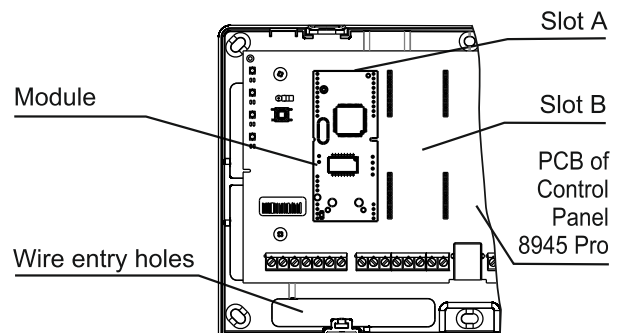
### 5.3 INSTALLATION ORDER

#### 5.3.1 Installing a module in the 8945 Pro Control Panel:

- 1) Turn off the power of the Control Panel 8945 Pro
- 2) Open the cover of the 8945 Pro Control Panel by unscrewing the two screws on the bottom of the base



- 3) Install the module in one of the two slots of the 8945 Pro Control Panel:



- 4) Pass the network interface wires through the wire entry hole, ensure hidden wiring. Conduct wiring to the Control Panel 8945 Pro terminals in accordance with p. 7 (Table 1).

- 5) Close the cover of the Control Panel 8945 Pro, tighten the two screws at the bottom of the base of the Control Panel 8945 Pro

### 5.3.2 Installing the module in the Control Panel 812 Pro :

1) Turn off the power of the Control Panel 812 Pro.

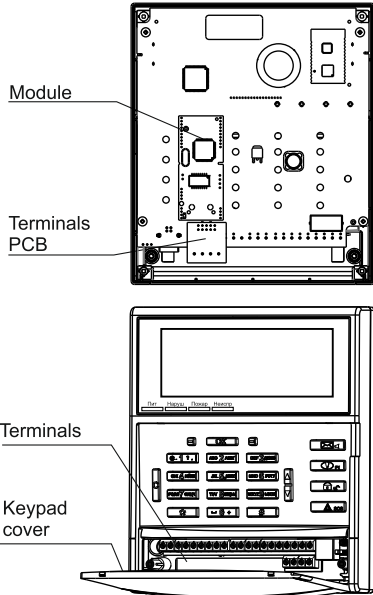
2) Remove the base of the Control Panel 812 Pro by unscrewing the 4 screws from the side of the base.

3) Install the terminal block board from the delivery set and the module itself on the PCB 812 Pro from the side of the base.

4) Install the base

5) Open the keypad cover of the Control Panel 812 Pro

6) Remove the terminal compartment cover by unscrewing the 2 screws securing it.



7) Pass the network interface wires through the wire entry hole, ensure hidden wiring to the terminals of the Control Panel 812 Pro is carried out in accordance with section 7 (table 2).

8) Replace the cover of the terminal compartment, tighten the two screws. Close the keypad cover if necessary.

## 6 SETUP

Module configuration is carried out using a computer and the PKM program Astra-Pro according to the method described in the User's Manual of the software.

When using the module as part of the Astra-812 Pro control panel, it is possible to add and configure it through the built-in keypad and display of the Astra-812 Pro control panel according to the instructions for the Astra-812 Pro control panel.

## 7 CONNECTION TO THE NETWORK

The control panel PCB contains screw terminals for connecting to the Ethernet network (connection to the control panel 812 Pro is made through the terminals of the installed terminal board).

**Terminals functions** is presented in Tables 1, 2:

Table 1 – Control Panel 8945 Pro

CP terminals	Terminals function
	Terminals are used when installing the module in slot A: <b>A1</b> - to connect Tx-; <b>A2</b> - to connect Tx+; <b>A3</b> - to connect Rx-; <b>A4</b> - to connect Rx+.
	Terminals are used when installing the module in slot B: <b>B1</b> - to connect Tx-; <b>B2</b> - to connect Tx+; <b>B3</b> - to connect Rx-; <b>B4</b> - to connect Rx+.

Table 2 - Control Panel 812 Pro

Control Panel terminals	Terminals function
	<b>A1</b> - to connect Tx-; <b>A2</b> - to connect Tx+; <b>A3</b> - to connect Rx-; <b>A4</b> - to connect Rx+.

Network connection must be provided with a **TIA/EIA-568-B** crossover type network cable.

The connection diagram is shown in the figure:

If module is installed into slot A of the Control Panel 8945 Pro, or into the Control Panel Astra-812 Pro slot:

Terminals	
A1	ORANGE
A2	WHITE-ORANGE
A3	GREEN
A4	WHITE-GREEN

when installed into slot B of the 8945 Pro Control Panel

Terminals	
B1	ORANGE
B2	WHITE-ORANGE
B3	GREEN
B4	WHITE-GREEN

## 9 WARRANTY

9.1 Warranty period of operation - 2 years from the date of commissioning, but not more than 2 years 6 months from the date of manufacture.

9.2 Average module life is 10 years.

9.3 **The warranty does not take effect in the following cases:**

- non-observance of this user guide;
- mechanical damage to the module;
- module repair by a person other than the manufacturer.

9.4 The warranty only applies to the module. All third party equipment used with the module is covered by their own warranties.

**The manufacturer is not liable for any damage to health, property, or other incidental or special loss, direct or indirect damages based on the user's claim that the module did not fulfill its functions, or as a result of misuse, failure or temporary inoperability of the module.**

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