

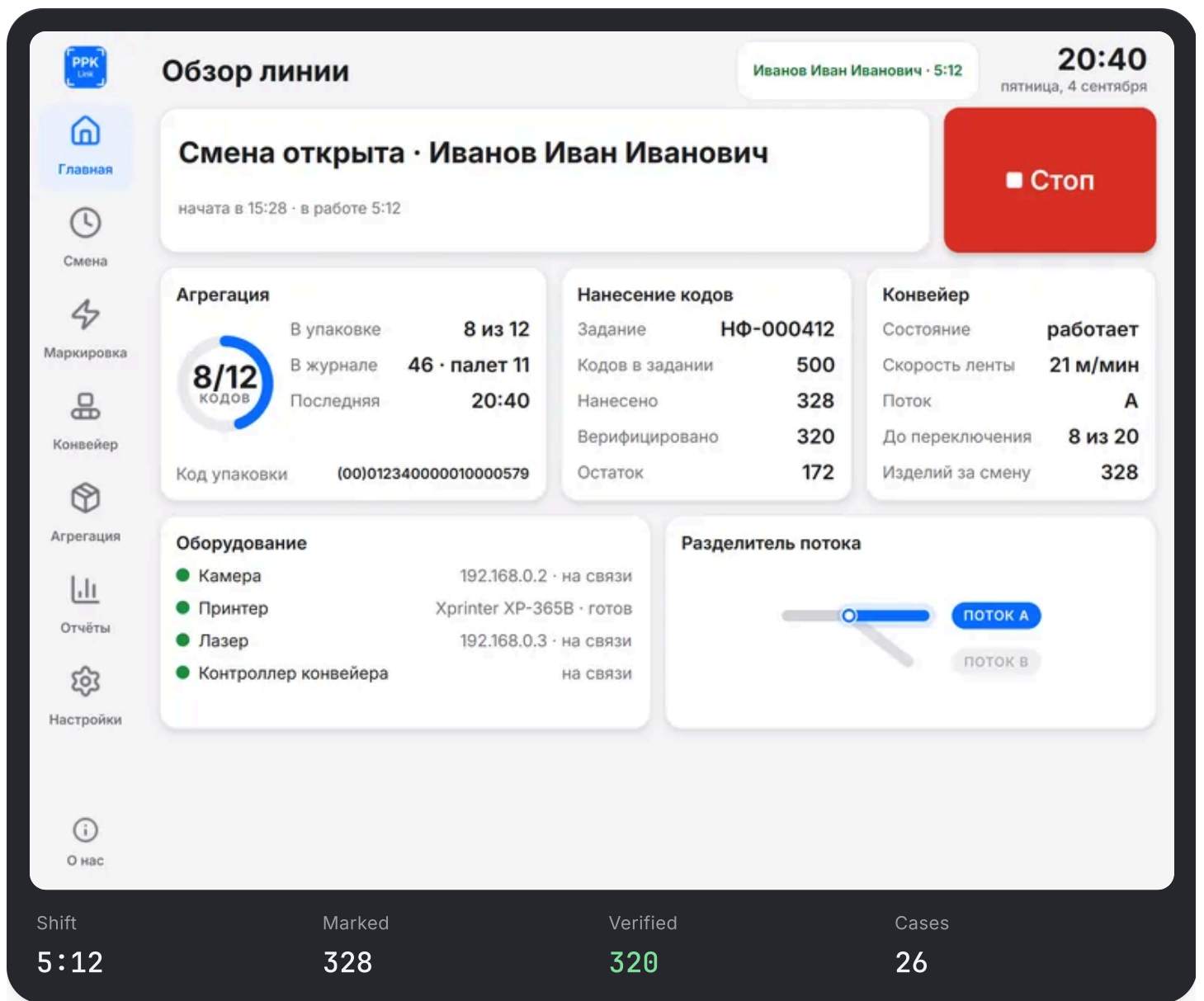
SOFTWARE FOR CHESTNY ZNAK MARKING LINES

Marking station control — from code application to the document in 1C

DataMatrix code application, camera verification, rejection, case and pallet aggregation, records and 1C exchange — on a single operator workstation. Fits a line that is already running: one executable file, no permanent network link required.

Get in touch: [+7 800 770-01-71](tel:+78007700171) [Telegram](https://t.me/+79061124292) (<https://t.me/+79061124292>)

[MAX](https://max.ru/join/QAwcWLvbt-WEEJLGBn2VK2kBEfufwbghd0nugSnQdRM) (<https://max.ru/join/QAwcWLvbt-WEEJLGBn2VK2kBEfufwbghd0nugSnQdRM>)



- 1 Job and codes from 1C
- 2 DataMatrix laser marking
- 3 Camera check, rejection
- 4 Cases and pallets with labels
- 5 Document back to 1C

Who it is for: manufacturers under mandatory marking, and integrators

Manufacturers under mandatory Chestny Znak marking — where the line is already running, being built now or only planned — and integrators who build such stations.

Marking is installed, need different software

The software fits the existing line: the camera, laser, printer and controller connect as they are. Only the operator workstation changes.

Building the station now

The workstation is composed for your equipment and the licence includes only the modules you need. Turnkey equipment and installation come from the PPK LASER group.

Still planning

We show the software in demonstration mode without installing anything, and walk through the future line composition and the 1C exchange.

Integrators

Ready software for your stations: equipment adapters, per-module licences, 1C exchange. You install it on your lines and support it yourself.

The three situations a station is installed for

Marked, but unreadable

BEFORE The item goes into the case; the defect is found at the warehouse or by the customer.

PPKLINK The camera reads every code right after marking. An item with an unreadable code is removed from the belt before packing.

Case packed, but missing in the records

BEFORE Case contents are typed in by hand or reconstructed from a paper note.

PPKLINK Contents are formed on the line and sent to 1C as a document. The case code is printed on the label the moment the case closes.

Internet drops, the line stops

BEFORE Output depends on an external service.

PPKLINK The workstation database is the source of truth. Documents go to 1C once the link returns; the queue survives a restart.

1 Demo

in demonstration mode or on your line

2 Composition and licence

only the modules you need

3 Installation

one file on the workstation

4 Commissioning

and operator training on site

Product groups the software already runs on

The marking code is the same for every product group — what differs is line speed, product material and the marking method. Below are the groups where stations with this software are already running.

Beverages and bottled water

Caps and PET containers: the code is applied on the fly and the round surface is read by the camera as the belt moves.

Household chemicals and cosmetics

Sealants and construction chemicals

Round tubes, marking without slowing output, and data on applied and rejected codes going to 1C.

Your group is not listed?

[Let us discuss your product and marking method](#)

Three ways to cover marking — and how ours differs

Each option has its own place. We compare them on one thing: what happens when the line changes.

Software from the equipment vendor

THE USUAL WAY

Comes bundled with the camera, laser or printer and is built for them. Change a model or add a section, and the question goes back to the hardware supplier.

PPKLINK

Device adapters are separated from the process logic, so the program fits what is already on the line, and a new model is added without rewriting the section.

Warehouse and accounting software

THE USUAL WAY

Orders codes, puts them into circulation, handles receiving and shipping, builds cases with a scanner. It does not drive the line equipment.

PPKLINK

Runs on the line itself: issues codes to the laser, checks what the camera read, drives rejection and the diverter, and passes the result to the accounting system.

Custom development

THE USUAL WAY

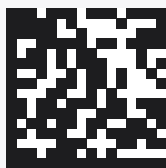
Exactly for your line — and entirely on you: timelines, acceptance, updates, and whatever happens if the developer leaves.

PPKLINK

A shipped product: fourteen modules, updates by replacing a single file, a module opened by licence without reinstalling or reconfiguring anything.

Marking, verification, conveyor, aggregation and 1C exchange in one program

The system covers the entire station — from product infeed to the document in 1C. The set of areas is defined by the configuration: unused modules appear neither in the menu nor in the settings.



issued → applied → verified → packed

Code application

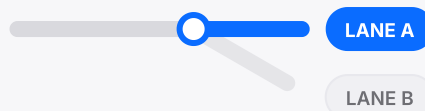
Marking codes are issued to the laser controller and applied as DataMatrix to product on the moving belt. Every issued code is tied to an item in the registry.



applied **328**
verified **320**
unread **8**

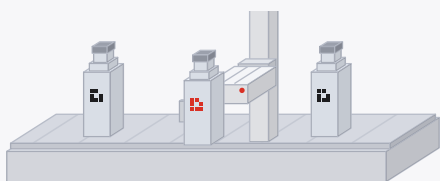
✓ Code verification

The code read by the camera is compared with the code issued. The outcome is recorded per item: applied, verified, unread.



↔ Conveyor and product flow

Belt start, stop and speed setpoint from the screen. The lane diverter splits product between two packing stations according to the batch setpoint.



✗ Rejection

An item with an unreadable code is pushed off the belt by a pneumatic actuator. With controller support the verdict is addressed — it applies to the specific item that passed the sensor.



(00)012340000010000579

📦 Aggregation and labelling

A case is filled to the configured count, receives an SSCC and a GS1-128 label. The second level is pallets with their own code.

1C



HTTP

folder

FTP



PPKLink



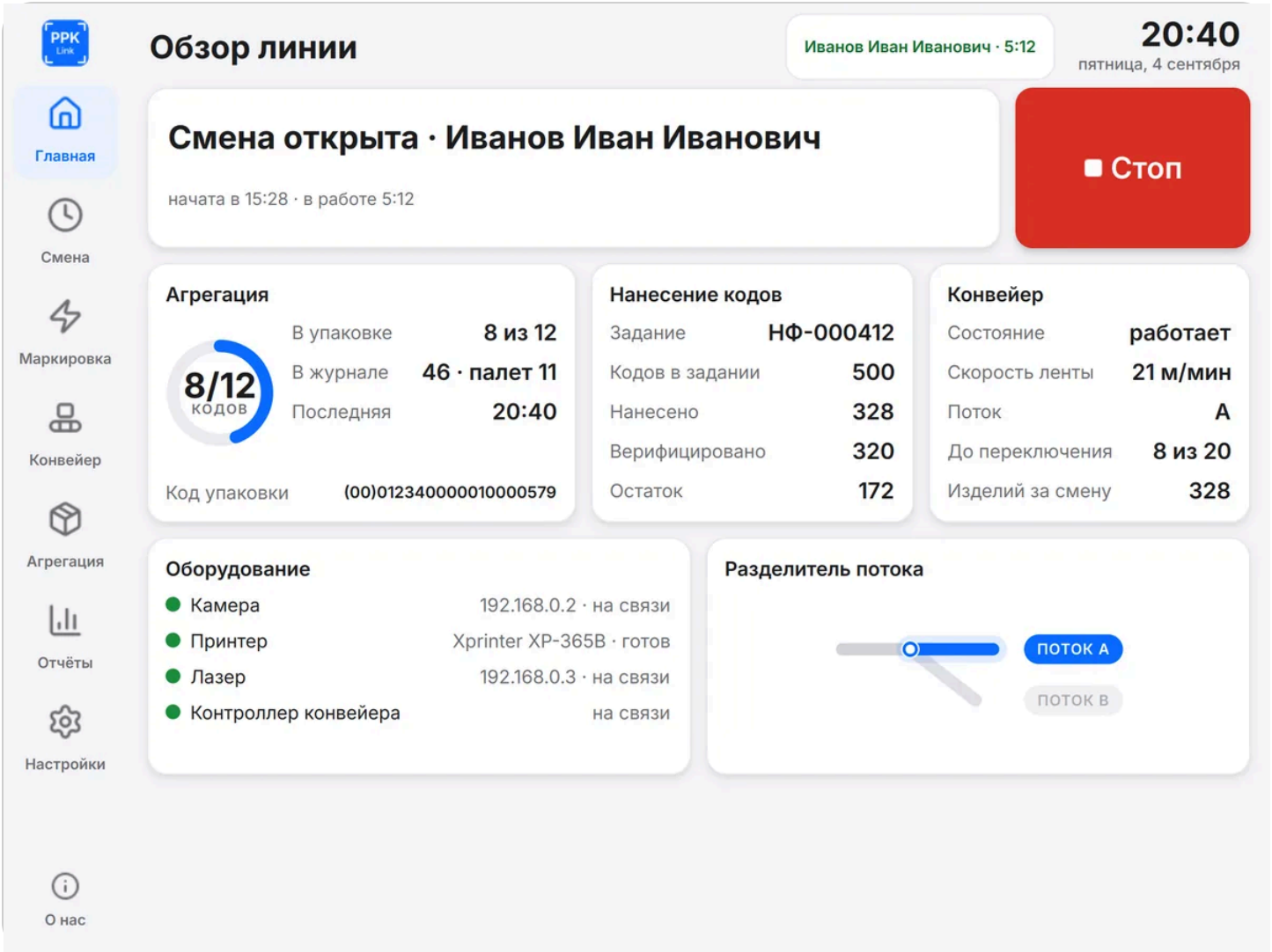
Chestny Znak

🗄 Records and data exchange

Exchange with 1C over an HTTP service, a shared folder or FTP; reporting to the state system either through 1C or directly from the line. Package journal, code registry, reports and shifts.

The operator workstation on the marking line

The program screens at work: a shift is open, the conveyor is moving, a case is being filled. The interface is designed for a touch screen at the line and for operation in gloves; the live line is in the videos below.



How it works: from the 1C job to

aggregation and the document back

1

Job

Product, quantity and marking codes arrive from 1C over HTTP or as a file. The operator selects the job on screen; manual code entry is not provided.

3

Flow and rejection

The line controller counts items, switches the lane diverter and removes items with an unreadable code. The counting logic runs independently of the program.

2

Marking and verification

The controller receives the next code and applies a DataMatrix. The camera reads what was applied and compares it with what was issued; the result is recorded per item.

4

Packing and transfer

The program fills the case to the set quantity, assigns an SSCC, prints a GS1-128 label and transfers the case contents to 1C. Submission to Chestny Znak is performed by 1C or by the line itself.

Case forming

12 items

0/12 CODES	Cases formed	0
	Duplicates dropped	0
	Items rejected	0

● Waiting for codes from the camera

Nº	TIME	MARKING CODE



(00)–

The label prints when the case closes

☐ The case is filled to the set quantity

☐ An SSCC case code is assigned

☐ A GS1-128 label is printed

☐ The case contents are sent to 1C

The process runs on its own, as on the line. Codes follow the Chestny Znak format and the case code is calculated by the same algorithm as in the program.

What the software includes: fourteen modules, take only what you need

Each module is a separate product with its own price. A workstation includes only the modules present on the line: a position with a handheld scanner needs neither the conveyor nor the laser. The composition is set by the licence, so a module is added without reinstalling or reconfiguring the hardware.

OPERATOR MODULES

shift

Shift

ALWAYS IN

A shift is opened for an employee taken from the 1C reference data. Module availability and production events are tied to the open shift.

mark

Laser marking

Codes are issued to the laser controller and applied as DataMatrix to moving product, then checked by the camera.

agg

Case aggregation

A case is built from item codes, receives an SSCC and a GS1-128 label printed on a thermal printer.

pallet

Pallets (level 2)

Cases are combined into a pallet with its own code and label. Usually requires a second printer for the larger format.

dup

Code duplication

The operator presents an item to the scanner and the same marking code is printed on a dedicated printer. No aggregation is performed here.

manual

Manual scan

A case is built with a handheld scanner at positions without a camera, and for re-packing previously rejected items.

reports

Reports and journal

ALWAYS IN

Package journal, per-stage code registry, reports on code stock and job completion.

CONVEYOR AND CONTROLLER

plc

PLC link

Line controller communication: telemetry, I/O status, commissioning mode.

conveyor

Conveyor

Belt start, stop and speed setpoint from the operator screen; speed is entered in metres per minute.

divider

Lane diverter

A pneumatic flap splits product between two packing stations by batch setpoint; the batch count is kept by the controller.

reject

Reject unit

An actuator pushes an item with an unreadable code off the belt. The verdict is addressed to the specific item that passed the sensor.

DATA EXCHANGE

api1c

1C exchange

ALWAYS IN

Jobs, items, employees and orders are received from 1C, and production results are returned. Three independent channels: the 1C HTTP service, a shared folder and FTP.

chz

Direct state reporting

The workstation signs documents with a qualified electronic signature and submits them to CRPT itself. Not required when the ERP performs the submission.

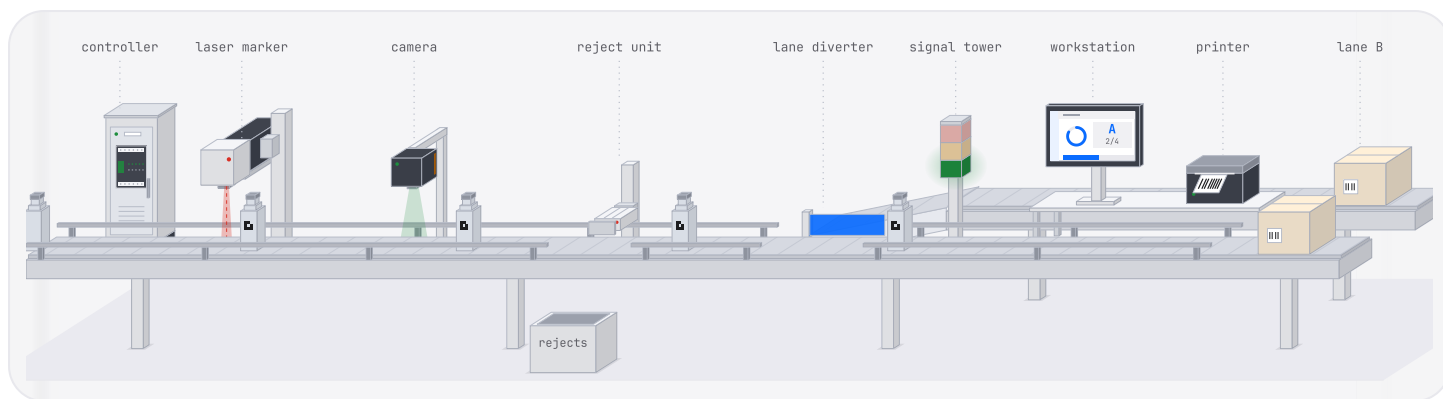
mirror

Cloud journal mirror

A copy of the journal in a cloud database for consolidated oversight of several lines.

Assemble your marking line configuration

Tick the sections present at your plant. The diagram rebuilds, the resulting workstation and the matching standard bundle appear on the right, and you can send that composition for a quote right away.



What it costs

There is no price list: the workstation is composed for your line. The rule is simple and open — a base plus modules.

BASE LICENCE

from RUB 290,000

Covers the minimum working scenario: code application from a job and camera verification of what was applied. The job is loaded from a file on a drive; no connection to the accounting system is required.

BEYOND THAT — MODULES, AND THEY CARRY DIFFERENT WEIGHT

The difference is not in a price list but in how much work happens on the line.

Light

Work inside the program and do not reach out to equipment: code duplication, manual scanning, reports and the journal.

Medium

Add a device of their own or an external exchange: case aggregation, pallets, 1C exchange, the journal mirror.

Heavy

Drive the line itself and require commissioning on site: the line controller, conveyor, lane diverter and rejection.

- A licence is issued per workstation. Three positions on the line means three licences, each with its own set of modules.
- A module can be opened later for an additional payment — without reinstalling the software or reconfiguring the equipment.
- The delivery includes the station survey, configuration, commissioning and operator training.
- Charged separately: travel to site, an adapter for equipment outside the supported list, and agreeing the exchange format for your particular 1C.

Assemble a set and get a quote

The exact figure follows from the set of modules and the number of workstations.

Every day on shift — and what happens if something goes wrong

Not separate modules but behaviour built into the program: on the left, what is used every day; on the right, what happens when something goes wrong.

EVERY DAY

● Printed label check

After printing, the workstation waits for the label to be scanned back and compares the code. No match — the case is not closed.

● Label editor without a developer

What is printed under the code — date, time, a free-text line — and in what order is set on screen. No new build required.

- **Per-stage code registry**

Every code of a job is visible in its state: received, applied, camera-verified, packed, uploaded to 1C. The same window shows the stock and resumes a job from the database.

- **Pre-shift equipment check**

One tap checks the camera, printer, controller, signature and exchange channels in parallel. A failure is explained in words, not as an error code.

- **Hardware detects itself**

The program lists the printers, scanners and ports actually connected, with their addresses. A wizard identifies the scanner: scan anything and the program names the device.

- **Network and Wi-Fi from the screen**

The workstation address, gateway and Wi-Fi connection are set inside the program. Where there is no keyboard, an on-screen keyboard built into the window is used.

- **Reprint and re-upload**

Any case in the journal can have its label reprinted and its document re-uploaded to the accounting system. Both ask for confirmation: a duplicate in the state system is worse than a delay.

- **Built-in operator training**

A tour of the live screens highlighting the element in question: where to open a shift, choose a job, close a case. Equipment is not touched.

WHEN SOMETHING GOES WRONG

- **Power lost mid-shift**

The unfinished case is restored automatically at the next start-up, without starting any equipment: the contents of an open case are written to disk as it is being filled. State files are written via a temporary file and renamed, and the journal database runs in write-ahead mode, so an interrupted write leaves no corrupted data.

- **The link to 1C is lost**

The upload is queued on the workstation and delivered to 1C once the link returns. The queue survives a program restart. Production does not stop. If the link stays down for long, the remainder is sent on the operator's command from the journal.

- **No answer from the state system**

The document is not resent: it may already have been accepted, and a duplicate in the state system is worse than a delay. The case is given a distinct status, the event is journalled and the operator sees it in the list.

- **The program was closed or restarted**

The conveyor keeps running: item counting, flow diverting and emergency stop are executed by the line controller. The batch count is retained in the controller across a program restart.

- **The licence expired**

Production continues. The term is shown in the interface and blocks neither the line nor the modules already enabled in the settings.

Proven on real production lines

The figures come from working lines and the program's own logs, not from a slide deck. The projects are PPK LASER group installations where PPKLink runs at the customer's station.

120 m/min

top line speed for code application and verification

0.1 s

laser marking of a code on a single item

1,000

cases in the load test — no slowdown, no memory leaks

757

automated checks every build of the program passes

1 file

to install and to update; settings, journal and queues are preserved

STATE REGISTRATION

Certificate of state registration of a computer program
No. 2026684210, issued by the Russian Federal Service for
Intellectual Property on 10 August 2026 and entered in the
Register of Computer Programs.

[Tap to open the document](#)

Group installations

Sealant tubes

TASK

Introduce Chestny Znak marking without slowing production. Round packaging, the code has to be applied on the fly.

SOLUTION

A laser and a camera reading DataMatrix off a cylindrical surface. PPKLink is linked to the plant's 1C.

RESULT

Line speed preserved: codes are applied, verified and rejected automatically, and data on applied and rejected codes goes to 1C.

Caps for beverages and household chemicals

TASK

100% traceability: a hardware guarantee that every DataMatrix is readable and recorded in the database.

SOLUTION

A high-contrast laser; right behind it a camera verifies every code and its print quality grade.

RESULT

A misprinted or smeared code — the cap is removed from the conveyor. Only valid codes reach the database and 1C.

Plastic packaging, 24/7 production

TASK

Add Chestny Znak marking without stopping the line or touching the conveyor mechanics.

SOLUTION

All tooling was assembled and tested at the integrator's site; the plant received a ready modular solution.

RESULT

Installed in a few hours during a scheduled shift change. Stable operation at high speed with print quality control.

These are three of the group's stories.

[All installations, line videos and video reviews — ppkmark.com](https://ppkmark.com/#resh) (https://ppkmark.com/#resh)

Deploying the software on a marking line

1 Station survey

Equipment composition, line speed, product format, data requirements and the exchange procedure with the accounting system.

2 Configuration and licence

The workstation composition is set by the licence: only the modules present on the line are enabled. Extending the configuration does not require reinstalling the software.

3 Installation and commissioning

Installation is a single file copy; parameters are set on screen without editing configuration files. A diagnostics mode with controller I/O indication is provided for commissioning.

4 Training and support

The program includes built-in operator training that does not affect equipment operation, and a demonstration mode that runs without hardware. Updating means replacing one file; settings, journal and exchange queues are preserved.

This page covers the software only.

[A turnkey station with equipment and installation — ppkmark.com](https://ppkmark.com) (https://ppkmark.com)

Frequently asked questions about marking software

If your question is not listed, call us: [+7 800 770-01-71](tel:+78007700171).

What equipment does the software work with? —

Hikrobot cameras, J2000 laser controllers, Modbus TCP line controllers and TSPL or ZPL thermal printers are supported out of the box. Communication uses standard network protocols. Other equipment is assessed case by case: device adapters are separated from the core, so a new model is added without rewriting the process logic.

Will our 1C need to be modified? +

What happens to an item whose code was not read?	+
Does the line need a permanent internet connection?	+
Who submits the data to the state system?	+
How are operator errors prevented?	+
How is the software installed and updated?	+
Can several workstations be installed on one line?	+
How much does the software cost?	+
How do you differ from the software supplied with the equipment?	+
What happens if the licence expires or support ends?	+
Is it suitable for pharmaceuticals and food supplements?	+
Is the software officially registered?	+
Is this L3-level software?	+

Let us discuss your line

Describe the station and your accounting requirements. We will assess compatibility with your equipment, state the scope of work and show the program at work — in demo mode or on your line. Reply within one business day.

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 **Message on Telegram** (<https://t.me/+79061124292>)

 **Message on MAX** (<https://max.ru/join/QAwcWLvbt-WEEJLGBn2VK2kBEfufwbghd0nugSnQdRM>)

1 Station assessment

Equipment composition and data requirements of the accounting system

2 Configuration

Only the required modules are included in the workstation

3 On-site demonstration

Camera, printer and 1C exchange are verified before the work starts

 PPKLink

Software for production line automation and marking accounting. A product of the PPK LASER group, Kazan.

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VK (<https://vk.com/ppklaser>)

YouTube (<https://www.youtube.com/@PPK-LASER>)

Presentation (PDF)

GROUP

ppkmark.com — turnkey stations (<https://ppkmark.com>)

ppk-laser.com — machines (<https://ppk-laser.com>)

ppk-service.ru — service (<https://ppk-service.ru>)

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