WEIGHT, NUMBER, PHOTO AND VIDEO OF EVERY RAILCAR — IN ONE RECORD

The hardware-and-software system turns railcar scales into an automated weighing station. A train is weighed statically or in motion without an operator, a neural network reads the number of every railcar, photos and video from IP cameras are attached to each record, and an Excel or PDF report takes one click.



The system is an option for Modul railcar scales: the scales work without it. Rail Scale Module, software developed in-house, connects to the weighing terminal and the cameras already installed at the scales and runs on an ordinary Windows PC in the weighing room.

STATIC — MANUAL MODE | STATIC — AUTOMATIC MODE | IN MOTION

WHAT THE CUSTOMER GETS

A STATION WITHOUT AN OPERATOR

Automatic mode: the software records the weight by itself and the LED display board tells the shunting crew what to do. Customers run the station around the clock, including at night with no operator.

FEWER DISPUTES OVER WEIGHT

Frames from both cameras and the pass video with the weight overlaid are attached to every record. Disputes with suppliers are settled from photos and video.

NO MANUAL NUMBER ENTRY

A neural network reads the railcar number on the weighing-room PC — no cloud and no subscription. A number can be re-read from the saved frames.

ARCHIVE AND REPORTS

A database with photos and video: select any shift, day or period, export reports to Excel and PDF, send them by e-mail, pass data to the customer's software.

IN SERVICE AT CUSTOMER SITES

> “The software of the hardware-and-software system... automatically identifies the railcar type and performs weighing, photo logging of the railcars being weighed, archiving and integration with the Neft i Kapital software 24 hours a day.”

Lukoil-Belorussia, testimonial dated 25 July 2021 (translated from Russian)

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HOW WEIGHING WORKS

STATIC: THE DISPLAY BOARD INFORMS THE CREW

01 “Waiting for railcar”
The scales are ready for the next railcar.

02 “Stabilising weight”
The railcar rolls onto the platforms. The outer wheelsets must be at least 300 mm from the platform edge.

03 “Recording weight”
Once the weight is stable, the software records it and shows the railcar mass on the board for 3–5 seconds.

04 Data upload
Once the scales return to zero, the data is sent to the customer's software automatically.

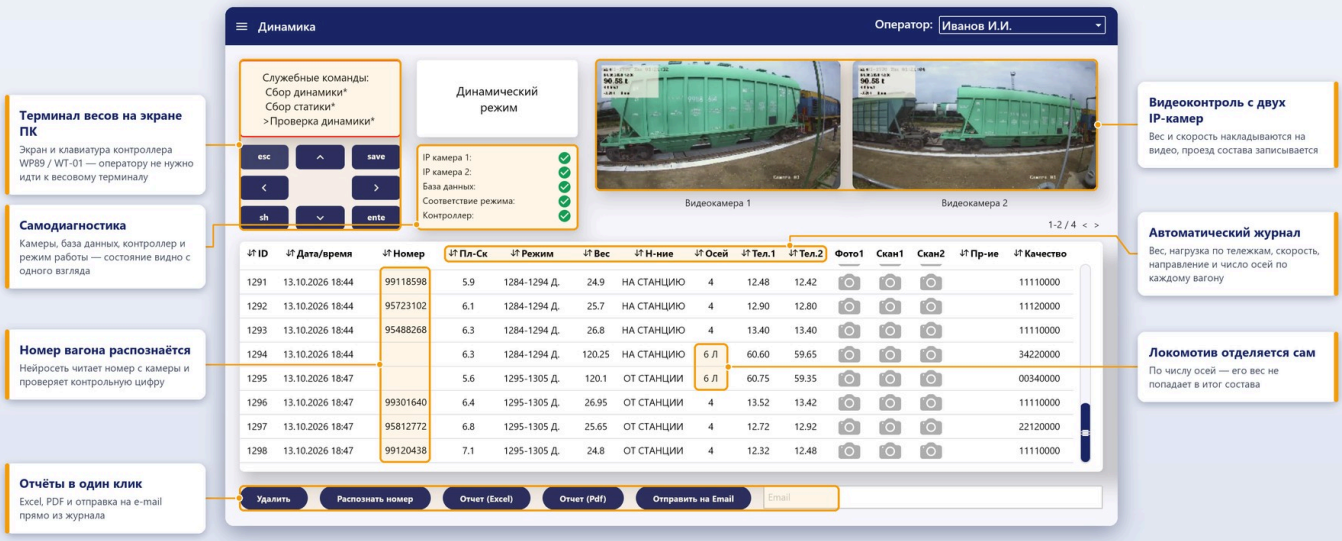
IN MOTION: THE TRAIN PASSES WITHOUT STOPPING

01 Train passing over the scales
The terminal signals the start of the pass and the software starts recording from both cameras.

02 After the railcars have passed
Weight, bogie loads, speed and number of axles arrive for every railcar.

03 Number and photo
A frame of the railcar is picked from the video; the neural network reads the number.

04 Report
The record goes to the database. The report is exported to Excel and PDF or sent by e-mail.



Dynamic screen: scale terminal on the PC, self-diagnostics, video from two cameras and the automatic log.

SYSTEM COMPOSITION

- **Outdoor cabinet** — weatherproof and insulated, with climate control, a viewing window for the terminal, an external keypad and a PoE switch
- **Operator-room cabinet** — network switch and video recorder
- **Operator PC** with Rail Scale Module
- **Two IP cameras**, Hikvision or equivalent, with mounts
- **LED weight display board** with mounting
- **Android app** — free of charge

LET US CONFIGURE IT FOR YOUR STATION

Fill in the questionnaire on our website and we will prepare a quotation.

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