

GENERAL INFORMATION ON PERCo-Web SYSTEM

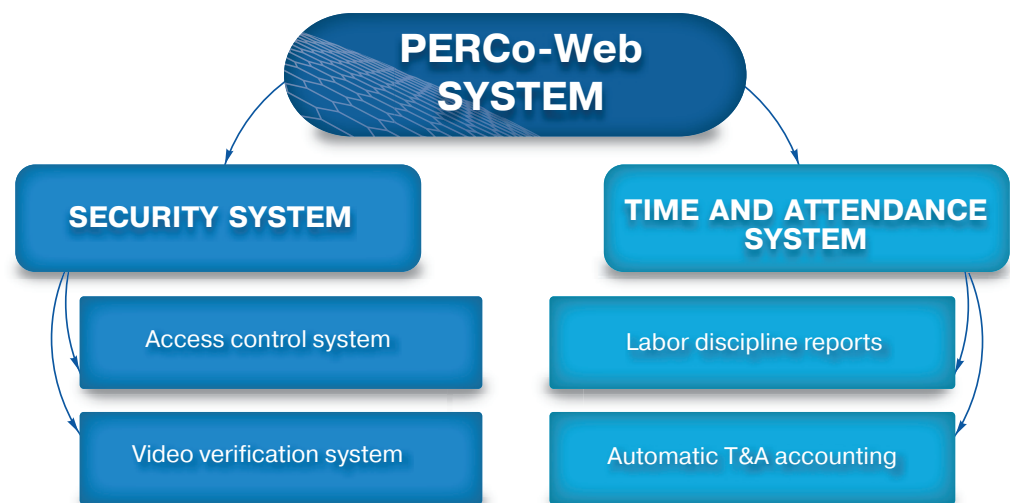
PERCo-Web is a multifunctional access control system with Web interface. PERCo-Web system provides a solution for security and efficiency improvement of an enterprise. Efficiency improvement includes reduction of labor discipline violations, automatic Time & Attendance and payroll accounting, automatic issuing of permanent and temporal access authorization cards and other processes.

Security control is performed by united access control, video surveillance and fire alarm systems. The advantage of PERCo-Web system is provided by the fact that the same equipment is used for security reasons and for efficiency improvement reasons. This process provides no impediments to security reasons, that's why it does not influence processing speed and reliability of the system.

Web-interface allows to organize remote access to the program from a workplace of an employee. System software and database are installed on one computer (server), all users work in the system via Web-browser. In such case there is no need to install software at workplaces of users.

PERCo-Web system is designed for enterprises, facilities, offices, business-centers that require optimal complex of access control and Time & Attendance management functions.

Functionality of the system



PERCo-Web provides access control and efficiency improvement solutions.

Security:

- access deny for unauthorized persons
- assignment of employees access rights according to time, room and status
- verification – access is denied to a person who uses someone else's card
- issuing of access authorization cards in the form of badges with photo, name, etc. of the person
- access of visitors with the use of temporal access authorization cards along with automatic return of cards at the exit
- arming of rooms in terms of internal system security
- fire alarm system
- vehicle entry

Efficiency improvement:

- registration of start/end of business day on IP-Stiles and special T&A terminals
- control of labor discipline violation (reports on employees if they are late, absent or have left before the end of business day)
- automatic T&A accounting
- support of week, shift or flextime schedules; operative calculation of working time balance
- automatic input of personal data of employees and visitors with the use of document recognition software
- Functionality of PERCo-Web system can be increased with the use of specially developed

Advantages of Ethernet technology

SDK (Software Development Kit). SDK allows integrating of the system equipment with special systems (paid access systems, ticketing systems, ERP-systems, systems for medical facilities, etc.)

Construction of PERCo-Web system complies with modern level of security systems development. The system is based on the network of controllers and computers, connected via Ethernet interface.

- high reliability of security systems thanks to standard IT-solutions and operation of system in the interconnect address space
- controllers equipped with Ethernet interface can be connected directly to local network without any additional equipment
- high data transmission rate and parallel operation of all controllers allow constructing security system without any limitations to the number of controllers, including those located in different buildings, districts and cities
- simultaneous processing of various events provides consistent operation of system in the moments of simultaneous activation of several devices
- extension of system does not require existing devices to be replaced – new devices can be just connected to Ethernet network
- system can be constructed with various ways of access: copper conductor, fiber-optic cable, wireless technology (Wi-Fi, wireless modems)
- Ethernet also makes it possible to use PoE (Power over Ethernet) technology – alternative way of power supply for network devices, that can make installation of ACS more convenient.

Operating principles of the system

All main «smart» elements of the system – access controllers, registration controllers, control units and also video cameras – are connected directly to Ethernet network, while other equipment – turnstiles, locks, readers, fire alarm indicators – is connected to control elements. It provides high reliability of the system, absence of hardware conflicts and also reasonable costs for equipment installation.

EMM/HID and MIFARE proximity cards and badges are used as identifiers in the system.

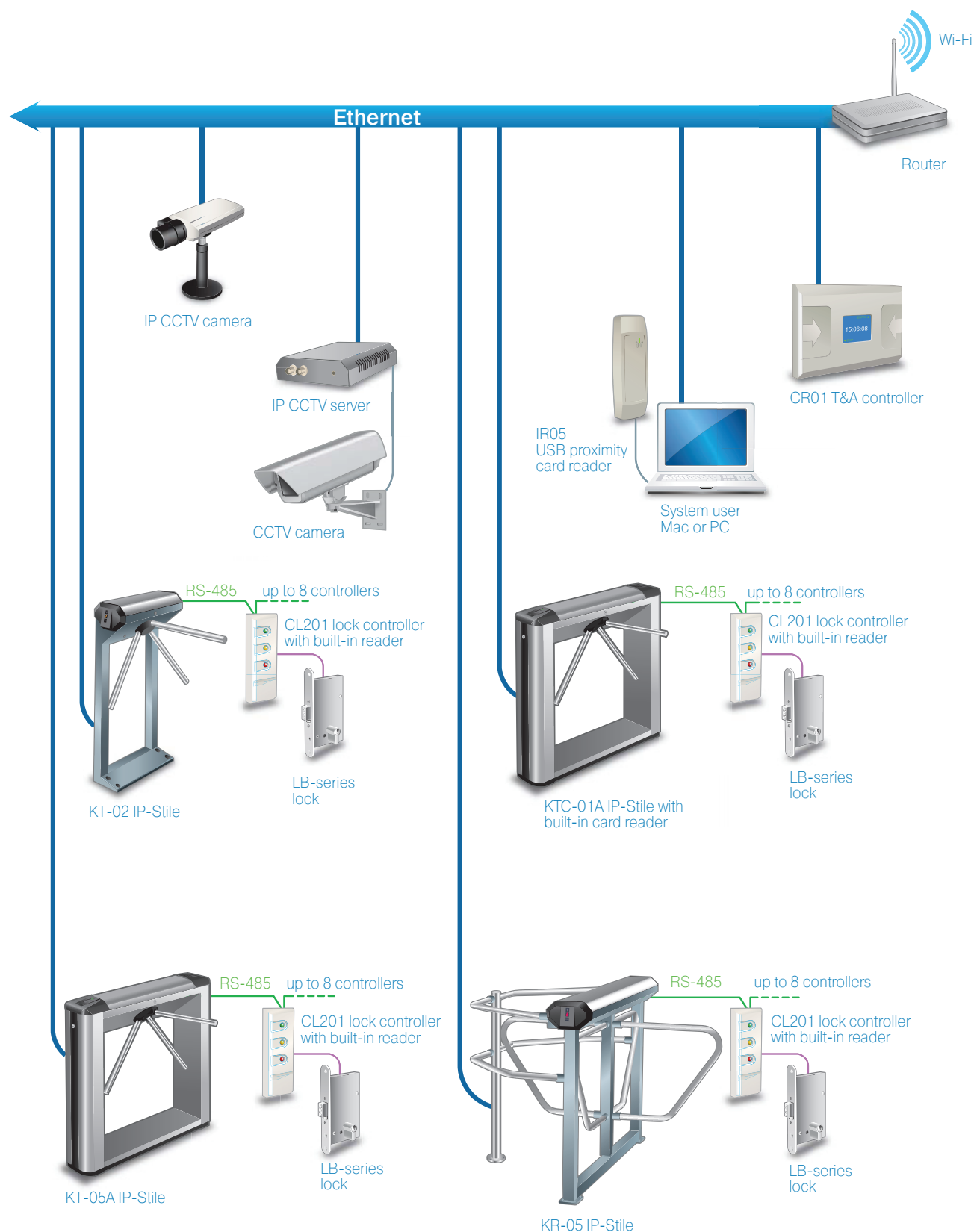
When a card is presented, controllers either grant or deny access through operating devices (turnstiles, locks). Events are recorded in non-volatile memory of controllers and then used for labor discipline and T&A control.

Access controllers are equipped with integrated support of alarm lines that allows not only controlling the whole office, but also arming/disarming with the use of access card. The system does not require permanent connection of controllers to a computer with ACS server. Each controller is equipped with non-volatile memory containing system settings, access rights and event log.

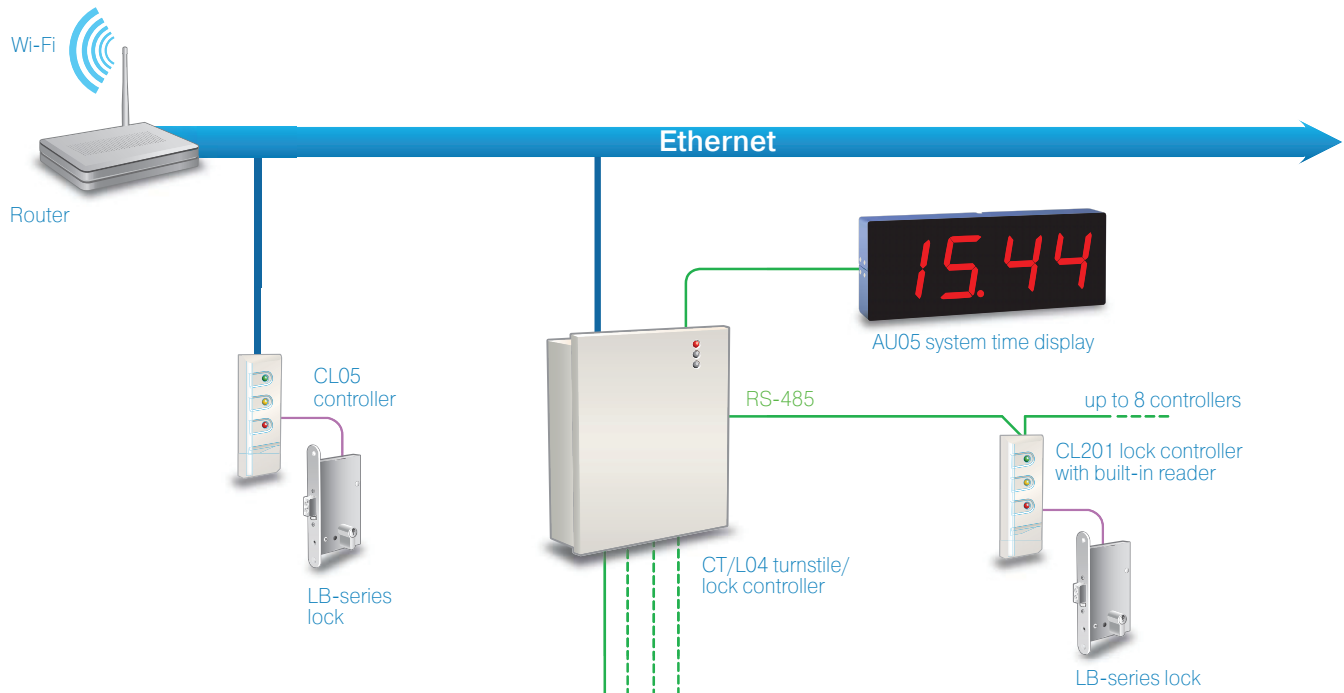
Main technical specifications of the system

Connection interface	Ethernet
Number of controllers in the system	up to 1000
Total number of identifiers in the system	up to 50 000
Type of identifiers	EMM/HID Proximity cards and tags, MIFARE smart-cards
Number of control space zones	up to 1024
Number of control time zones	up to 256
Number of time intervals for each time zone	4
Number of week schedules	up to 256
Number of flextime day schedules	up to 256
Number of flextime week schedules	up to 256
Programming extent of flextime day schedules	up to 30 days
Programming extent of flextime week schedules	up to 52 weeks
Number of days that can be programmed as days of various types	366

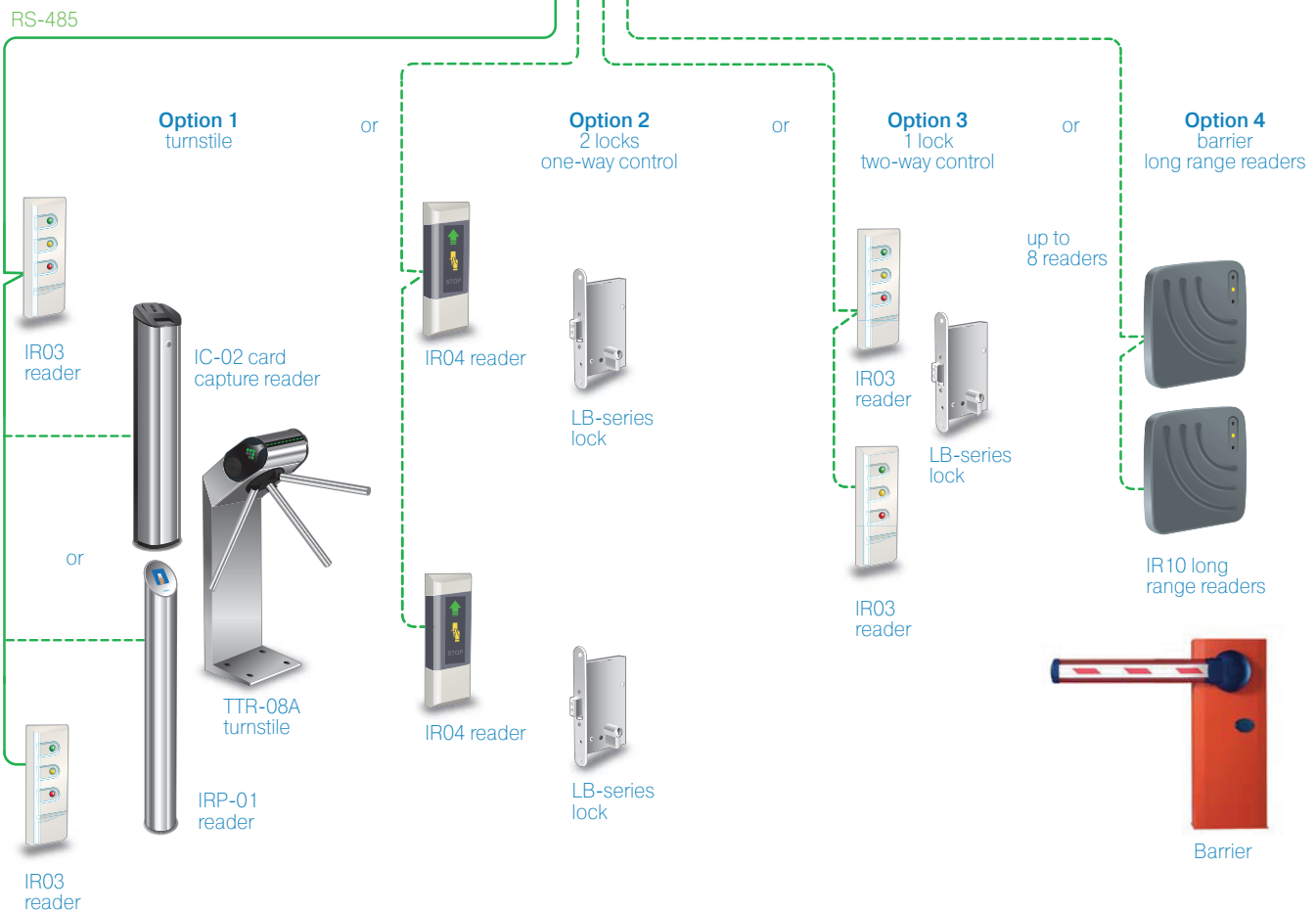
All main elements of PERCo-Web system (controllers and cameras) are connected directly to local Ethernet network, other devices (readers, turnstiles, locks) are connected to controllers.



PERCo-Web access control and T&A system scheme



OPTIONS FOR CONNECTING TURNSTILES, GATES, LOCKS AND BARRIERS TO CT/L04 CONTROLLER



PERCo-Web SOFTWARE

PERCo-Web provides a possibility to construct an access control system that fits all requirements of an office, a company or a business-centre.

Insert IP-address into the address bar to get access to the PERCo Web-interface.

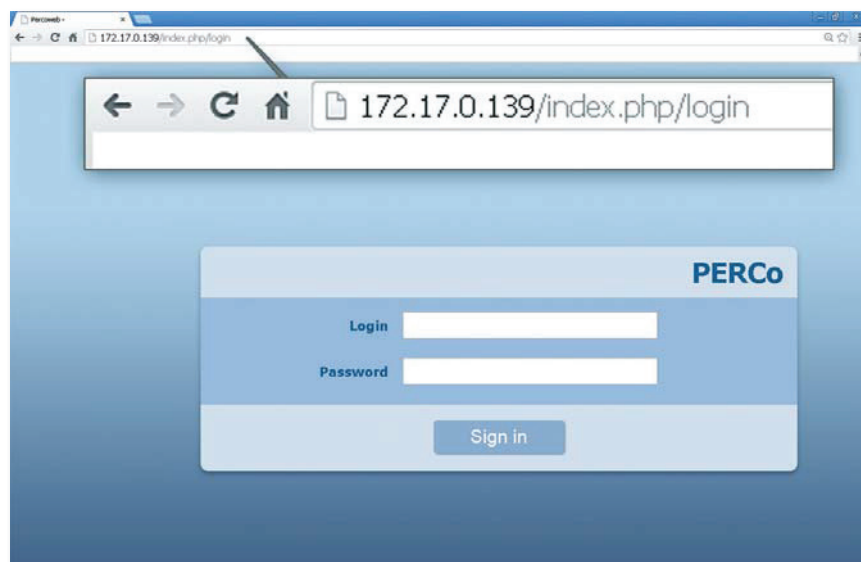


Fig. IP-address

PERCo-Web software allows users to operate remotely in the following sections:

- Staff
- Access control office
- Time & Attendance
- Access control
- Verification
- Cards ordering
- Administration

Section: Staff

«Staff» module allows to maintain data of employees and departments, create and edit work schedules, assign access rights to employees.

Fig. Employee record card

The PERCo-Web can store various text and image information of employees. Images can be downloaded both from IP-camera and from a file.

Each employee is assigned with access schedule for the secured area and work schedule for labor discipline and T&A control.

Work schedules are also set in this section. The system supports setting of week and shift work schedules.

Fig. Setting of work schedules

When organizing work schedules the system takes into account such features as: transition of schedule through 0-00, additional breaks and lunch breaks, support of flextime schedules, etc.

Section: Access control office

The main goal of this section is to organize access to the facility for employees and visitors. The system can create access algorithms of different complexity, depending on requirements of users.

An employee or a visitor receives an access card with assigned access rights to gain access to the secured area. According to security requirements of the facility the system can set various access algorithms:

- Access limitation according to time and areas
- Verified access – access is granted by a security guard upon identification of employee. The employee is identified by the security guard who checks his photo on the display
- Double-check access – access is granted on «two persons» principle. The access for the card that is set to be «subject to double-check» is granted only when the second (double-check) card is presented.
- Access with a right for an employee to arm security of the area
- Control of several passages with one card («Antipassback» function).

Visitors receive single-passage access cards. These cards can be collected at the exit with the use of card capture readers.

This section provides visitor recording. Administration of the enterprise can check necessary information on visitors who visited any department.

Besides that «Access control office» section provides a possibility to create patterns for card issuing in the form of badges with photos, names and other information.

Section: Cards ordering

The module allows managers and other authorities to remotely order access cards for expected visitors in advance.

System user (manager or access control office operator) enters main data of the visitor. Information on ordered access card is automatically shown in «Access control office» section, «Ordered access cards» tab. When the visitor comes to the check-point, the operator just needs to check data and issue a temporary access card.

Fig. Visitor Information

Section: Time & Attendance

The section is designed to control labor discipline of employees and register their work hours.

Parameters for registering are set in «Staff» section.

«Time & Attendance» section provides following reports:

Time & Attendance:

- On worked time
- On non-worked time
- On overtime
- On balance (difference between time worked according to schedule and time of employee's presence at work)

Labor discipline:

- On time of presence/absence
- On employees that are present/absent at the moment
- On location of employees

Pers. Number	Employee	Division	Position	Late-in	Early-out	Absence	No. of late-in events	No. of early-out events	No. of absences	Absence time
1	Anderson Tom	CNB Company	General Manager	00:00	06:00	00:00	00:00	00:00	1	06:00
4	Barker Susan	CNB Company	Chief accountant	00:00	06:00	00:00	00:00	00:00	1	06:00
10	Braun David	CNB Company	HR manager	00:00	08:00	00:00	00:00	00:00	1	08:00
3	Carter Julie	CNB Company	Accountant	00:00	06:00	00:00	00:00	00:00	1	06:00
2	Ferris Will	CNB Company	Sales director	00:00	08:00	00:00	00:00	00:00	1	08:00
8	Jenkins Jim	CNB Company	IT administrator	00:00	05:15	00:00	00:00	00:00	1	05:15
7	Smith Tom	CNB Company	Senior PHP Developer	00:00	06:00	00:00	00:00	00:00	1	06:00
9	Scott Robert	CNB Company	Technical director	00:00	08:00	00:00	00:00	00:00	1	08:00
6	Smith Mark	CNB Company	Salesman	00:00	08:00	00:00	00:00	00:00	1	08:00
5	Sommers Frank	CNB Company	Salesman	00:00	08:00	00:00	00:00	00:00	1	08:00

Fig. T&A Reports

Section: Verification

This section is designed for organizing of workplace for security service operator, it provides a possibility to identify the owner of the card by comparing the face of entering employee or his/her image from a video camera installed at the entrance with the photo of the owner from the database. On the basis of this comparison the security service operator decides whether to grant or deny access.

Later the system can provide a report based on verification events.

Section: Access control

This section is designed for creation of reports based on various data for security service and system administrators. The system can create the following reports:

- based on access parameters of employees/visitors to various rooms
- based on passages of employees and visitors
- based on verification events
- based on device events

Also the system allows the user to operate system devices in on-line mode.

Section: Administration

This section is designed for operation of security system administrator.

Main functions of the section:

- Equipment configuration
- Reports on system events
- Design of facility's rooms
- Access of system users

BASIC ACCESS CONTROL SOLUTIONS

Time and Attendance control solutions for enterprises

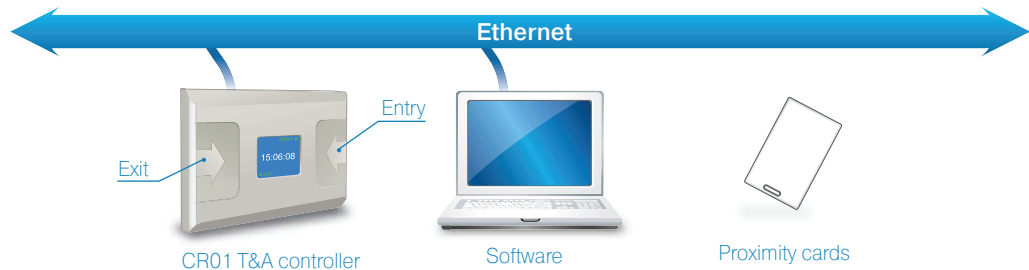
You can manage your Time and Attendance control system using the ACS equipment that is already installed in the facility – for example you can use a turnstile and a lock and 2 card readers (for entry and for exit) – or it can be managed with the specially designed PERCo-CR01 T&A controller.

Below you can find the description of both of these options for organizing the T&A control system at the enterprise.

T&A control system without lock or turnstile in a small enterprise without entrance check-point

The installation of the Ethernet connected PERCo-CR01 controller (LICON) with two built-in card readers and a real time clock provides the simplest solution for the T&A control.

PERCo-CR01 controller (LICON)	1 unit
Proximity card	According to the number of users



Employees have to present their cards to the controller upon arriving to work and leaving from it. When the card is presented to the controller, the system identifies the employee and records the time of his entry/exit. The Software permits to compare the real time when the employee was present in the workplace with his individual work schedule and forms the necessary reports, for example the report on labor disciplinary violations. The intellectual control algorithm sustains the flextime and shift work schedules. If it is necessary a responsible employee can input justificatory documents data into the system.

The LCD screen displays the system time so the employee that presents the card to the controller can see what time of entry/exit will be indicated in the reports.

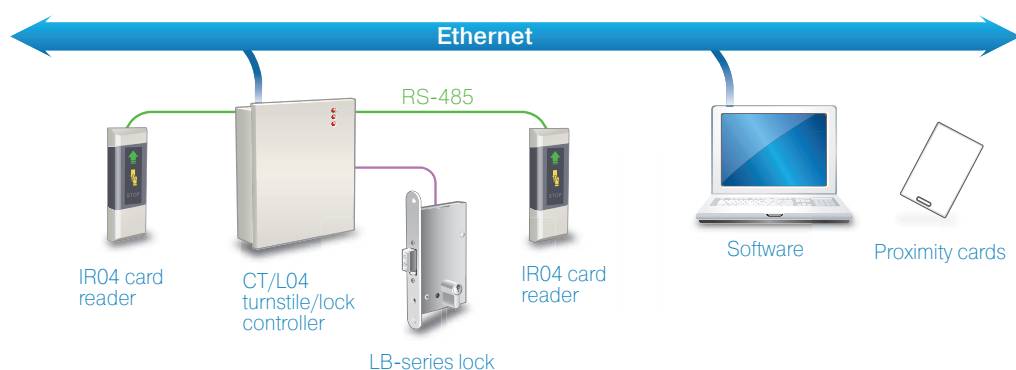
The controller also informs about double or incorrect card presentation.

T&A control system based on turnstile or lock

If the enterprise is already provided with access control system, the equipment that is already installed can be used for T&A management – IP-stiles, turnstiles, locks, controllers and readers. When the system is used at a large enterprise, it might be more efficient to organize T&A system not at the check-point, but at the departments and other rooms, by installing T&A controllers at the entrances.

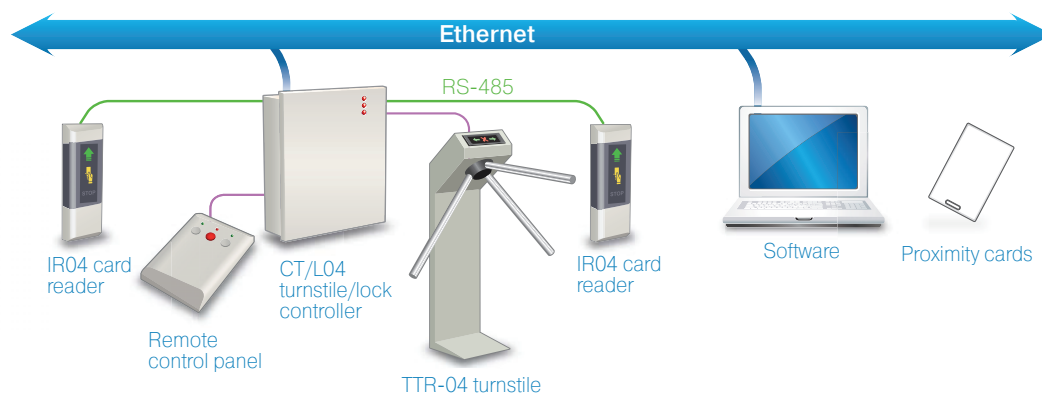
Example 1.

Electromechanical lock	1 unit
CT/L04 turnstile/lock controller	1 unit
IR04 card reader	2 units
Proximity cards	According to the number of users



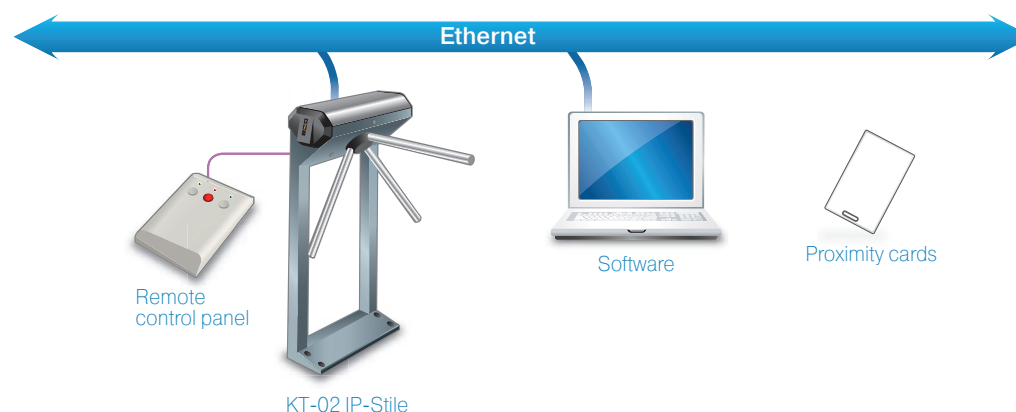
Example 2.

PERCo turnstile	1 unit
CT/L04 turnstile/lock controller	1 unit
IR04 card reader	2 units
Proximity cards	According to the number of users



Example 3.

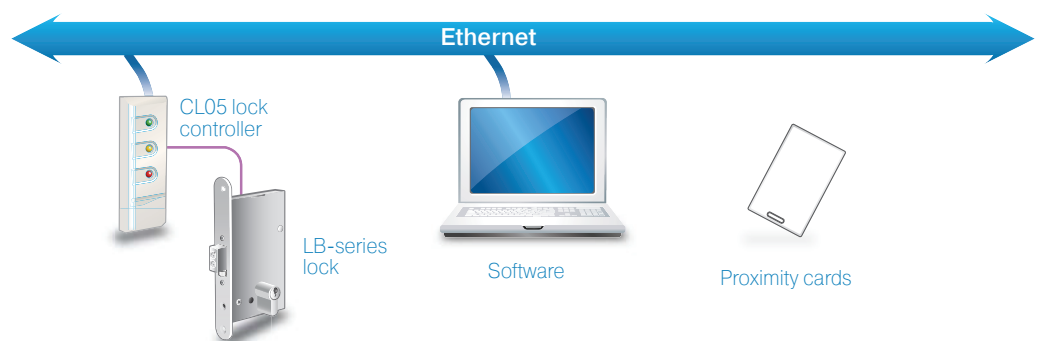
PERCo IP-Stile	1 unit
Proximity cards	According to the number of users



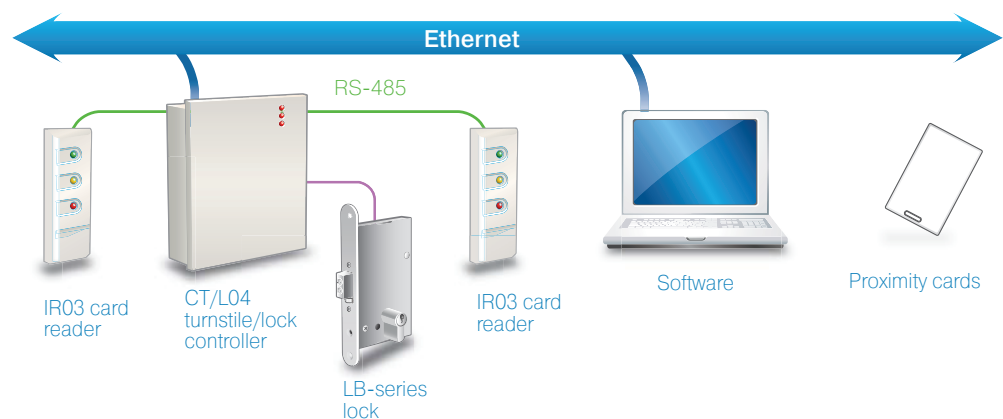
Single door access control system

Single door access control system can be used with entrance doors and emergency exit doors, office and staff room doors. The main objective of the system is to prevent unauthorized access. Depending on the door location you can arrange both one-way and bi-directional control.

ONE-WAY CONTROL	
CL05 lock controller with built-in card reader	1 pcs
LB-series electromechanical door lock	1 pcs
Software	1 pcs
Proximity cards	According to the users number



BI-DIRECTIONAL CONTROL	
CT/L04 turnstile/lock controller	1 pcs
IR03 card reader	2 pcs
LB-series electromechanical door lock	1 pcs
Software	1 pcs
Proximity cards	According to the users number

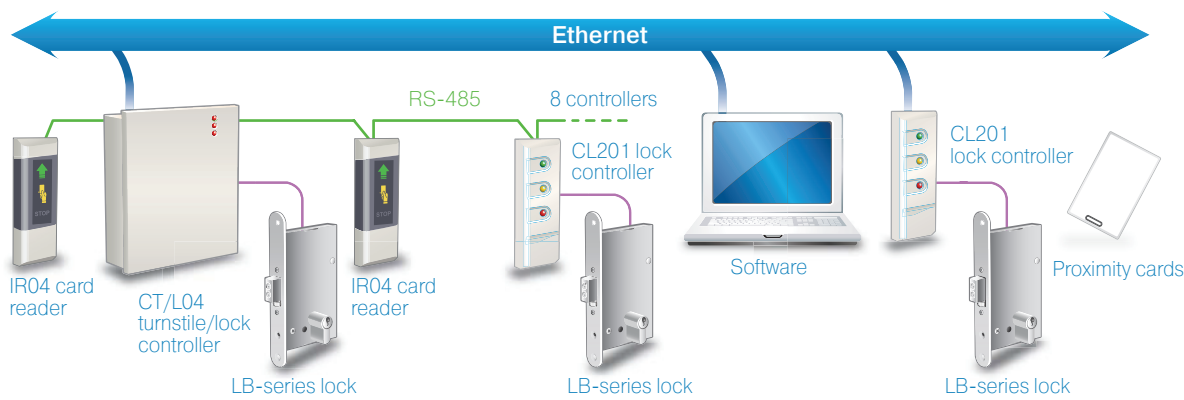


Users card list is stored in controller memory with the software. All events - inputs and outputs - are stored in the controller's memory. To upload a card list of employees or make changes, you can use a controller web-interface with a laptop.

Several doors access control system

Consider the access control system for a company that occupies a floor in the business center, moreover, has one more room on another floor. Access control for 8 rooms, in/out control for floor entrance and separate room access control should be organized here.

CL05 lock controller with built-it card reader	1 pcs
CT/L04 turnstile/lock controller	1 pcs
CL201 lock controller with built-it card reader	8 pcs
IR04 card reader	2 pcs
LB-series electromechanical door lock	10 pcs
Software	1 pcs
Proximity cards	According to the users number



All doors should be equipped with electromechanical locks.

8 room doors are equipped with CL201 controllers with built-in readers. Door that leads to the floor is equipped with two IR04 card readers. Card readers and CL201 lock controllers with integrated readers are connected to CT/L04 universal controller and locks are connected to CT/L04 and CL201 controllers.

Separate room door is equipped with CL05 controller with built-in reader.

CT/L04 and CL05 controllers connect a software installed on a computer via Ethernet. The software allows you to create employees lists, assign access rights and view the event log.

