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Intelligent, battery- and cable-free, digital
iLOQ locking technology
for greater security, less work and lower costs
in hospital buildings and
secure management of medicine cabinets

iLOQ Ltd



iLOQ Ltd from Finland develops, manufactures and markets the revolutionary iLOQ electronic locking solution integrating modern mechatronics, communication and software technologies enabling a new level of high-security throughout the lifetime of a locking system.

iLOQ locking solutions are winner of several international security awards:

- IFSEC Security Industry 2008
- Detektor International Award 2008 and 2010
- INNOFINLAND 2008



iLOQ – Digital Locking. No Batteries.



iLOQ Lock & Key

- Unique patented digital self-powered identification technology
- Fully programmable locks and keys
- Battery-free and cable-free

iLOQ S10 – Locking Management System

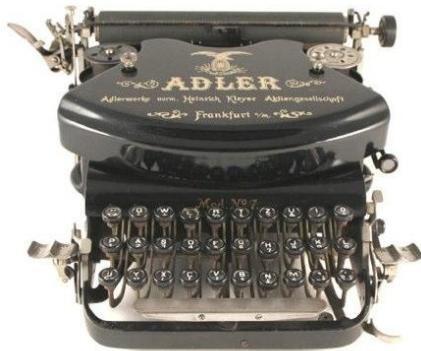
- Master key locking solution
- Remote access management
- Software as a Service (SaaS)

iLOQ solves Facility Management Challenges



Mechanical master key locking systems:

- Rekeying limitations
- High lost key costs
- Visible key code – key can be copied
- Security level corruption
- Complicated and slow delivery
- Manual management process
- Authorization based maintenance

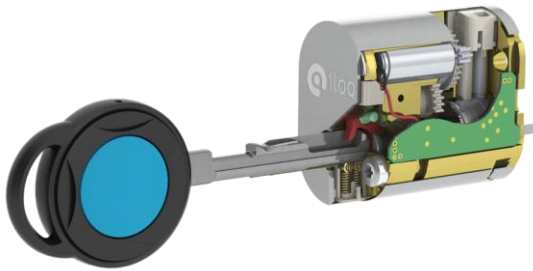


Solution so far:

Expensive Electromechanic or Access Control Systems

- High investment costs
- High maintenance costs
- Battery replacements in batter-powered keys or locks

iLOQ - Self-Powered Digital Identification



Operation principle

- No battery, no cabling
- Necessary electricity is generated by the generator when the key is inserted into the lock
- Lock identifies keys securely using strong encryption SHA-1 ($2^{64} = 1,8 \times 10^{19}$)
- Lock checks access authorization of the key
- Lock opens, if key is authorized
- Lock does not open, if key is not authorized

iLOQ S10 – System Elements



Windows PC with Internet connection

- iLOQ S10S Software as a Service license
- iLOQ P10S programming device
- iLOQ P10S.3 iButton® administration key
- iLOQ locks & keys

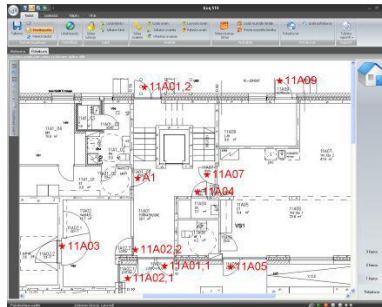


iLOQ S10 – Locking Management Software



Convenient management of iLOQ locks and keys

- Access right definition, restriction, changes
- Blacklisting of lost keys
- Audit trail reports
- Multi-site management



24/7 internet connection as Software as a Service

- Easy installation, Microsoft.net
- Secure information storage and backups
- Automatic updates

User-friendly Graphical User Interface with building drawings

iLOQ K10S – Battery-free Digital Key



- Battery free => Maintenance free
- Duplication-proof with unique SHA-1 chip => Security
- Durable stainless steel operating also at -40°C => Robust
- Mechanically identical keys => Flexible stocking & fast delivery

Key Programming



- Access rights programmed in key
 - No reprogramming of lock required
- Access rights removed when key is returned
 - Reutilization of keys
 - No need for key safes
- Lost key elimination
 - by transferring lost key information to affected locks with programming device, or
 - by inserting the new replacement key first time

iLOQ C/D10.S – Self-Powered Digital Locks



- Completely self-powered by insertion motion of the key
=> No batteries or cables needed
- Standard sized
=> Easy installation in existing lock cases
- Strong encrypted key identification
- Audit trail report of last 500 key insertions
- Mechanically identical shape
=> Flexible stocking & fast delivery
- Durability tested for temperature range from -40°C to +70°C
- Meets prEN15684/EN1303 requirements

iLOQ C/D10S.2 – Additional Access Options



Optional access rights restriction

- By ON/OFF switch
- By external input

Optional Real Time Clock (battery-powered)

- Key start and expiry date
- Key validity time and days in week calendar
- Time stamp on audit trail

Optional iLOQ N001 network connection

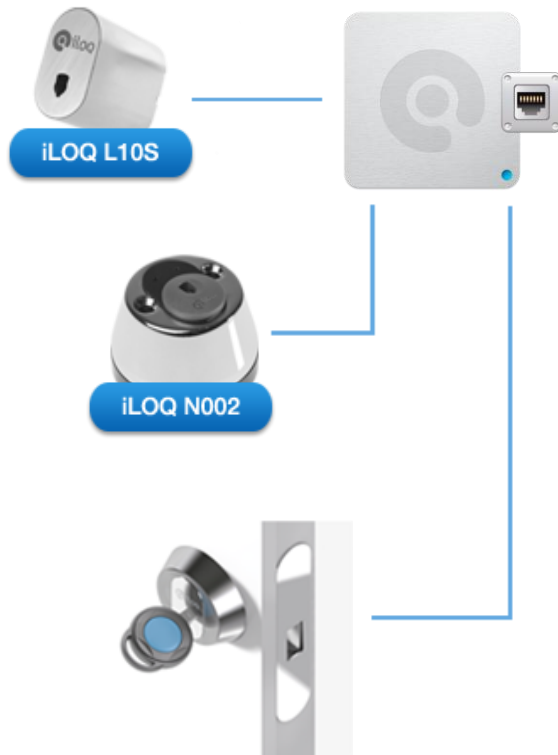
- Networked access right definition
- Networked blacklisting
- Networked audit trail pick up

iLOQ S10 – Product Family



- iLOQ Key
- iLOQ Lock Cylinders
- iLOQ Key Tube Lock
- iLOQ Padlock
- iLOQ Cam Lock
- iLOQ Key Reader
- iLOQ Accessories and Installation Equipment
- iLOQ Programming Device
- iLOQ Locking Management Software
- iLOQ Network Module (optional)

iLOQ S10 Expand 1 – 2 – 3



1

Offline - system

- Key update and lock programming with the iLOQ Programmer and the new iLOQ key.
-

2

Additional networked key programming hotspot

- Key update at remote iLOQ N002 key programming hotspot mounted at building's wall.
-

3

Additional networked locks

- Remote management of wired locks
- Main entrance door time control based on calendar
- Main entrance lock programming and key blacklisting
- Reporting of washing room usage, audit trail reading

“...iLOQ locking system was the only reasonable solution” *Oulu University Hospital*



Why iLOQ S10 for hospital management?



► Wide range of flexible keying options

- Convenient and fast access management
- Key elimination from lock by new replacement key
- Optional time restrictions and network connection



Blacklist of lost keys

- Easy and fast elimination of lost key from all locks
- No other keys to be changed or to be reprogrammed



Cost efficient installation and maintenance



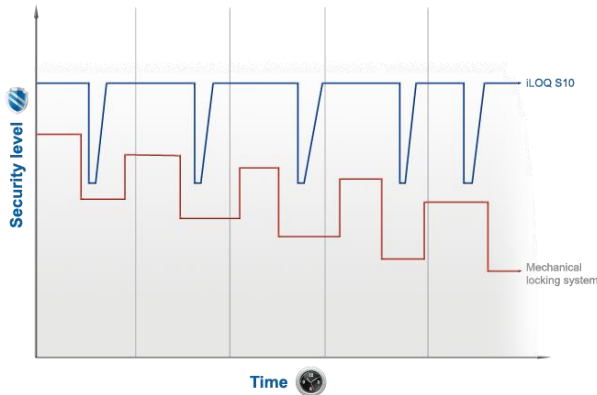
- No cabling, no batteries needed (for off-line locks)
- Fits into existing lock cases
- Automated software updates and security back-ups

Why iLOQ S10 hospital management?



Efficient lock and key management

- System data at one place always up-to-date
- Supporting multi-site management
- Key return and reuse possibility
- Low lifetime and maintenance costs
- Client can manage locks and keys autonomously



High security

- Encrypted iLOQ key cannot be copied
- Secure lock cylinder
- All security critical system information encrypted
- Audit trail report prevents misuse and helps in problem cases

Easy system expansion – iLOQ S10 Expand 1-2-3

iLOQ – Installations

- Locker management application: Itella (Finnish Post)
- Apartment houses: hundreds of applications
- Office management: e.g. Technopolis, Crane Court London
- Recreational management: e.g. Levi Spirit, Saimaa Gardens
- Municipalities / Authorities: e.g. Finnish tax authorities, music center, municipal organizations
- Industry: e.g. Konecranes, Fazer, NokiaSiemensNetworks, Nexans
- Banks: e.g. Aktia, OP Pohjola, Lammin Säästöpankki
- Energy/Telecom: Several large pilot applications running
- Hospitals: applications in hospital a.o. medicine cabinet management
- Education: very many applications in school / university environment
- Church organizations: many applications
- Shopping malls: e.g. Citycon Jyväskylä



iLOQ S10 – Upgrade security! Break down keying restrictions!
Save time, money and the environment! – [**www.iLOQ.com**](http://www.iLOQ.com)