



iLOQ – Digital Locking. No Batteries.

iLOQ Ltd



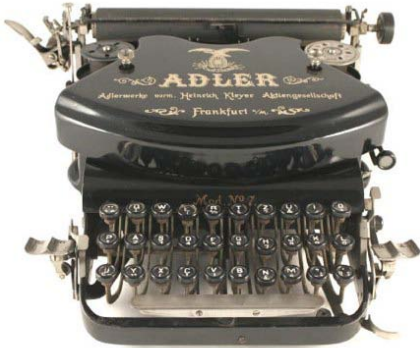
iLOQ Ltd from Finland develops, manufactures and markets the revolutionary iLOQ electronic locking solution integrating modern mechatronics, communication and software technologies enabling a new level of high-security throughout the lifetime of a locking system.

iLOQ locking solutions are winner of several international security awards:

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



Market Background



Serious problems with mechanical master key locking systems in facility management of big organizations, housing companies, public premises, industries, offices, IT:

- 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 Access Control Systems

iLOQ – Digital Locking. No Batteries.



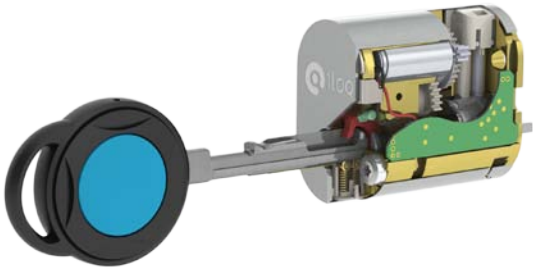
iLOQ Lock & Key

- 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 - Self-Powered Digital Identification



Operation principle

- No battery, no cabling
- Necessary electricity is generated by the insertion motion of the key 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 K10S – Battery-free Digital Key



iLOQ K10S



iLOQ P10S

- 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 – 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

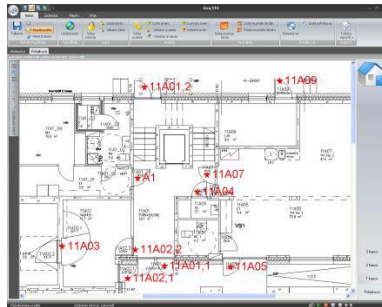


Convenient management of iLOQ locks and keys

- 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 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)

Why iLOQ S10?



▶ 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?



iLOQ K10S



iLOQ C10S



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

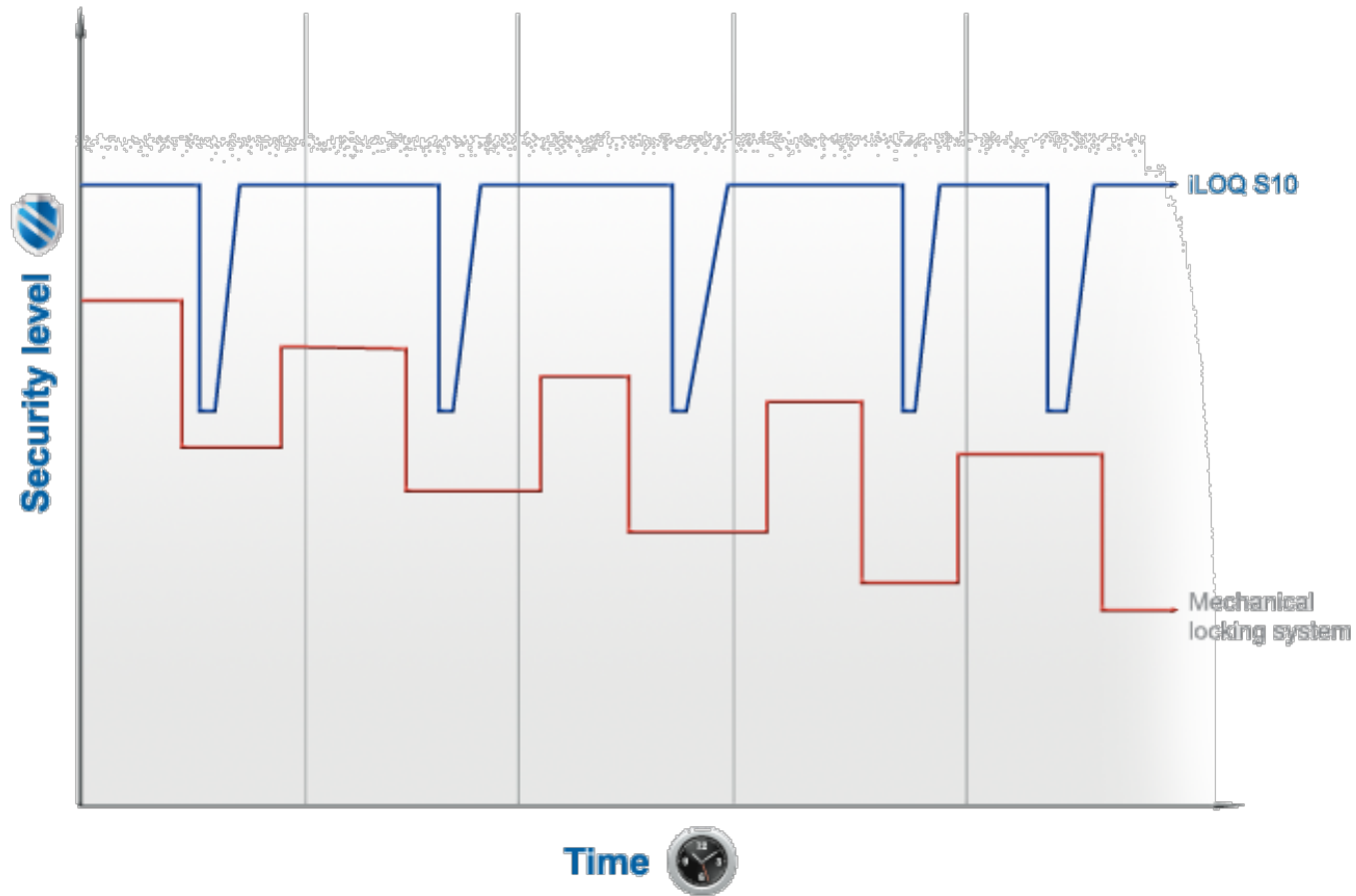


High security

- 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

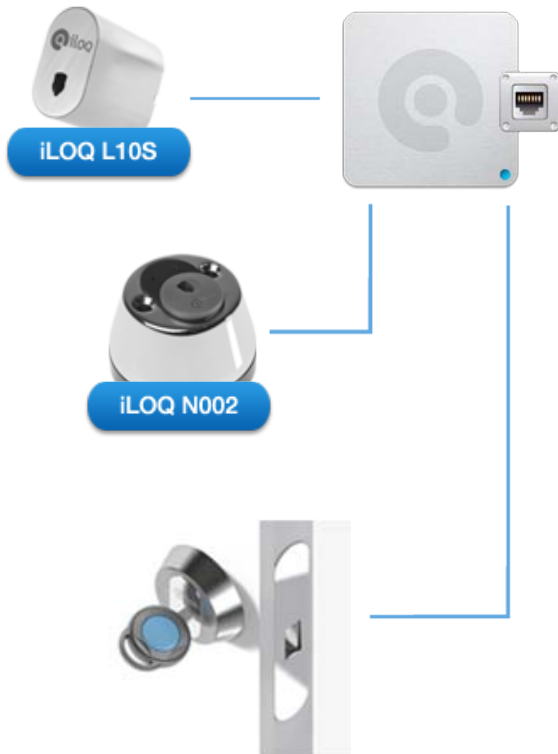
iLOQ S10 – High Security



iLOQ S10

Expand 1 – 2 – 3

iLOQ N001 network module



Easy expansion to a fully remotely controlled iLOQ S10 system

- Remote lock management over network
 - Lock re-programming over the network
 - Audit trail reading over the network
 - Key blacklisting over the network
- Remote key update over key programming hotspots
- Calendar based door control

iLOQ S10 – Basic level system elements

System administration

Lock and key management
from administrator's PC



Level 1:
fully off-line management



Key update

with iLOQ Programmer

Lock programming

with iLOQ Programmer

with new iLOQ key

Audit trail reading

with iLOQ Programmer

Key blacklisting

with iLOQ Programmer

with new iLOQ replacement key

iLOQ S10 – Level 2: Key hotspots

System administration

Lock and key management
from administrator's PC



Level 2: additional networked
key programming hotspot



Key update

with iLOQ Programmer & over Hotspot

Lock programming

with iLOQ Programmer

with new iLOQ key

Audit trail reading

with iLOQ Programmer

Key blacklisting

with iLOQ Programmer

with new iLOQ replacement key

iLOQ S10 – Level 2: Example



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

- Administrator gives maintenance company access to technical room,
- Maintenance person inserts his key and gets access rights

iLOQ S10 – Level 3: Networked locks

System administration

Lock and key management from administrator's PC



Level 3:
additional networked locks

Key update



with iLOQ Programmer

& over Hotspot

Lock programming

with iLOQ Programmer

with new iLOQ key

Audit trail reading

with iLOQ Programmer

Key blacklisting

with iLOQ Programmer

with new iLOQ replacement key



& over network

& over network

& over network

iLOQ S10 – Level 3: Example



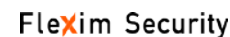
Remote management of wired locks, e.g.:

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



iLOQ – Partners in Finland

More than 70 installer branches in Finland



Heinolan
Lukkohoolto Oy



Turvatalo –
Ylivieskan Lukko Oy



iLOQ – Partners in Scandinavia

Over 30 installer branches in Sweden, Norway, Denmark

LÅS-AKTUELLT

ALVIKS LÅS AB

Bergs Lås AB
Lås • Larm • Passage-system

Blekinge
Lås & Larmteknik

DoNET

El och Fastighetsdrift
Stockholm AB

ELECTROSEC

Gärden Persson

LÅS & MASKIN

LÅS & SÄKERHET

LÅS & TRYGGHET

LÅSET

LÅSSMEDEN

LÅSTEAM

LÅSTJÄNST ALARM

PROTECT YOU

RIKSTVÅANS
LÅSSERVICE

SÖDERLÅS

VALTERS
Lås & Nyckelservice
Skellefteå 729 729

WB LÅS AB

övik låsteknik ab

trygge rom

Dansk
Sikrings
Service

valnes

iLOQ – Partners international

Growing partner network worldwide:



iLOQ – Installations

- Locker management application: Itella (Finnish Post)
- Property management: hundreds of applications
- Office management: e.g. Technopolis, Crane Court London
- Recreational management: e.g. Levi Spirits, Saimaa Gardens
- Municipalities / Authorities: e.g. Finnish tax authorities, music center, municipal organizations
- Industry: e.g. Konecranes, Fazer, NokiaSiemensNetworks, Nexans
- Banks: e.g. Nordea, Aktia, OP Pohjola, Lammin Säästöpankki
- Military: Test application in NATO member country
- Energy/Telecom: Several large test applications running
- Hospital: applications in hospital a.o. medicine cabinet management
- Education: very many applications in school / university environment
- Church organizations: many applications
- Shopping mall: e.g. Citycon Jyväskylä

iLOQ S10 – Upgrade security! Break down keying restrictions!
Save time, money and the environment! – www.iLOQ.com

