

The Gantner smart lock system

The Gantner locker locking system allows the convenient electronic locking of End of Trip change room lockers, Commercial office lockers or deposit box installations. In many cases the existing access cards serve as identification media directly at the locker lock.

Thanks to the multi-technology reader, almost all common RFID technologies as well as NFC are suitable for identification.

Gantner's Networked lock system offer the advantage of direct control of all locks from a management platform. Likewise, all information, alarms, and movement data are displayed there. The authorizations can also be managed and controlled centrally. Special, complex authorization processes can be defined in the central software and expanded if necessary. The entire lock installation is supplied via mains power, thereby omitting the need to replace batteries.

Locker Lock System for Concealed Installation with RFID Reader on the Lock

Accepted card technologies:

- Mifare Classic - EV1
- Mifare Plus
- Mifare DESfire - EV1 EV2
- Also included – Ultralight based on site specific requirements (limited application)
- HID - iClass
- HID - iClass SE
- HID - iClass SEOS – Requires booster label to exterior of locker door

The authorizations of user credentials are managed in the same way as the doors in the building via the access control system.

Locking modes:

The system can be established to allow users to be assigned a locker (Personal locker mode) or have free selection at an available locker of their choice (Free locker mode).

Hybrid mode allows for a mix of personal and free locker modes where rental or permanent locker allocation is a partial requirement of a locker installation.

User groups:

User groups are established to determine where users may select a locker. Access rights may be restricted to zones, levels and/or number of lockers. This ensures in a multi-tenant building EOT lockers can be apportioned to individual tenancies. In an office employees may be restricted to a zone or level where they are required to work. This assists in management of locker to user ratios.

Users can be assigned multiple locker access where project/team lockers are a requirement or for EA/Exec document sharing is critical.

Locker Lock - GAT NET.Lock 7000

In many environments lockers have become the last point of personal storage employees or facility users are provided. With the electronic locker lock, change room lockers, storage boxes, rental lockers, or office lockers can be locked and unlocked using a variety of RFID data carriers at the locker door. This provides a heightened level of user experience eliminating pinch points during key entry/exit times and ensuring users may select a locker suitable to their individual requirements.

The Gantner smart lock system

The electronic lock is connected to a superordinate control unit (24 locks per control unit). By installing the lock inside the locker, it is optimally protected against manipulation.

- Locking / Unlocking at locker door via RFID data carrier (employee ID card, key tag) of various technologies.
- Remote opening without data carrier.
- Integrated alarm for break-in attempts.
- Frequency of reading field: 13.56 MHz
- Status display via multi-color LED indicator and acoustic signal generator.
- Low voltage Motor-driven unlocking and locking for maximum reliability and security, reduced power consumption and longevity of equipment.
- Suitable for left and right-hinged doors as well as various door materials.
- Vandalism-proof installation.
- Break-in resistance Class C according to DIN 4547-2.
- Environment Class II according to VdS 2110.

Locker Control Unit - Slave Controller MIFARE/ISO & HID - GAT NET.Controller S 7000

With the slave controller, up to 24 lockers can be powered and controlled. Up to 8 slave controllers can be connected via an RS-485 bus to a central control unit. In the event of a communication failure with the central control unit, an uninterrupted emergency operation of the lockers is possible. During complete power outage without back-up locker remain locked ensuring security of personal items and identity. A managed UPS or essential power connection is required to maintain full system operation during power outages.

Features:

- Free and personal locker selection.

- Rental locker function.
- Configurable operating mode.
- Uninterrupted emergency operation in the event of a communication failure with the central control unit.
- Connection of up to 24 locker locks.
- Alarm forwarding for break-in attempts.

Reader type:

- MIFARE® - read and write.
- ISO 15693 - read and write.
- NFC - read and write.
- HID® IClass read and write

Central Control Unit - Master Controller - GAT NET.Controller M 7000

With the master controller, up to 8 locker control units (slave controllers), and thus a total of up to 192 locks, can be controlled. The central reading unit communicates via Ethernet with the server where the lock management software is installed.

- Secure data transmission to the lock control unit.
- Secure data transmission to the server.
- Uninterrupted emergency operation in case of communication failure with the server.
- Connection of up to 8 locker control units via RS-485 interface.
- Firmware update via central server.
- SD card slot with 4 GB SD card for storing up to 10,000 bookings.
- 4 x potential-free relay outputs for alarm, manipulation warning, and usage indication.
- 4 x potential-free optocoupler inputs for forwarding status messages to the server.
- RJ45 Ethernet interface to the server.

The Gantner smart lock system

- Internal quartz-controlled real-time clock.

Master Card Set

Set for operating locks. Cards to be supplied by client to Gantner for programming to the system

3 pieces. Master data card – Allows system administrators to open/close a locker without operation disruption. Provides physical security credential for resetting of lockers assisting in secure removal of left items and overall asset management.

Lock Management Software – GAT Relaxx

The lock management software is used to visualize, monitor, and configure a networked locker system. In addition to displaying the current locking status of each locker (occupancy display) and monitoring break-ins (alarm display), the complete remote control and configuration of the individual lockers is also possible. The system configuration is conveniently carried out via a graphical user interface. In addition to assigning lockers and configuring controllers, authorization lists for free locker selection and user assignments for personal lockers can also be defined. The multi-user capability, the user rights system, and a web-based user interface enable multi-user use with a central database.

- Central control of the lockers. For networked, cabled locks.
- Group and local authorization assignment.
- Authorization management for lockers with free selection (“Free Locker”), for personal lockers (“Personal Locker”), and for rental lockers.
- Configuration of the locker system operating modes.
- Backup of all transaction data.
- Break-in and manipulation alarm on multiple

computers (clients) possible (Remote Alarm).

- Clear usage and occupancy evaluations.
- Operation of several clients possible.
- User and rights management.
- Device scan of the network.
- Online XML/JSON interfaces for customer-specific connections. Standard integration via bulk data transfer required for initial user on boarding only.
- Web user interface for locker management (operation).

System Requirements

Minimum supported operating systems:

- Microsoft® Windows 10® Pro, Enterprise (32 and 64-bit)
- Microsoft® Windows 8.1® Pro, Enterprise (32 and 64-bit)
- Microsoft® Windows® 8 Pro, Enterprise (32 and 64-bit)
- Microsoft® Windows 7 SP1 Professional, Ultimate, Enterprise (32 and 64-bit)
- Microsoft Windows Server® 2014 Essentials, Data center, Foundation (64-bit only)

Minimum supported browsers:

- Internet Explorer 9, 10, 11
- Chrome
- Firefox
- Opera
- Safari

Minimum supported databases:

- Microsoft SQL Server 2008 R2 or higher. Supported editions:

The Gantner smart lock system

Standard, Express, Enterprise

- Minimum server specification – less than 1000 locks
- Server: Windows Server 2014 or Higher
Min 4 CPU cores, Min 8 GB RAM (Usable), Min 50 GB HDD space
- Client: Windows 7 or higher Min 4 CPU cores, Min 4 GB RAM (Usable), Min 20 GB HDD space
- Minimum server specification – Greater than 1000 locks
- Server: (Application), Windows Server 2014 or Higher, Min 8 CPU cores, Min 8 GB RAM (Free / Usable), Min 50 GB HDD space (App Programs) Min 50 GB HDD space (Backup / Log Data)
- Client: Windows 7 or higher Min 4 CPU cores, Min 4 GB RAM (Usable), Min 20 GB HDD space

installation into lockers by locker manufacturer.

- Supply and commissioning of Gantner Lock Controllers each capable of accommodating either 12 or 24 hardwired locks depending on module type required in various locations.
- Supply and commissioning of Gantner Master Controllers / network modules for converting serial RS485 communications to TCP/IP on the client's Ethernet network.
- Commissioning of GAT Relaxx Lock Management Software.
- Supply and installation of Standard Door Labels subject to site requirements.
- 1 hours staff training for GAT Relaxx Management Software, on site, once system commissioning is completed.
- 12 months warranty on all products or parts.

The above server specifications are for an Application Server only. The associated MySQL server would be accommodated on a separate server

All IT hardware and Software requirements to be provisioned by client

System Notes

- 24/7 remote access is requested to ensure full service expectations can be met without incurring site visit cost or delays in service times during peak locker usage periods.
- Provision of IT infrastructure, completion of cable testing and remote software installation is required prior to final system commissioning.

Within Gantner's typical scope allowance has been made for the following unless noted otherwise in writing:

- Supply, programming and commissioning of Gantner supplied equipment and software.
- Supply of hardwired locks and cables (4.8m) for

Allowance Notes

Standard Door Labels – included:

The Standard label is shown below and can include door numbering. Where HID SEOS is the chosen credential a door label MUST be used to ensure satisfactory card reading and user experience.

Door Labels:

The Gantner door label is used to indicate exactly where the user should place their smart card to operate the locker, i.e. place the staff card over the label. A transparent window lines up with the Gantner smart lock LED providing the user feedback on card reading and lock status. The label includes a booster coil for improved user experience and card reading. Allowance is made for door labels to be manufactured from a single format / single design which can incorporate a number if required. Certain card technology types dictate the mandatory use of a door label.

The Gantner smart lock system

No Allowance has been made for:

- Installation of locks on lockers. (Installed by locker manufacturer during locker production).
- Pre-cabling Works.
- Server and/or Personal Computer(s)
- UPS Power – may be desirable if you require locks to be opened during power failure - an alternative is to connect controllers to essential power circuits if available).
- Network switch and network connection points as well as communications equipment rack equipment or shelves, horizontal fixed cabling cross connect patch leads. Note an equipment rack shelf (1RU) will be required from the client/ electrician to accommodate Master Controller(s) in each communications rack location that Gantner controllers are to be housed.
- High level interface to other systems.
- After Hours Works unless noted.

Pre-cabling notes:

The Gantner Hardwired Locker Controllers network together and connect to standard Ethernet networks for monitoring and management via the GAT Relaxx Lock Management Software. It is most cost effective for the builder's / client's electricians to install the necessary pre cabling. At the appropriate time we will provide accurate instructions and will mark up supplied drawings as necessary, to guide your / builders cabling installers.

All technology, software and intellectual property used in the project is and remains the property of Gantner Electronics Pty Ltd. Any development or such for the system or products supplied as part of this quotation is the property of and remains the property of Gantner Electronics Pty Ltd

Q. Can I use any card to operate a locker

A. An access card is the most common type utilized to operate a locker. The Gantner system natively reads most common card types in the 13.56MHz frequency.

Q. Can I use more than one locker

A. The system administrator can define the type, zone and quantity of lockers each user has the rights to access. Commonly one locker is made available to each individual with additional rights provisioned for Team/Project lockers, Visitors lockers etc

Q. How do I know which locker to use

A. Lockers can be assigned to a user (Personal Locker Mode) or within the users zone they may be allowed to select a locker that best suits their requirements (Free Locker Mode). Based on business requirements a combination of modes is common.

Q. What happens if I lose or forget my card

A. System administrators are provided with System Master Cards to open any locker and can also remotely open via the software commands.

Q. Do I need a label on the door or can I use my own graphics

A. A door label can provide an easy to identify card placement zone but is only required in conjunction with HID iClass SEOS cards. Where a label is not used an LED hole plug is required.

Q. Can the lockers be set to open at a defined time for cleaning

A. Yes, depending on the system setting adopted

Q. What happens if the network connection breaks

A. Gantner's smart controllers maintain operation when the network fails between the locker controller and master controller or master controller and server. This ensures user the same level of experience is maintained.

Q. What happens in a power failure, do all the doors spring open

A. Should the power fail, all lockers remain locked maintaining Gantner's security of user's identities and personal effects protocol. Where operational requirements dictate opening during power outage either an essential power or managed UPS connection is recommended.

Q. Can Gantner provide a central reader or kiosk system

A. The Gantner system has been designed to provide a premium user experience. It allow users to select/lock a locker at the locker door. This eliminates common pinch points during peak entry and exit times. It also ensures they if a selected locker is not fit for use – rubbish left behind etc, a user can easily select an alternative locker rather than having to re-queue for a system allocated locker. It also ensures that any fault is restricted to a single locker whereby a failed reader can put a complete locker bank or system out of action.

Q. Can I open my locker with my phone

A. Yes lockers can be locked/unlocked via a mobile credential in association with NFC (near field communication). This is currently openly available with most Android NFC capable devices and is in testing with IOS devices.

Q. What do I do when I forget which locker I locked

A. System administrators can quickly assist with locker identification.

Q. How can a jammed locker be opened

A. If a locker cannot be opened via user card, system master card or remotely via the management platform, Gantner has a tested manual opening process for emergency requirements.