# Checkmate Nv

## Intelligent Access Controller

- 4/8 Weigand Reader Panel
HID Prox / iClass Supported
- Nested Access Levels for Interlocking
- Integration with Visitor Management System

## Checkmate Nv

**Checkmate Nv** is a networkable, intelligent, industry standard Access Control Panel. Designed for use in Building Management System (BMS) applications, **Checkmate Nv** provides a cost effective solution for Time & Attendance, Access Control & Supervisory Control for Fire & Security Panels. Each **Checkmate Nv** can monitor & control upto 4 Reader which may be configured to control 4 doors Entry with Reader (Exit with Push Switch) or 2 Doors Entry and Exit Reader or any mixed configuration. The Reader & Lock are connected to the **Checkmate Nv** in star connection it may be slided on DIN Rail.

**Checkmate Nv** provides a user configurable intelligent Engine for taking care of any organization's access control needs and is configured using web or client based Application software. All the Access Control decisions are taken by the controller making it truly a standalone system independent of PC. Multiple **Checkmate Nv**'s can be networked on a Ethernet Network or Wifi (with suitable hardware) for larger Applications.

## Card Reader Technology

### Contact less Smart Card Reader :
Contact less Smart card Reader works on 13.56 Mhz RF based on MIFARE / iClass Technology. It is useful where Multi-application card is envisaged. MicroSMART/R10 Reader (from HID) complaint to ISO 14443 Protocol, can be used (Read Range 3").

### Proximity Card Reader (RFID) :
Proximity Reader is based on 125 Khz RF technology and reads the Proximity cards on show within read range. The Entry level MicroPROX / Prox Point(from HID) reader has a read range of 3".

### Finger Print Reader
Finger Print Reader, MicroTIP may be connected to **Checkmate Nv** panel using CAT 5 Cable terminated with Rj45 pluggable connector. The Templates may be centrally managed using a Single IP Address of the **Checkmate Nv** which transfers the required Finger templates to MicroTIP.

### Cards :
Proximity cards / Smart cards compatible to respective readers need to be used. The size of the Card is as per ISO standard i.e. 85 X 54 mm.

## Hardware Features

### ➢ Wiegand Reader Interface
The Checkmate Nv Panel supports 4 Wiegand Reader & may be extended to 8 Readers by adding a Piggy-back Module. Readers can individually be upto 100 m cable distance from the Controller.

### ➢ Lock/Relay Output
The relay outputs are available for Lock Release & are tagged to one or more Reader for door operation as per requirement. The contact may be wetted with 12V from the Power Supply for Lock operation. The basic Model is having 4 Lock outputs & gets extended to 8, as mentioned above.

### ➢ Request-to-Exit(ReX) Switch Input
There is a provision for 4 Exit Push Switches & is paired with the lock, it is going to release. The switch is normal Push Button offering momentary contact. The lock is operated upon usage for Lock On-Time. The basic Model is having 4 ReX inputs & gets extended to 8, using piggy bag board.

### ➢ Magnetic Sensor Input for Door status
For monitoring the status of the Door (i.e. Open or Close), Magnetic Sensor input is used. The Door open sensor input is paired with a lock output. It is useful for Door Open alarm & remote monitoring.

### ➢ General Purpose Input & Output (GPIO)
There is a provision for Potential free contact inputs, which can be input from Fire/Intruder Alarm panel & can be programmed to make the Controller Fail Safe / Fail Secure, in emergency situation. Resetting of Alarms results in normal operation. All alarms are logged for analysis. There is a provision of 2 Auxiliary Relay output. Additional Ports are available.

### ➢ Centralised Lock Power Supply
A Bulk 12V Power Supply may be centrally connected to the controller to power the Panel & locks thereby removing the necessity for power supplies near lock. Optionally, UPS with battery may be provided.

### Cabling
6 core multi strand (each core 14/36) shielded cable for Reader is used. One Pair each of electrical multi strand cable (each core 1.5 sq mm) is used for Lock operation, Door Open Sensor and Exit Switch. These cables run from each Door to Controller. Cable length should be within 100 m.

## Access Control Features

**ACCESS GROUP :** Access Groups may be defined. Each Access Group are associated with one or more Door. One or more Readers / Exit switches are linked to a Door in an Access Group.

**ATTENDANCE GROUP :** Attendance Group is used for recording Employee Attendance and accepts all cards at all time. This data are later used for Attendance Report generation.

**GLOBAL ATTENDANCE MODE :** Access may be granted only to Card Holders who have Clocked-In the Attendance in the Attendance Group. Once the Cards holder Clock-out, the Access rights to the card holder is removed. This feature may be enabled to selective Card Holders also. The Attendance may be done using Biometric reader & the Access Control may be done using card. If this mode is activated, then loss of a Valid Card will not lead to security lapse.

**GROUP ANTIPASS BACK :** Enable / Disable for each Access Group. *Hard Antipassback* : No exit w/o valid Entry, violation alarm. *Soft Antipassback* : Exit w/o Valid Entry with violation alarm.

**TIME ZONE :** 8 user definable Time zones per Access Group. The Time Zones could be Enabled / Disabled for Holiday / Weekly off. "ALLOW ALL" Time Zone is possible for rush hours.

**CARD HOLDER DATABASE :** Each Access Group has its own set of Card Holders linked to one or more Time Zones for the Group. Card holder can be member of Multiple Access Groups.

**VISITOR DATABASE :** A visitor Access may be defined based on the Access Group from Visitor Management Software. The Access rights can be withdrawn upon visitor leaving. **Escort Card** feature may be defined for Visitor Card, such that the Visitor card will activate the lock, if a valid card holder punches his card.

**HOLIDAY DATABASE TABLE :** 30 Holiday Dates & a Weekly off Day can be defined for barring Access. 5000 Card holders can provide access irrespective of Holidays based on their default Access Groups & Time Zones.

**HOLIDAY MASTER CARD :** For Card holders not included in Holiday Database Table, requiring entry on Holiday / Weekly off in their Time Zone, Master Card needs to be shown before the Card Holders card. Upto 5 Holiday master cards per Access Group may be defined.

**CALL CENTRE MODE :** This feature could be used, if you want to withdraw Access automatically to a Card Holder, if it is not in use for a specified No. Of days. The No. Of day for withdrawing access is definable.

**FACILITY CODE :** Upto 8 Valid Facility Code may be downloaded, such that the Card Nos. Of the said Facility code will only get accepted by the controller. Alternatively, if this feature is not configured, it will accept the cards from all the facility codes.

**DOOR OPEN LONG (DOTL) :** If the Door open sensor input is ON for a period longer than the Lock on - time, Alarm is raised & recorded. This may be used for on-line monitoring of doors on Central Monitoring Computer.

**LOCK ON-TIME :** Lock on-time for door opening after Card Show is User Settable. The Lock shuts after his time. This can be used with Door open Sensor for exception monitoring.

**EMERGENCY LOCK OPEN :** Central Computer can open a lock remotely with authorization. Alternatively, a long press of Exit Push Switch (ReX) may be programmed to open the lock (freepass), until it resumed back to normal Access Control, by another Long Press of the same ReX. Free Time zones may be set for rush hours. All such events are logged.

# Checkmate Nv 8
## Single Door Access & Attendance System

**Checkmate Nv8** is a 8 Reader Control Panel in the same foot print using Double Decker concept. **Checkmate Nv** may be upgraded on field to **Checkmate Nv8**.
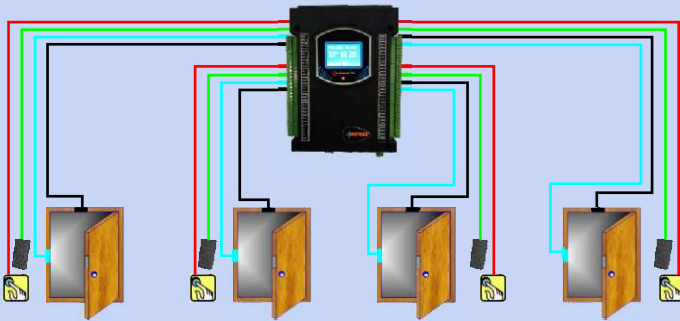
**Checkmate XR** is specially designed for Biometric Reader nodes. It may be connected to upto 8 Nos. of MicroTIP(Fortuna's Biometric) Reader, using CAT 5 cable in Star connection. The Finger Templates may be uploaded/downloaded thru this cable. Hence there is no need of a separate LAN cable/IP Address for managing the Finger template, which saves a lot of wiring & IT cost.
Upto 128 controllers can be networked on a single system.

> Centralised Finger Template Management from Controller
>
> Lock & ReX Connection from Reader Junction Box
>
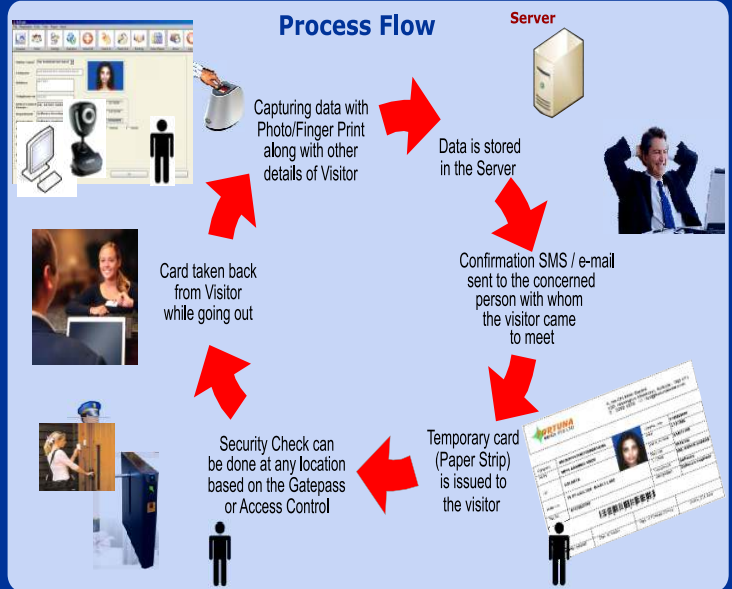> Structured Reader Cabling using CAT5 / 6 Cable with Junction Box

## COMPRO XP : Configuration, Data Capture & Report Generation Software

Compro XP is WINDOWS based system software.It configures Checkmate XT to the user's requirement also captures the transaction data and generates reports for First In Last Out , Movement Report , Access Reports for Access Groups, Visitor IN-OUT reports etc..COMPRO XP can capture data in a continuous manner in on-line mode or in a Batch-mode i.e.collecting the data from the controller manually. Data is available in tables for user to create his own reports or to link to their HR/Attendance/Payroll package.

## KJ Tumi : Visitor Management Software

**KJTumi Online** is a modern age, enhanced Visitor Management application to deal with Front Office Management needs, intelligently along with Biometric authentication. It is integrated with Finger Print Scanner, Webcam, Signature Pad for capturing the Visitor information . Fortuna in-house Biometric Devices & Access Control Panel, is also integrated for enhanced security. Upon successful registration a Visitor Pass is generated with the required information which is presented on Gate and verified by the Security Team.

## TYPICAL INSTALLATION LINE DIAGRAM



| | | |
|---|---|---|
| ReX | (red) | 2 Core, 0.5 Sq.mm cable (for ReX) |
| Reader | (green) | 6 Core(Each 14/36),Shielded Cable (for Reader) |
| Lock | (cyan) | 2 Core, 0.5 Sq.mm cable (for Lock) |
| Door Sensor | (black) | 2 Core, 0.5 Sq.mm cable (for Door Sensor) |

## Process Flow



Capturing data with Photo/Finger Print along with other details of Visitor

Data is stored in the Server

Confirmation SMS / e-mail sent to the concerned person with whom the visitor came to meet

Temporary card (Paper Strip) is issued to the visitor

Security Check can be done at any location based on the Gatepass or Access Control

Card taken back from Visitor while going out

## TECHNICAL INFORMATION

**CPU :** High Performance 32 bit Microcontroller
**Memory** : 200000 Transaction Data Storage with ID #, Date, Time and Access Information. Separate table for Event Storage
**Battery Back-up** : Retention of Clock & Data under power-off
**Communication** : Ethernet or Wifi Connectivity using additional hardware
**Data Upload Speed** : 1000 Records / Minute
**CPU Power** : Wide Range SMPS(170V to 260V@50Hz+/-5Hz,5W)
**Lock Power** : Built-in12V/3 Amp Power Supply for Locks
**UPS with Battery** : Optionally available with 4 hours back-up time
**Card Reader Interface** : 4/8 Reader 26/34 bit Weigand Interface
**Relay Output** : 4/8 Potential Free/12V Wet Contact O/P for Locks
**Exit Switch** : 4/8 Exit Switch Input Interface
**Lock Feedback** : 4/8 Door Open Sensor Input for Lock Feedback
**General Purpose Input/Output** : 4 GPI and 4 GPO (TTL Level)
**Dimension** : 194mm(H) X 123mm(W) X 40mm(D) (4 Readers)
194mm(H) X 123mm(W) X 60mm(D) (8 Readers)
**Enclosure** : Dust Resistant, Corrosion Free ABS Casing
**Colour** : Black
**Operating Temperature** : 0-55 Degree Centigrade

*Specifications are subject to change without notice.*

**Supported Technologies :**

## ORDERING INFORMATION

**Checkmate Nv :** Access Controller with 4 Weigand Reader I/F
**Checkmate Nv8** : Access Controller with 8 Weigand Reader I/F
**Checkmate xR** : Access Controller with 8 Biometric Reader I/F
**UPS with Battery** : UPS with battery for 4 hours back-up time
**MiniProx / Prox Point Plus** : HID Proximity Card Reader
**MicroPROX** : Proximity Card Reader with Read Range upto 3"
**MicroSMART** : Contactless Smart Card Reader(Read Range upto 3")
**MicroTIP** : Integrated Finger Print and Contactless HID card Reader
**COMPRO XP** : Configuration, Data Capture & Reporting Software
**MIS Time Pro LITE** : Time Office Management Software
**MIS Time Pro Enterprise** : Time Office Management Software for Factory
**justHRMS** : Web based HR & Attendance Management Software
**ID Card** : (a) Proximity Card (b) Contactless Smart Card (1K/4K)
**Door Lock** : (a)Strike (b)EM Lock (c)Turnstile (d)Drop bolt (e)Boom
**Cable** : (a)Reader Cable (b)Communication cable (c)Lock Cable
**Accessories** : (a) Exit Switch (b) Door Sensor