SECURE
TECH

ST3 Installation Manual

Keyless Access System Solutions

ST3 Keyless Access System

The ST3 system utlizes the latest technology in keyless entry systems, it is reliable, scalable and offers specific software management solutions.

The ST3 motherboard controller controls two doors, supporting an expansion module that can increase the capacity up to fourteen doors. The system supports electric strikes and magnetic locks. Proximity readers can be set as access or exit readers.

Communications:
Rs485 communications allows the interconnection of two hundred and fifty six motherboard controllers in the same network.

Memory and Autonomy:
The ST3 system keeps all information regarding access credentials, access schedules, door unlocking schedules and can verify access requests even when it is disconnected from the network. All data is stored in an onboard non-volatile memory that keeps the data under power loss. Date and time are maintained by an on-board battery.

Monitoring features:
The ST3 system allows to monitor and report in real time door remaining open, breaks in and power loss.

Specific Management software:
Software version for companies and institutions, commercial buildings, health clubs, hotels and commercial buildings. All versions unclude a setup wizard that allows to set up the system in few minutes.

Remote Management over Internet:
Management operactions can be performed remotely over any internet. Remote desktop solutions provides access to the management server/computer.

Elevator Integration:
Full integration with ST4 elevator controller. ST4 controller panels can be integrated to the rs485 network allowing management from the same software solution.

ST3 Technical Specifications

Operating Voltage	12VDC to 14VDC
Current Consumption	60 mA
Proximity Reader Interface	Wiegand 26 bits
Number of Proximity Readers	2
Inputs for door release	2
Inputs for door contact	2
Inputs for motion sensor	2
Expansion modules door capacity	2 – 4- 6 – 8 – 10 - 12
Max credentials capacity	60,000
Max number of motherboard on network	255
Relay Max operating current and voltage	250 VAC, 10A
Non-Volatile Memory Type	Eeprom
On- Board Battery	CR2032
Communication Interface	RS485

Leds status on-board	Door contact, release, motion detector, lock/unlock
Operative system supported	Win xp, Win7, Win vista, Win 8
Integration with ST4 Elevator Controller	Yes
Specific Software Versions	Companies, Residential Buildings, Commercial buildings, Hotels, Health clubs

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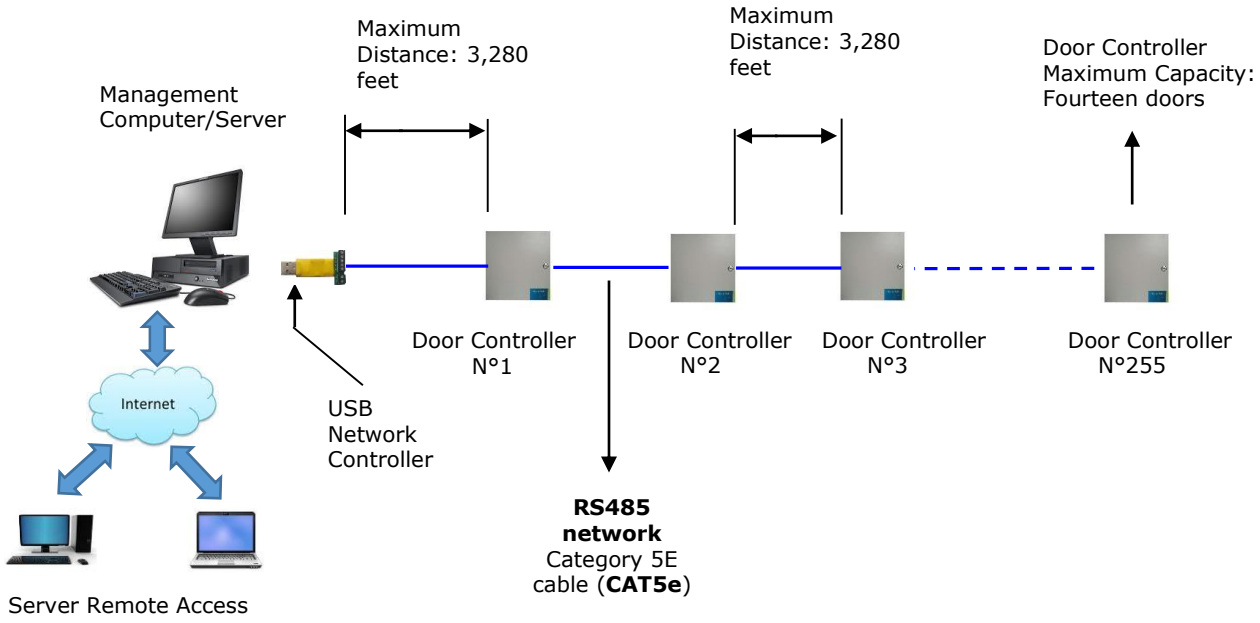
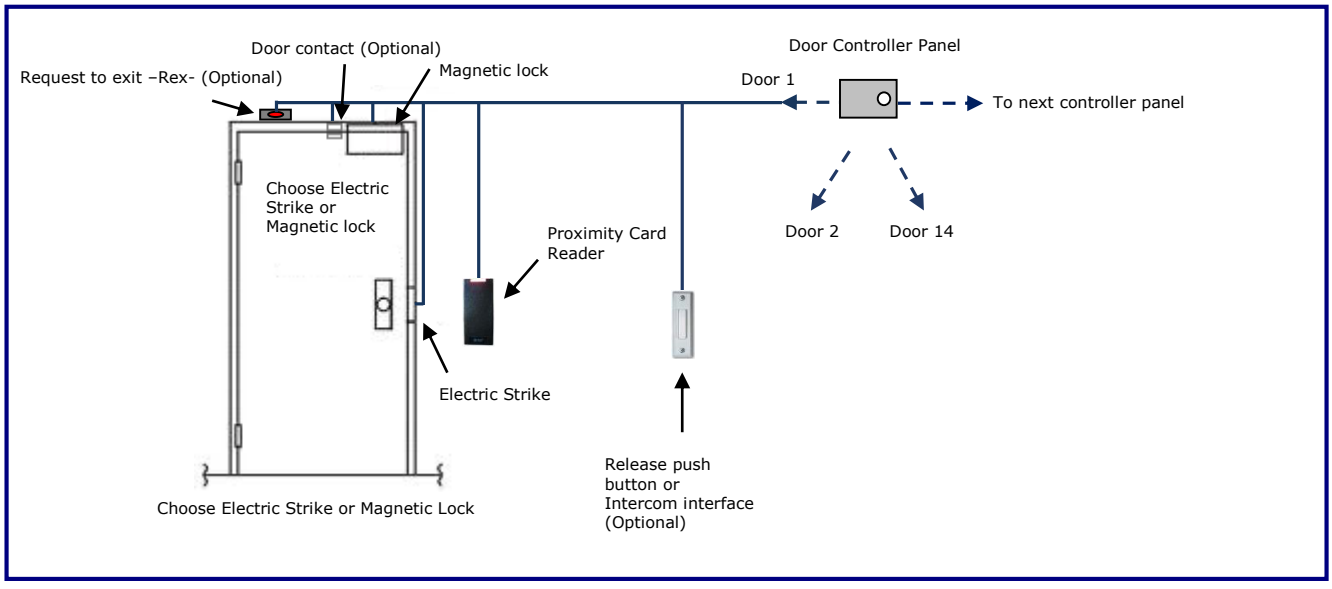
Access Control System - Interconnection Diagram



Door Installation diagram



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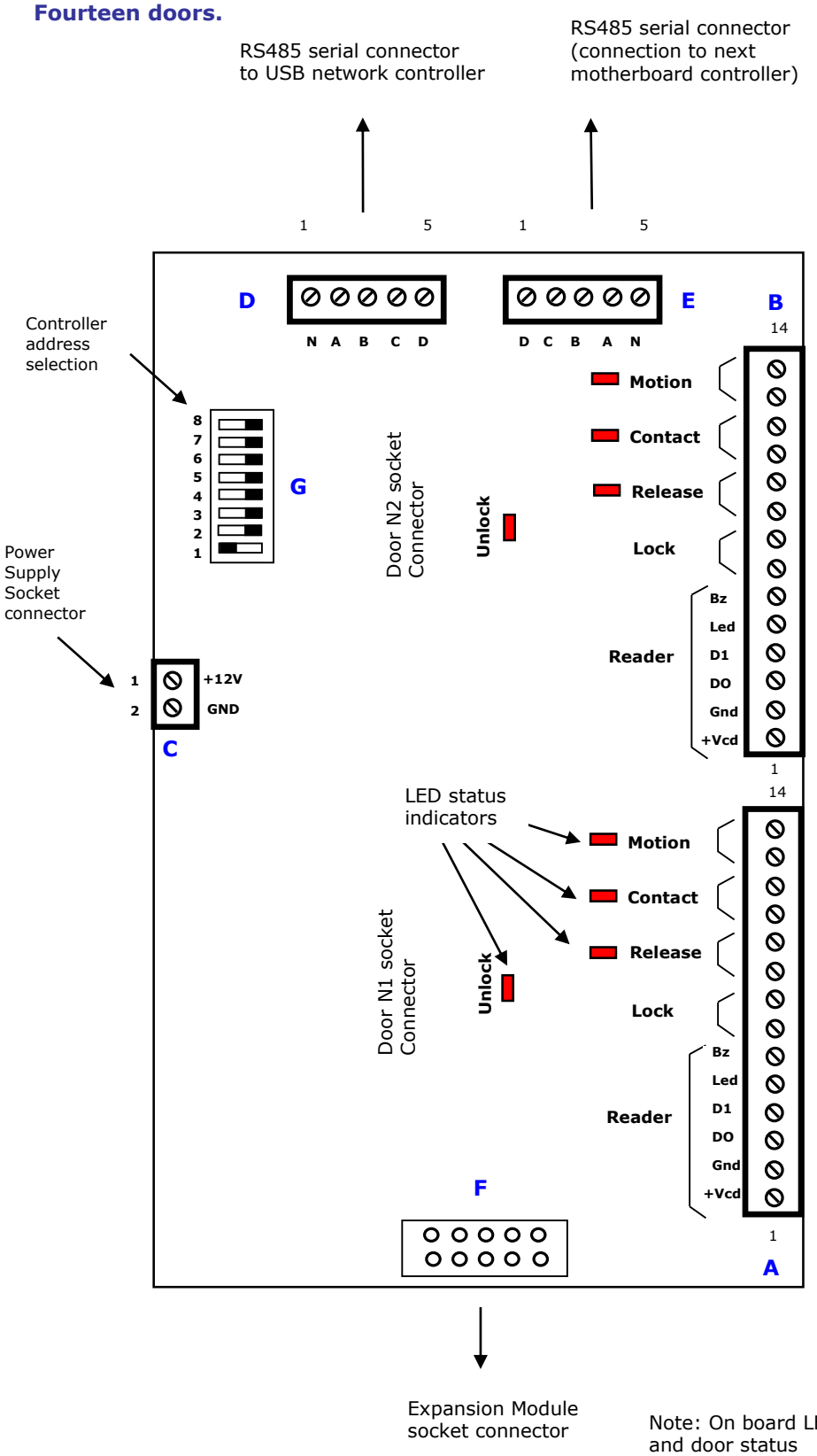
Door Controller Motherboard Description

Two doors capacity, expandable to up to Fourteen doors.



Controller Motherboard Connectors Description

C: Power
1- 12 VDC to +14 VDC
2- Ground

A & B: Door Socket Connector
1- Prox. Reader/+VDC (Red)
2- Prox. Reader/ Ground (Black)
3- Prox. Reader/ Data 0(Green)
4- Prox. Reader/ Data 1(White)
5- Prox. Reader/ Led (Blue)
6- Prox. Reader/ Buzzer (Yellow)
7- Lock out/ +Vlock
8- Lock out/ Ground
9- Release input (REX)/ Rex1
10- Release input (REX)/ Rex2
11- Door contact input 1
12- Door contact input 2
13- Motion detector input 1
14- Motion detector input 2

D: RS485 Serial Connector - From previous controller or USB network controller (controller motherboard N1)
1- To USB network controller pin N or to previous motherboard controller pin N
2- To USB network controller pin A or to previous motherboard controller pin
3- To USB network controller pin B or to previous motherboard controller pin B
4- To USB network controller pin C or to previous motherboard controller pin C
5- To USB network controller pin D or to previous motherboard controller pin D

E: Serial Connector
1- To Next controller motherboard pin D
2- To Next controller motherboard pin C
3- To Next controller motherboard pin B
4- To Next controller motherboard pin A
5- To Next controller motherboard pin N

F: Expansion Module Socket
***Door Expansion modules Capacity: 2, 4, 6, 8, 10,12**

G: Controller Module Address selection (1 to 255)

Note: On board LED indicators for each door indicates sensors and door status

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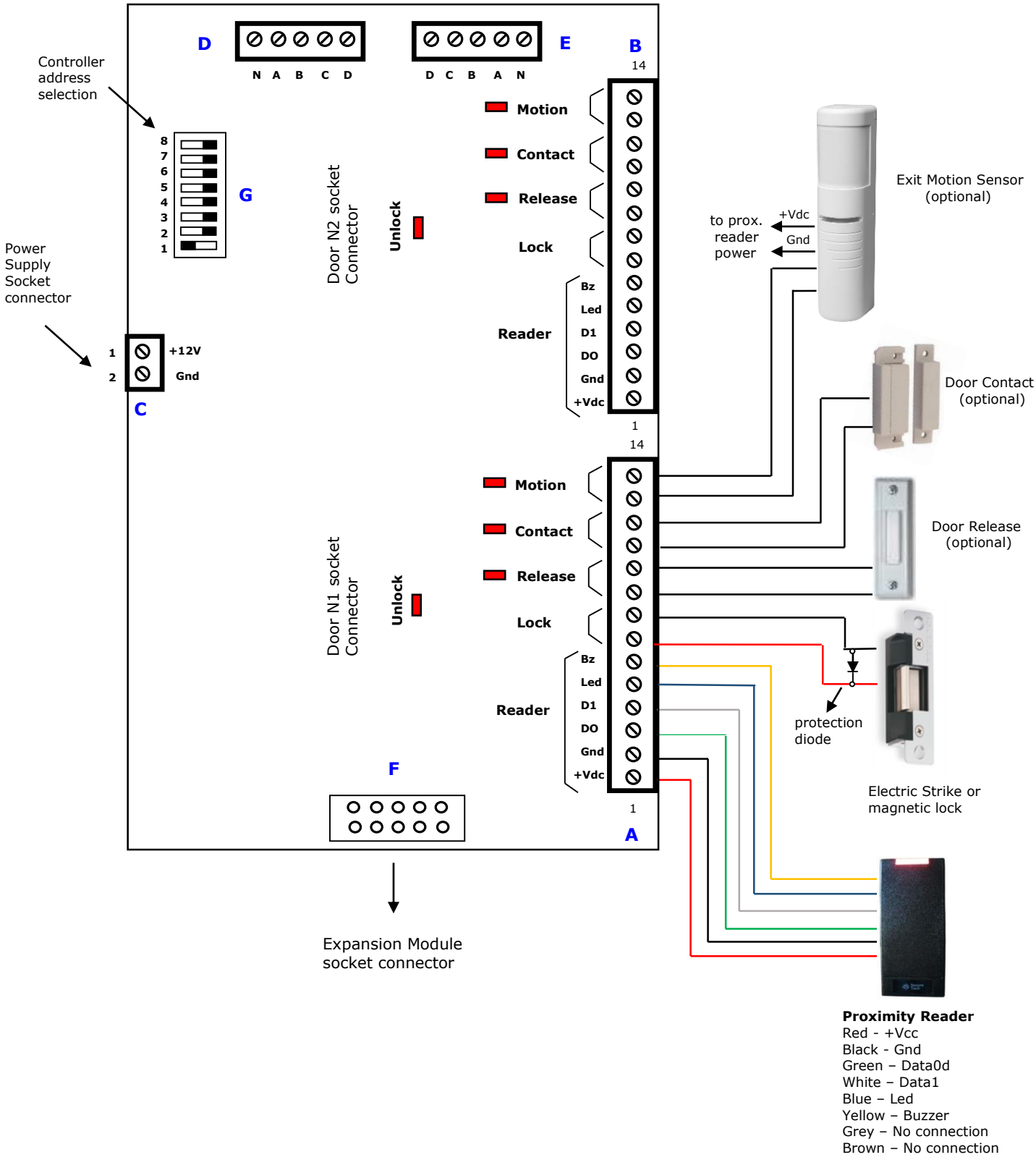
Devices Connection Diagram



Proximity Reader
Red - +Vcc
Black - Gnd
Green – Data0d
White – Data1
Blue – Led
Yellow – Buzzer
Grey – No connection
Brown – No connection

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Door controller power supply

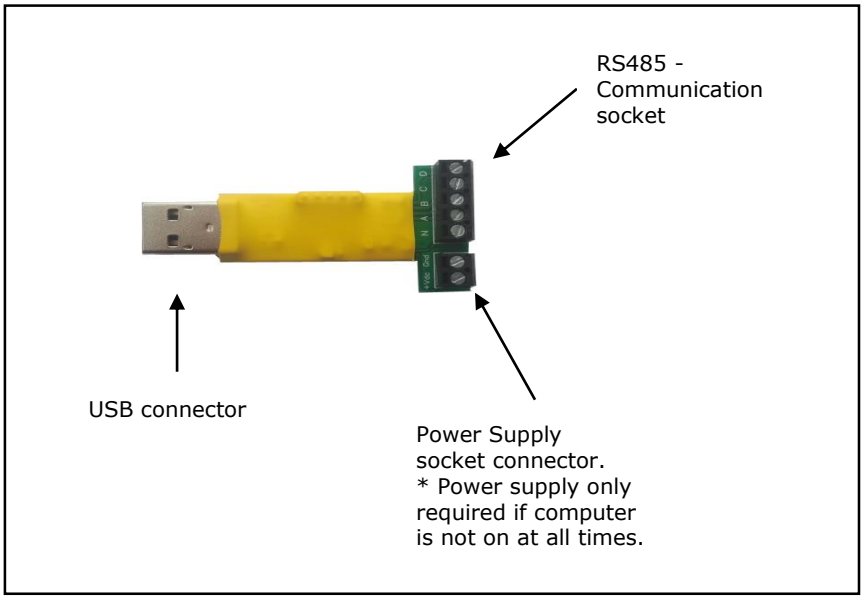
The door controller can be powered from two types of plugging transformers:
12VDC, 2A:
If the system doesn't require battery power back up system, or if the 12vdc transformer will be plugged into an UPS (uninterrupted power supply) system.

110VAC to 220 VAC socket outlet or UPS output

16VAC, 40VA :
If it is required a battery power back up system, 16VAC transformer, battery charger board (access system accessory) and battery should be incorporated to the ST3 panel.

USB - Network Controller

The USB net controller is the interface between the RS485 network and the management computer.
It polls the motherboard controllers for data and transfers it to the management computer.
Automatically detects when the management computer is on to transfer the data collected.
It provides led communication status.



Net Controller Connector Description

Power
+Vdc - 9 VDC to +14 VDC
Gnd - Ground
*Required if computer/server is not powered at all times

Communication Socket Connector
A- To motherboard pin A
(Cat5 - green/white)
B- To motherboard pin B
(Cat5 - green)
C- To motherboard pin C
(Cat5 – blue/white)
D- To motherboard pin D
(Cat5 – blue)
N- To motherboard pin N
(Cat5 –Orange)

Led indicators
Red: Power
Yellow: Communication error
Green: Communication successful

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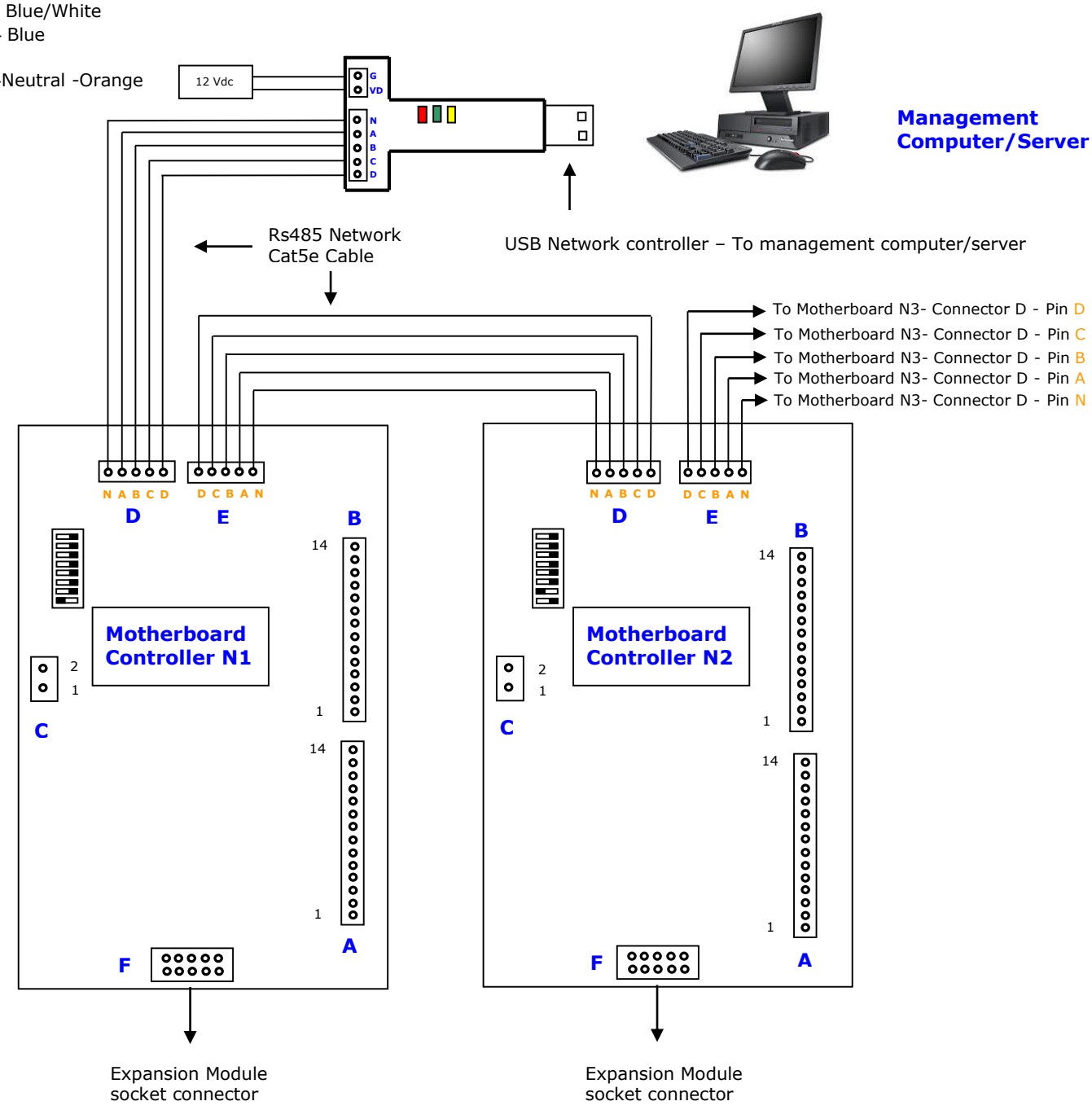
USB Net Controller Connection Diagram

Cat 5e Connections
A-B - First pair
A- Green/White
B- Green

C-D - Second Pair
C- Blue/White
D- Blue

N-Neutral -Orange



Recommended Cables Specifications:

Proximity Reader: 6 Conductors - 22 AWG – Shielded /max distance: 300 feet
*optional for low noise environment and distance < 200 feet: alarm quad cable (4x 22awg)
1) Board bridge between board connector **4**- Prox. Reader/ Data 1(White) and **5**- Prox. Reader/Led (Blue)
2) Resistor 220ohms on the reader end between Led line (blue) and D1 line (white)

Electric Strike: 2 Conductors - 18 AWG
Power supply: 2 Conductors -18 AWG
Door Contact: 2 Conductors- 22 AWG
Push Button REX: 2 Conductors- 22 AWG
Motion Detector REX: 4 Conductors- 22 AWG
Motherboard to USB network controller: CAT5E
RS485 network: Interconnection between motherboard controllers: CAT5E

Software Download:

Specific software solutions for companies and institutions, commercial buildings, health clubs, hotels and residential buildings.
http://www.setech.ca/