CoreStation

設置ガイド

バージョン 1.07

日本語

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suprema

SECURITY & BIOMETRICS

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安全にお使いいただくために

本製品を使用する前に、ご自身や他人への怪我を未然に防ぎ、物的損害を防止するために、この「安全にお使いいただくために」をお読みください。本マニュアルの「製品」という用語は、製品および製品に付属するすべての品目を指します。

指示アイコン

警告：この記号は、死亡または重傷につながるおそれのある状況を示しています。

注意：この記号は、中度の傷害や物的損害をもたらすおそれのある状況を示しています。

ヒント：この記号は、注記または追加情報を示します。

警告

設置場所

本製品を無断で設置したり修理したりしないでください。

- 感電、火災、または製品の損傷につながるおそれがあります。
- あらゆる改造により、または取り付け手順に従わなかったために損傷が生じた場合は、製造元の保証が無効になることがあります。

本製品を、直射日光の当たる場所、湿気の多い場所、埃やすすの多い場所、ガス漏れがありそうな場所には置かないでください。

- 感電または火災につながるおそれがあります。

本製品を、熱器具の近くなど高温になる場所に置かないでください。

- 過熱により火災につながるおそれがあります。

本製品を、乾燥した場所に設置してください。

- 湿気や液体は感電や製品の損傷につながるおそれがあります。

本製品を、無線周波数の影響を受ける場所に設置しないでください。

- 火災や製品の損傷につながるおそれがあります。

お取り扱い

本製品は乾燥した状態にしておいてください。

- 湿気や液体は感電、火災、または製品の損傷につながるおそれがあります。

損傷した電源アダプタ、プラグ、緩んだコンセントは使用しないでください。

- 接続部がしっかりと固定されていないと、感電や火災の原因になるおそれがあります。

電源コードを折り曲げたり損傷させたりしないでください。

- 感電または火災につながるおそれがあります。

注意

設置場所

本製品を、直射日光や紫外線が当たる場所に設置しないでください。

- 製品の損傷、故障、変色、変形につながるおそれがあります。

電源ケーブルを人が通る場所に取り付けないでください。

- 負傷や製品の損傷につながるおそれがあります。

本製品を、磁石、テレビ、モニター（特に CRT モニター）、スピーカーなど磁気を発する物の近くに設置しないでください。

- 本製品が故障するおそれがあります。

お取り扱い

本製品を落下させたり、衝撃を与えたりしないでください。

- 本製品が故障するおそれがあります。

本製品のボタンを無理に押したり、鋭利な工具で押したりしないでください。

- 本製品が故障するおそれがあります。

本製品を非常に高温または低温になる場所に保管しないでください。本製品は -20 °C～50 °C の温度で使用することをお勧めします。

- 本製品が故障するおそれがあります。

本製品を清掃する際は、次の点に注意してください。

- 清潔で乾燥したタオルで本製品を拭きます。
- 本製品を消毒する必要がある場合は、布またはティッシュを適量の消毒用アルコールで湿らせ、指紋センサーなどの露出した表面をすべて丁寧に清掃します。消毒用アルコール（イソプロピルアルコール含有率 70 %）と、清潔で研磨性のない布（レンズ用ティッシュなど）を使用します。
- 本製品の表面に液体を直接塗布しないでください。

本製品を本来の用途以外に使用しないでください。

- 本製品が故障するおそれがあります。

はじめに

製品の構成

CoreStation

クイックガイド

オープンソースのソフトウェアガイド

固定ねじ x12

スペーサー x6

ダイオード x4

部品は設置環境によって異なる場合があります。

付属品

付属品として CoreStation とともに筐体を購入できます。筐体には、LED 制御基板、配電基板、電源装置、バッテリー、およびタンパーが含まれています。

各部品の名前と機能

1
2
3
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18
19
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21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
GND
TRX –
TRX +
ETHERNET
ON ◀ ▶ OFF
TERM
HOST
RS-485
HOST
RS-485
RX
HOST
RS-485
TX
ON
OFF
TERM
INIT
RS-485 2
TRX +
TRX –
GND
WIEGAND 2
12V OUT
D 0
D 1
TTL OUT (4:5)
OUT 4
OUT 5
SUPERVISED INPUT(4:5)
IN 4 +
IN 4 –
IN 5 +
IN 5 –
RELAY 2
NO
COM
NC
STATUS LED 1 / 2
ON ◀ ▶ OFF
TERM
RS-485 3
TRX +
TRX –
GND
WIEGAND 3
12V OUT
D 0
D 1
TTL OUT (6:7)
OUT 6
OUT 7
SUPERVISED INPUT(6:7)
IN 6 +
IN 6 –
IN 7 +
IN 7 –
RELAY 3
NO
COM
NC
SUPERVISED INPUT 4
SUPERVISED INPUT 5
RELAY 2
SUPERVISED INPUT 6
SUPERVISED INPUT 7
RELAY 3
suprema
CoreStation
INFORMATION
THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS:
(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.
RELAY 1
SUPERVISED INPUT 3
SUPERVISED INPUT 2
RELAY 0
SUPERVISED INPUT 1
SUPERVISED INPUT 0
AUX IN 0
AUX IN 1
RESET
POWER / AUX IN
12V DC
GND
AUX IN 0
GND
AUX IN 1
GND
RELAY 1
NC
COM
NO
SUPERVISED INPUT(2:3)
IN 3 –
IN 3 +
IN 2 –
IN 2 +
TTL OUT (2:3)
OUT 3
OUT 2
WIEGAND 1
D 1
D 0
12V OUT
RS-485 1
GND
TRX –
TRX +
OFF ◀ ▶ ON
TERM
RELAY 0
NC
COM
NO
SUPERVISED INPUT(0:1)
IN 1 –
IN 1 +
IN 0 –
IN 0 +
TTL OUT (0:1)
OUT 1
OUT 0
WIEGAND 0
D 1
D 0
12V OUT
RS-485 0
GND
TRX –
TRX +
OFF ◀ ▶ ON
TERM

番号	名前	番号	名前
1	HOST RS-485 接続	20	RESET ボタン
2	HOST RS-485 終端抵抗スイッチ	21	AUX IN (0、1) 接続
3	INIT ボタン	22	CoreStation 電源接続 (DC 12 V IN)
4	イーサネット接続	23	リレー 3 接続
5	リレー 1 接続	24	TTL 入力 (6、7) または監視入力 (6、7) 接続
6	TTL 入力 (2、3) または監視入力 (2、3) 接続	25	TTL 出力 (6、7) 接続
7	TTL 出力 (2、3) 接続	26	Wiegand 3 接続
8	Wiegand 1 接続	27	12 V 出力
9	12 V 出力	28	RS-485 3 接続
10	RS-485 1 接続	29	RS-485 3 終端抵抗スイッチ
11	RS-485 1 終端抵抗スイッチ	30	CoreStation のステータス LED
12	リレー 0 接続	31	リレー 2 接続
13	TTL 入力 (0、1) または監視入力 (0、1) 接続	32	TTL 入力 (4、5) または監視入力 (4、5) 接続
14	TTL 出力 (0、1) 接続	33	TTL 出力 (4、5) 接続
15	Wiegand 0 接続	34	Wiegand 2 接続
16	12 V 出力	35	12 V 出力
17	RS-485 0 接続	36	RS-485 2 接続
18	RS-485 0 終端抵抗スイッチ	37	RS-485 2 終端抵抗スイッチ
19	RTC バッテリー		

- デバイスに現在リンクされている CoreStation を初期化し、別のデバイスに接続するには、INIT ボタンを 2 秒以上押し続けます。
- CoreStation と Wiegand デバイスが接続されている場合、CoreStation の電源出力 (12 V、最大 1.5 A) を Wiegand デバイスの電力として使用できます。つまり、200 mA を消費する 3 台の Wiegand デバイスが接続されている場合、最大 900 mA を消費するデバイスを残りの電源出力端子に接続できます。

通信のステータス LED

LED	ステータス
HOST RS-485 TX	オレンジ色の点滅：RS-485 データの送信中
HOST RS-485 RX	緑色の点滅：RS-485 データの受信中
RELAY (0 ~ 3)	赤色の点灯：リレーの作動
SUPERVISED INPUT (0 ~ 7)	TTL 入力 • 緑色の点灯：常時閉 • オフ：常時開 監視入力 • 緑色の点灯：常時閉 (短絡)、常時開、スイッチオン • オフ：スイッチオフ
AUX IN (0, 1)	オレンジ色の点灯：AUX 信号の受信中

CoreStation のステータス LED

CoreStation のステータスは、製品の前面ユニットの左側にある STATUS LED 1/2 で確認できます。このステータス LED は、イーサネット、RS-485 0、RS-485 1、RS-485 2、RS-485 3、RS-485 HOST、およびシステムのステータスを、それぞれ順に 1 秒間ずつ表示します。

機能	LED 1	LED 2	ステータス
イーサネット	赤	赤	動的 IP への接続に失敗
	赤	黄	動的 IP への接続が待機状態
	赤	スカイブルー	静的 IP への接続に成功
	赤	青	動的 IP への接続に成功
	赤	紫	静的 IP への接続に失敗
	赤	オフ	HW エラー
RS-485 0	黄	赤	スレーブデバイスなし
	黄	黄	スレーブデバイスの接続が切れている
	黄	青	スレーブデバイスは正常
	黄	オフ	HW エラー
RS-485 1	緑	赤	スレーブデバイスなし
	緑	黄	スレーブデバイスの接続が切れている
	緑	青	スレーブデバイスは正常
	緑	オフ	HW エラー
RS-485 2	スカイブルー	赤	スレーブデバイスなし
	スカイブルー	黄	スレーブデバイスの接続が切れている
	スカイブルー	青	スレーブデバイスは正常
	スカイブルー	オフ	HW エラー
RS-485 3	青	赤	スレーブデバイスなし
	青	黄	スレーブデバイスの接続が切れている
	青	青	スレーブデバイスは正常
	青	オフ	HW エラー
RS-485 HOST	紫	赤	スレーブデバイスなし
	紫	黄	スレーブデバイスの接続が切れている
	紫	青	スレーブデバイスは正常
	紫	オフ	HW エラー
システム	白	赤	システムロック（デバイスのトリガーとアクションによる）
	白	黄	システムロック（BioStar 2 のトリガーとアクションによる）
	白	緑	BioStar 2 への接続に成功
	白	スカイブルー	BioStar 2 への接続に成功 + タンパーオン
	白	青	タンパーオン
	白	紫	システムロック（デバイスのトリガーとアクションによる）+ タンパーオン
	白	白	システムロック（BioStar 2 のトリガーとアクションによる）+ タンパーオン
	紫	紫	データベースの移行

設置例

CoreStation は、生体認証が可能な中央管理型入退管理システムです。企業向けシステムとして設計された CoreStation は、最大 500,000 ユーザーの情報を保存し、1 秒あたり 400,000 個の指紋を照合できます。

BioStar 2 との連携により、入退管理および勤怠管理の両方で利用することができます。また、RS-485（OSDP）、Wiegand、監視入力、AUX を含むさまざまなインターフェイスが提供されます。

システム図

最大 64 台の RS-485 デバイスを CoreStation に接続できます。また、DM-20 をデイジーチェーンで接続すると、Wiegand デバイスを最大 132 台まで拡張できます。

接続の全体図

筐体には、LED 制御基板、配電基板、電源装置、バッテリー、およびタンパーが含まれています。

設置場所

1 固定ねじを使用して、CoreStation を取り付ける位置にスペーサーを固定します。

2 固定ねじを使用して、固定したスペーサーの上に製品をしっかりと固定します。

バッテリー

バッテリー用のベルクロストラップを筐体に挿入し、バッテリーを固定します。

電源装置の接続

- 入退管理デバイスと CoreStation には、必ず個別の電源を使用してください。
- 正しい電源仕様（12 V、3 A）を使用してください。

- 停電を防ぐため、無停電電源装置（UPS）を接続して使用することをお勧めします。

電源（筐体）

ネットワーク接続

TCP/IP

LAN 接続（ハブに接続）

一般的なタイプの CAT-5e ケーブルを使用して、製品をハブに接続できます。

LAN 接続（直接 PC に接続）

CoreStation には、通常タイプの CAT-5e ケーブルを使用して直接 PC に接続できるように、自動 MDI／MDI-X 機能が搭載されています。

RS-485 接続

CoreStation は 5 つの RS-485 ポートをサポートしており、各 RS-485 ポートには最大 31 台のデバイスを接続できます。

- CoreStation に接続できる RS-485 デバイスは、最大 64 台です。
- RS-485 ケーブルには、最大長が 1.2 km の AWG 24 ツイストペアを使用します。
- 終端抵抗（120 Ω）を RS-485 デイジーチェーン接続の両端に接続します。中央の線に接続すると、信号レベルが弱くなり、通信性能が低下します。必ずデイジーチェーン接続の両端に接続してください。CoreStation の終端スイッチ（TERM）をオンに設定します。

リレー

フェールセーフロック

フェールセーフロックを使用するために、下の図のように NC リレーを接続します。通常、フェールセーフロック用のリレーには電流が流れています。リレーが作動して電流が遮断されると、ドアが開きます。停電や外部の要因のために製品に接続した電源が切断された場合は、ドアが開きます。

- デッドボルトまたはドアストライクを取り付けるときは、下の図に示すように、電源入力の両端にダイオードを接続してください。ダイオードの方向に注意しながら、陰極（ストライプの方向）を電源の + 部分に接続してください。

フェールセキュアロック

フェールセキュアロックを使用するために、下の図のように NO リレーを接続します。通常、フェールセキュアロック用のリレーには電流が流れていません。電流がリレーによって作動すると、ドアが開きます。停電や外部の要因のために、製品に接続した電源が切断された場合は、ドアがロックします。

- デッドボルトまたはドアストライクを取り付けるときは、下の図に示すように、電源入力の両端にダイオードを接続してください。ダイオードの方向に注意しながら、陰極（ストライプの方向）を電源の + 部分に接続してください。

Wiegand IN

ドアセンサーおよび Exit ボタン

SUPERVISED INPUT 端子 No. 0〜7 は、通常の TTL 入力または監視入力に使用するように設定できます。

AUX IN

電力障害検出器またはタンパーを AUX IN 端子に接続できます。

- CoreStation Setup Managerに接続してCoreStationのネットワーク設定を管理したり、スレーブデバイスは、入力および出力ポート、Wiegandポートの接続状態を確認することができます。
- CoreStation Setup ManagerはCoreStationファームウェア1.3.1以降のバージョンでサポートされます。1.3.1より前のバージョンのファームウェアを使用する場合、BioStar 2に接続してファームウェアを最新バージョンにアップグレードしてください。
- CoreStation Setup Managerの詳細については、ユーザーガイドを参照してください。ユーザーガイドはSupremaホームページ（https://www.supremainc.com）からダウンロードすることができます。

製品仕様

カテゴリ	機能	仕様
全般	モデル	CS-40
	CPU	1.4 GHz 8 コア
	メモリ	8 GB Flash + 1 GB RAM
	クリプトチップ	サポート対象
	LED	マルチカラー • STATUS - 2ea • HOST RS-485 TX - 1ea • HOST RS-485 RX - 1ea • SUPERVISED INPUT - 8ea • RELAY - 4ea • AUX IN - 2ea
	動作温度	0°C ~ 50°C
	保管温度	-40°C ~ 70°C
	動作湿度	0% ~ 80%, 結露しないこと
	保管湿度	0% ~ 95%, 結露しないこと
	寸法 (W x H x D)	150 mm x 214 mm x 21 mm
	重量	415 g
	証明書	CE、FCC、KC、RoHS、REACH、WEEE, UL 294 Compliant
キャパシティ	最大ユーザー数	500,000
	最大クレデンシャル (1:1)	• 指紋: 500,000 • 顔: 30,000 • カード: 500,000 • PIN: 500,000
	最大クレデンシャル (1:N)	• 指紋: 100,000 • 顔: 4,000
	テキストログの最大数	5,000,000
インターフェイス	イーサネット	10／100 Mbps、自動 MDI／MDI-X
	RS-485	5 チャンネル
	RS-485 通信プロトコル	OSDP V2 準拠
	Wiegand	4 チャンネル
	リレー	4 リレー
	監視入力	8 チャンネル (TTL 入力を選択可能)
	TTL 出力	8 チャンネル
	AUX 入力	2 チャンネル (AC 電源の停電、タンパー)
電気関連	電源	CoreStation • 電圧：12 VDC / 電流：最大 3A 電源装置 (SMPS) AC 入力 • 110-240 VAC、50／60 Hz
	電源出力	電圧：12 VDC / 電流：最大 1.5 A
	スイッチ入力 VIH	最大：5 V / 最小：3 V
	スイッチ入力 VIL	最大 1 V
	リレー	5 A @ 30 VDC 抵抗負荷

* FaceStation2 と FaceLite のみが利用可能です。

寸法

（単位：mm）

* 公差は ±0.3 mm です。

FCC 準拠情報

このデバイスは、FCC 規則第 15 部に準拠しています。

動作は、次の 2 つの条件に従います。

(1) このデバイスは、有害な電波干渉を引き起こしてはなりません。また、

(2) このデバイスは、望ましくない動作を引き起こす可能性のある電波干渉を含め、受信したあらゆる電波干渉を許容する必要があります。

- この装置は、FCC 規則の第 15 部に従って、クラス A デジタルデバイスの制限に準拠していることがテストおよび確認されています。これらの制限は、商業地域での設置において有害な電波干渉から適切に保護するためのものです。この装置は、無線周波エネルギーを生成、使用、および放射する可能性があり、指示マニュアルに従って設置および使用しないと、無線通信に有害な電波干渉が発生することがあります。居住地域で本装置を動作させると、有害な電波干渉が発生する可能性があります。その場合、ユーザーは自費で電波干渉を解消することが求められます。
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