

Reduce Risk at the Door with

# Mobile Authentication for Physical Access

BioConnect is unifying physical and digital access with the Link Solution. A convenient, flexible and scalable solution to add an additional layer of security to physical access points with two-factor mobile authentication.



### Smart, Rules-Based Access

With custom configuration for security administration and the ability to set schedules for additional security levels, like after-



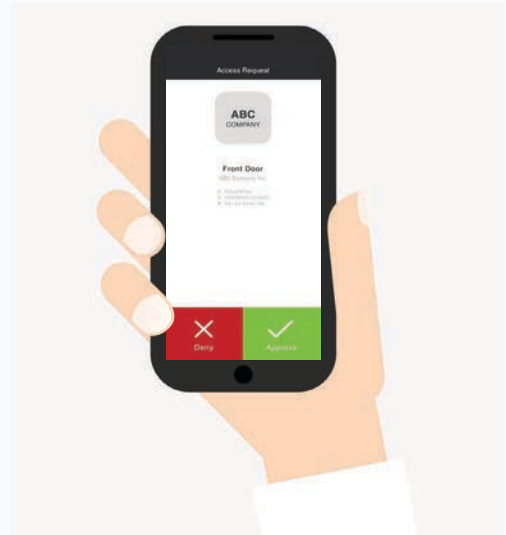
### Deny Untrustworthy and Falsified Access

Key cards and FOBs can be easily duplicated. With the Link solution, suspicious access events can be blocked.



### Reduce Tailgating

Leverage mobile two-factor authentication already deployed for digital applications at physical access points and prevent tailgating.



## How it works

Tap your card



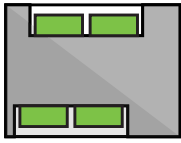
Receive push notification



Access granted

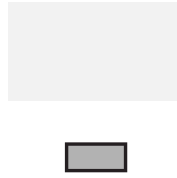


## Solution Components



### Link Device

An intelligent device designed to facilitate the unification of physical security with mobile authentication applications. Easy installation, less than 30 minutes.



### Link Admin Console

A platform to manage users, devices, rules, system configuration and two-factor authentication scheduling. Syncs users via the solutions ACM sync feature.

### Mobile Authenticator

The second factor of authentication to the presented card. This can be BioConnect's provided mobile authentication app (using biometrics or a simple yes/no approval), or a supported 3rd Party Authenticator.

## Supported Authenticators

**bioconnect.**



Use biometric facial recognition or a simple 'Approve'/'Deny' to authenticate.

**DUO**



**PingID**



**okta**

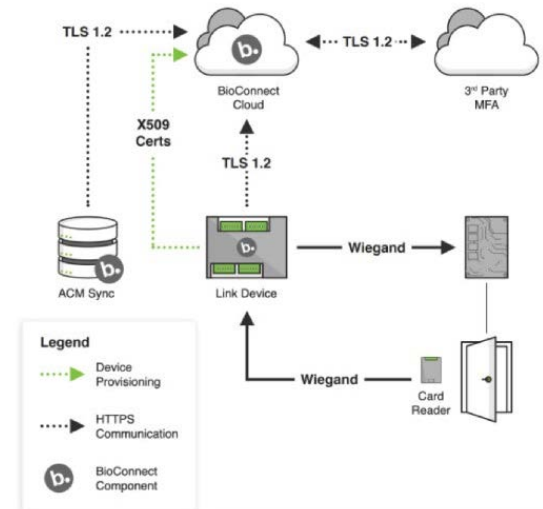


## Product Specifications

	Product Code	Name	Description
Door Controller	BC-Door Link	BioConnect Link MFA Module for Doors	Retrofit Two Factor Authentication Solution for Wiegand Based Readers. (Available authenticators include: BioConnect Mobile, DUO, PingID, OKTA) Includes 1- 4-door controller. Wifi / IP Enabled. Subscription service sold separately. Please have customer contact BioConnect for subscription service (sales@bioconnect.com)
	BC-Cablink	BioConnect Link MFA Module for Cabinets	Retrofit Two Factor Authentication Solution for Wiegand Based Readers. (Available authenticators include: BioConnect Mobile, DUO, PingID, OKTA) Includes 1 controller. Wifi / IP Enabled. 1 Required per cabinet. Subscription service sold separately. Please have customer contact BioConnect for subscription service (sales@bioconnect.com)
Software	BC-Blink-D1	BioConnect Link for Doors - 1 Year Subscription (1 Door)	1 year subscription service for one door. (Available authenticators include: BioConnect Mobile, DUO, PingID, OKTA). 1 Required per door.
	BC-Blink-C1	BioConnect Link for Cabinets - 1 Year Subscription (1 Cabinet)	1 year subscription service for one cabinet. (Available authenticators include: BioConnect Mobile, DUO, PingID, OKTA). 1 Required per cabinet.

## Hardware Specifications

<b>Processor</b>	Xtensa LX6 dual-core 240MHz with Secure Boot ATmega168 16MHz
<b>Dynamic Memory</b>	500kB SRAM
<b>Long-Term Storage</b>	4MB hardware-encrypted flash storage (FIPS-197 compliant)
<b>Network Connectivity</b>	10Base-T / 100Base-TX 802.11B/G/N, WPA/WPA2 Secure 2.4GHz Wireless Mesh (optional) Bluetooth 4.2 BR/EDR/BLE
<b>Input Voltage</b>	+12 V DC / PoE (+44VDC)
<b>Wiegand Interface</b>	4 pairs: Wiegand In/Out + LED control
<b>Relays</b>	4 pairs: 12-30VDC (dry), 2.5A inductive, 5A resistive
<b>Operating Temperature</b>	-40°C (-40°F) to +125°C (+257°F)
<b>Dimensions</b>	86.4mm X 132.9mm X 24.7 mm



## Security and Privacy

### Hardware: BioConnect Link Device

The communication between the Link hardware and the BioConnect cloud service is protected using mutually authenticated TLS 1.2 certificates on a secure MQTT protocol. Our hardware has multiple layers of redundancy to ensure your access events go through, even in the event of one or more of power, hardware or software failure.

1. Mechanical bypass to ACM in loss of power to the hardware device.
2. Device bypass to ACM if hardware device loses internet connection or cannot connect to the BioConnect cloud service.
3. Hardware equipped with partition to load an older OTA config/ Firmware.
4. Cloud redundancy for each service for BioConnect Link hardware device.
5. Link has a dedicated hardware watchdog and software watchdog; either of these will completely reboot and reinitialize the Wiegand circuitry within 250ms of detecting a hardware or software error.

### Software: BioConnect Link Admin Console

Operates behind HTTPS, using TLS 1.2 and provides a standard web application to administer the solution, for example, adding users, schedules, and cards. Our software uses a microservice infrastructure to follow modular software design principles, allowing for higher manageability and scalability. Our cloud service has been designed to scale horizontally, and vertically as required. This is to ensure that access requests are processed regardless of failures and seamlessly handles peak traffic loads.

### Privacy and Data Storage

1. **Data in Transit:** Each device is securely provisioned with a X509 certificate, and BioConnect does not have access to the device's locally generated private key. For a device, certificate-based authentication is the sole method of logging into the BioConnect cloud exchange; there are no generic usernames or pre-shared passwords that could be obtained by a third-party and then used to forge a connection to your cloud service. In addition to the encrypted transport layer, all user physical access data is separately protected, using either strong symmetric encryption or anonymized using one-way secure hashing. (HMAC-AES256) before it leaves the device.
2. **Data at Rest:** All local flash memory is protected by hardware encryption (AES-256), using a random key that is generated locally on each device and securely stored in a dedicated hardware enclave. Over-The-Air configuration upgrades support full, automatic rollback in the event of configuration errors.