TECHouse

Custom Elevator Reader Module

Embedded reader-module platform for elevator panels, destination dispatch fixtures, turnstiles, kiosks, and specialty access stations. The content below is rebranded for TECHouse and aligned with the provided reader module specification.

Reader module chip pictures

Custom faceplate examples

Design & Technologies

Available technologies: 125kHz (HID Prox), 13.56MHz (Mifare, DESFire, HID iClass), and 2.4GHz (Bluetooth). Supports on-site reader configuration card to change reader parameters if needed, plus reverse power protection.

Application Overview

Elevator panels	Embedded access reader electronics for secured floor access, modernization, and panel-integrated reader layouts.
Destination dispatch	Reader placement and access authorization before floor selection or destination-dispatch workflows.
Turnstiles and kiosks	Module-based designs for specialty locations where a standard reader cannot fit or does not match the architectural design.
Custom faceplates	Project-specific mounting, finish coordination, front-cover layout, labeling, and sample review.

TECHouse Reader Module Platform

The reader module platform supports multiple credential technologies and interface options for embedded elevator, turnstile, kiosk, and specialty-panel applications. Final configuration is confirmed during project review.

Bluetooth Design Background

- As a software-based solution, virtual cards integrate easily with mobile apps to extend functionality and flexibility.
- Virtual cards perform the same as physical cards for common access control applications and offer convenience for smartphone users.
- Virtual cards are gaining market popularity due to their flexibility.

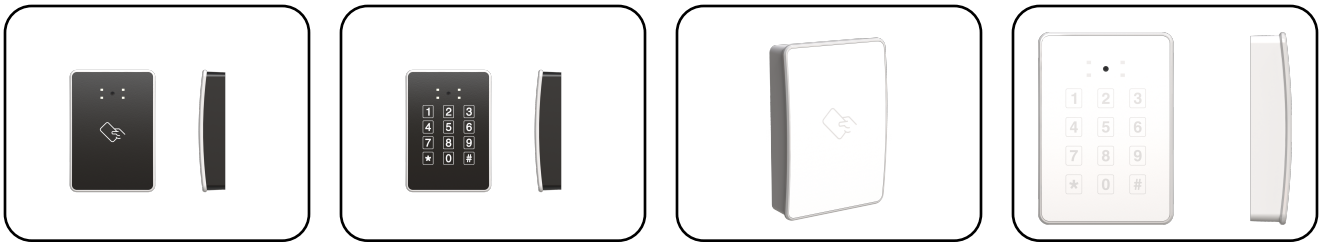
Modes of Access — Bluetooth

- **Show-to-Go:** Show the mobile phone in front of the reader to open the door (same as swiping a card).
- **Shake-to-Go:** Shake the mobile phone to open the door (not to turn the mobile phone).
- **Hands-free:** Door opens automatically when the mobile phone enters the connecting area.
- **Manual Button:** Click the button in the app to open the door manually.

Model Options

Model	Typical credential set
IH	HID iClass + HID Prox
DH	Mifare + DESFire + HID Prox
BIH	Bluetooth + HID iClass + HID Prox
BDH	Bluetooth + Mifare + DESFire + HID Prox

Custom Reader Format Examples



Reader Module Specifications

Reader Module Specifications

Reading technologies	IH: HID iClass + HID Prox | DH: Mifare + DESFire + HID Prox | BIH: Bluetooth + HID iClass + HID Prox | BDH: Bluetooth + Mifare + DESFire + HID Prox
Frequency	125kHz & 13.56MHz; Bluetooth models add 2.4GHz
Read range	Card reading: 2 ~ 8 cm; Bluetooth is configurable from 0.1 m ~ 5 m
Bluetooth antenna	Directional
Host interface	USB, RS232, serial (logical level 3.3V, CMOS 5V tolerant), Wiegand, RS485 (OSDP V1, V2)
Reconfiguration window	Via USB or configuration card (5 seconds after power-up)
Firmware upgrade	Via USB or OSDP port
Buzzer control	Reader and controller control (default)
Typical wiring distance	Wiegand: 150 m (22 AWG shielded cable); OSDP: 800 m (22 AWG shielded cable)

Bluetooth App Specifications

Operating system	Both iOS & Android
Data encryption	Customer + end-user code + data encrypted with AES 128
Show-to-Go	Reading distance is adjustable
Shake-to-Go	Phone vibrates when motion is successful
Shake sensitivity	Adjustable

Operating Specifications

Operating voltage	5V DC
Operating current	120 mA
Operating temperature	-25°C to 70°C
Operating humidity	10% - 90%
Exterior dimension	76 mm × 49 mm × 14 mm