The PORT Technology
The Transit Management System for an intelligent, secure, personalized transit experience.
Introducing the PORT Technology

Architectural innovations demand intelligent solutions
As urbanization rates grow, so does the demand for intelligent buildings. Use of cutting edge technology has become key to enable building owners and developers to bring their tenants a superior user experience, greater convenience and higher efficiency.

This demand calls for an intelligent transit management system that can cater to the individual needs of building owners and tenants, boost transportation efficiency and offer an exceptional user experience.

The PORT (Personal Occupant Requirement Terminal) Technology is the 3rd generation of destination control system first pioneered by Schindler in the 1990s.

The intelligent software powering the PORT Technology runs on a highly advanced algorithm that continuously reviews traffic patterns and systematically optimizes traffic handling efficiency throughout the day.

The PORT Technology, which integrates powerful communication, security and energy saving features, has revolutionized the way people move through buildings seamlessly and efficiently.

The evolution of transit management

1st Generation
Miconic 10
World’s first practical destination control system to enhance traffic efficiency

2nd Generation
Schindler ID
Incorporates a RFID card reader to check passengers’ access rights

3rd Generation
PORT Technology
Incorporates a host of powerful access and communication features to enable efficient transit management
The PORT Technology is the latest generation of transit management system. Integrating efficient traffic management and a host of powerful access, communication, security and energy saving features, PORT has revolutionized the way people move through buildings seamlessly and efficiently.
Benefits at a glance

A boost to traffic performance
By grouping passengers going to the same floor to take the same elevator, PORT avoids chaotic elevator runs and random, multiple stops, thus providing the shortest possible journey for every passenger.

Enhanced building security
Elevator calls can only be made with pre-programmed access cards, with passengers’ access rights defined by the building management. PORT can also be integrated with turnstiles to further enhance building security.

User-friendly operation
A user simply needs to swipe his personal access card at the PORT terminal for a lift to be immediately assigned to take him to his destination.

Combining discretion with convenience
PORT can be programmed to only display to public visitors general purpose floors that can be accessed without the use of an access card.

Excellent personalized service
PORT ensures each journey is customized to meet individual requirements, whether it is more walking time, longer door opening time or more space for passengers with special needs.

Smart building management
PORT can be easily programmed to accommodate a wide range of needs in real time, such as providing a particular tenant with a higher level of personalized service or communicating clear messages to occupants during an emergency.

Energy saving
During non-peak hours, the Energy Control Option (ECO) mode sets several elevators into standby or sleep mode. This prevents elevators from making an unnecessarily large number of trips to transport only a few passengers.

Stylish touch screen design
Inspired by the latest design and architectural trends, the PORT terminals feature sleek glass touch screens and are available in wall-mounted or pedestal-mounted versions.
A boost to traffic handling performance

Riding on Schindler’s 20 years of experience pioneering intelligent traffic management system, the advanced algorithm powering PORT fully optimizes the way elevators are allocated to take passengers to their desired destinations.

By selecting the destination floor before entering the elevator, passengers going to the same floor will be directed to take the same elevator. The system reduces the number of intermediate stops for each round trip, enabling the elevator to return to the main lobby sooner to collect more passengers.

The intelligent components of PORT

PORT features a color touch screen and a card reader that allow building occupants to communicate their requirements to the system.

PORT’s unique ability to recognize and act on each individual user requirements means the technology not only brings traffic performance to unprecedented levels, but also provides a secure, personalized and seamless transit experience to all building occupants.

PORT recognizes the specific requirements of every individual user and personalizes every trip accordingly.
User-friendly operation

Simply swipe your personal access card at the touch screen PORT terminal. Within less than a second, PORT will validate your access right and assign an elevator to take you to your destination in the most efficient manner.

**Step 1**
Present your access card at the PORT terminal

**Step 2**
Read the elevator assignment

**Step 3**
Walk to the assigned elevator and enjoy the ride

**Fast microprocessor**
- Low energy consumption
- High computing power

**Card Reader**
- Uses radio frequency identification (RFID) technology to identify users

---

**Floor Layout**
- Lobby
- Floor 1
- Floor 2
- Floor 3
- Floor 4
- Floor 5

**Passenger Capacity**
- 6 passengers
- 2 stops
Enhanced security

First line of defense
Elevator access forms a vital part of a cohesive building security architecture. The PORT Technology brings a number of powerful access control features that help curb unauthorised access to a building while preserving a smooth and contemporary experience.

With PORT, elevator calls take place outside the elevator. The elevator system thus becomes the building’s first line of defense, barring access to anyone without proper credentials.

Pre-programmed operation
Elevator calls can only be made with pre-programmed access cards, with tenant and visitor access rights defined by the building management.

Contextual operation
On each typical floor, PORT can be programmed to display only floors that users are allowed to access.

Forward credentialing
To ensure the security and safety of building occupants, the use of credentials is essential. When the Forward Credentialing feature is activated, PORT ensures that if an access card is not used to gain entry to a certain floor, it can be barred to access any other floors, without being first returned to the lobby for a reset.

Forward credentialing addresses a common situation of someone who does not use his card to make a call and shares an elevator with other users.
PORT on turnstiles
PORT can be integrated with any barriers or turnstiles to further enhance building security. Two PORT terminals per turnstile provide an aesthetically pleasing two-way card reader and instruction screen combination. Turnstiles, if specified, can be controlled by the PORT Technology through a simple interface. Access credentials are verified at the turnstile when users swipe their personal access cards at the PORT terminal. Depending on the situation, a lift may be immediately allocated or PORT may simply display an entry or exit signal.

Anti-pass back
The PORT Technology also incorporates an anti-pass back feature to ensure that once a card has been used to gain entry through a barrier, it can no longer perform this task until it has been used to exit the building. This ensures that only one user can access the building using an individual card and therefore substantially reduces the possibility of system abuse.
Powerful Personalization

Flexible User Interface
PORT opens up a wide range of possibilities when it comes to delivering a personalized user experience. Designed to meet the specific needs of a building and those of its individual occupants, the PORT Technology comes with a versatile user interface that ensures the highest level of vigilance – in total convenience.

RFID Card Access
Where a passenger has access rights to only one specific floor, an elevator to that floor will be allocated as soon as his access card is presented.

Touch-less operation
If a card is held continuously at the PORT terminal, each authorized destination will be highlighted in turn, until the user makes his choice by removing his card.

Keypad
At all times, a 10-digit keypad display can be summoned to enter a floor to which the user has access.

Pre-programmed display
User simply need to select their destination floors on the touch screen for PORT to allocate an elevator.
By keeping in mind the specific requirements of each individual user, whether it is for more walking time, more space or a dedicated elevator for VIP access, PORT helps to ensure every journey is customized to meet their needs.

PORT, when require, features a raised access button with braille to assist visually-impaired passengers.

**Designed for equal access**

The PORT Technology has been designed as an equal access system based on the principle of catering to everyone’s personal needs. A person in a wheelchair may need a little extra space and more time to get to the elevator and through its doors that are held open a little longer. A visually-impaired person can be directed via audible and visual cue identifying the elevator number and its arrival will assist the user find and enter the elevator.
An Effective Tool for Building Management

Visitor management
PORT offers a simple and effective integrated solution to program visitor access within a building.

Access cards for building tenants and visitors can be conveniently programmed at the reception or concierge desk.

Real time security
The use of access cards allows management to track movements for security purposes on a real time basis.

The PORT Passenger Report program can, on demand, quickly generate a report detailing all passenger movements throughout the building.

The report can be used to track, analyze and respond swiftly whenever required, for instance in case of an unauthorized entry.

Information such as the time of users going in and out via turnstiles or elevators, departing and arrival floors, can be recorded for security purposes.

The program also features various analytical tools to assist building management in analyzing passenger movements and assessing the elevator service level.

The PORT Technology Passenger Report program can be easily installed within the building to provide management with the flexibility to monitor for any breach of security access.
Emergency signalization
In the event of an emergency, the ability to communicate with tenants accurately and efficiently is essential. PORT can turn into a valuable communication tool in such situation.

The PORT terminals can be pre-programmed to display clear instructions to tenants approaching the lift lobby, for instance whether they should wait for the lift service or take the stairs.

Once activated, the pre-programmed message can be displayed on all PORT terminals in the building within a short instant.

Emergency communications can be made specific to the circumstances of any particular building and assist by quickly responding to the situation at hand.

PORT can act as a communication tool between building management and tenants, for instance during emergencies. PORT can be swiftly activated to display clear, pre-programmed messages to all building occupants.
**Energy Control Option (ECO)**

Typically during non-peak hours, all elevators in a group are still in operation to ensure passengers reach their destinations as quickly as possible. This means that elevators may make many trips with just one or a few passengers. Furthermore, a lightly loaded elevator actually consumes a high amount of energy due to the larger weight difference between the elevator car and the counterweight.

PORT Energy Control Option (ECO) was designed to address this situation and provide significant energy savings while maintaining the service level.

**How it works**

The unique PORT Technology ECO allows the average acceptable waiting time to be defined for a specific building.

Once activated, the ECO mode continuously looks at travelers’ waiting time. Whenever the current and expected waiting times fall below a specified threshold, the system sets non-essential elevators in the group into energy saving standby or sleep mode.

This reduces the number of elevator trips and – due to the improved balance of the elevators – should save energy for the trips undertaken.

---

Energy consumption can be particularly high in low traffic condition due to the unbalanced load between the elevator car and the counterweight.

Once the ECO mode is activated, energy consumption is optimized during low traffic condition while maintaining passengers’ waiting times at an acceptable level.
Green by design
Zuellig Building, Philippines

Developer: Bridgebury Realty Corporation
Architect: Skidmore, Owings & Merrill
Building type: Commercial (Office & Retail)
Building height: 33-story

- Zuellig Building was the first high-rise building in the Philippines to earn certification from the U.S. Green Building Council at the LEED Platinum level.

- Many features of the resolutely green building were specifically designed to prevent unnecessary power consumption.

- The PORT Technology was selected to contribute to this vision.
Schindler’s myPORT smartphone application delivers greater security and a whole new way for people to interact with their environment.

myPORT allows you to gain access to and subsequent transportation through any building where the Schindler PORT Technology has been installed. The nature of the access available is dependent on your specific rights in relation to the particular building being entered.

4-step “e-Banking” security
As soon as an occupant enters the building, their smartphone, equipped with the myPORT application, is detected as part of a multi-level security check which goes on in the background.

The occupant can then gain entry to the building by simply using their PIN code or Touch ID to unlock their phone and then presenting it to a PORT terminal to be assigned an elevator. The system uses a combination of timing,
A building tenant gains entry into a building, and is assigned an elevator, by presenting her my-PORT equipped smartphone to the PORT terminal.

building topology and multiple data channels to undertake a 4-step security verification.

Once in the building there is a very high degree of confidence that the owner of the smartphone has the right to be there. This means that doors can be opened, pre-programmed elevators ordered and life in general made much more convenient, all without removing the smartphone from your pocket.
Wide range of applications

The PORT Technology can fit any new or existing building, be it a high-rise office building, a mixed-use complex, a luxury condominium, a hotel or a hospital.

**Offices and commercial buildings**
PORT Technology is the latest generation of transit management system which provides tenants a smart and smooth journey through out the building. It delivers exceptional outcomes in traffic and energy efficiencies, sleek human interfaces and enhanced building security.
Benefits of PORT for residential buildings

- Enhanced building security as elevator calls are made outside the elevator with pre-programmed access cards.
- Exceptional personalized experience as PORT recognizes the unique requirements of each building occupant.
- Convenient visitor management interface.
- Lavish modern touch screen design.

Benefits of PORT for hotels

- Enhanced traffic performance during peak hours.
- Exclusive guest experience. Avoids chaotic situation where guests need to rush to slot key cards into the card reader inside the elevator.
- Enhanced security. Elevator access is determined at the lift lobby, depending on pre-programmed access rights.
- Seamless one card access through integration with room key card registration system.
- Freedom of elevator lobby arrangement.
Elegant Design

Enabling a wide range of applications, Schindler’s PORT terminal combines inspired design with state-of-the-art technology.

Available in wall or pedestal-mounted versions, the PORT terminal features a 7”, 480 x 800 pixel touch screen mounted above a RFID card reader.

Technical Details

<table>
<thead>
<tr>
<th>Dimensions (WxHxD)</th>
<th>126.5 x 284 x 77 mm (4.98 x 11.18 x 3.03 inch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screen</td>
<td>7”, 480 x 800 pixel, capacitive touch glass panel</td>
</tr>
<tr>
<td>Back-light and standby-mode</td>
<td>LED include lifetime extensions by adaption to ambient light level</td>
</tr>
<tr>
<td>Energy Consumption</td>
<td>Max. 5 W per PORT</td>
</tr>
<tr>
<td>Standby mode</td>
<td>Yes, due to proximity sensor</td>
</tr>
<tr>
<td>Supply</td>
<td>Either 24/48 VDC or Power over Ethernet (IEEE 802.3af)</td>
</tr>
<tr>
<td>Card Reader Frequency</td>
<td>13.56 MHz</td>
</tr>
<tr>
<td>Card Reader Protocols</td>
<td>ISO14443A, ISO14443B</td>
</tr>
<tr>
<td>Standard card types</td>
<td>Mifare Classic, Mifare Ultra Light, Mifare 1K, Mifare 4K (all other cards have to be pre-qualified by our test service center before used)</td>
</tr>
</tbody>
</table>
PORT 1.2 Wall-mount (Glass version)
Dimensions (W x H x D):
126.5 x 284 x 77 mm

PORT 1.2 Pedestal (Glass version)
Dimensions (W x H x D):
126.5 x 1247 x 77 mm

PORT 4.2 Flush-mount (Glass version)
Dimensions (W x H x D):
154 x 606 x 21 mm

For more design options, please contact our sales representatives
International Commerce Centre, Hong Kong
A proven technology showcased throughout the world

Other selected references

<table>
<thead>
<tr>
<th>Indonesia</th>
<th>Ciputra World Jakarta</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Chase Tower</td>
</tr>
<tr>
<td></td>
<td>International Financial Centre 2</td>
</tr>
<tr>
<td></td>
<td>Bahana Tower</td>
</tr>
<tr>
<td></td>
<td>Rasuna Tower</td>
</tr>
<tr>
<td></td>
<td>Thamrin Nine – Tower 1</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>One Bay East</td>
</tr>
<tr>
<td></td>
<td>Shanghai Commercial Bank</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Continental City</td>
</tr>
<tr>
<td>Singapore</td>
<td>HSBC Headquarter</td>
</tr>
<tr>
<td>Taiwan</td>
<td>Yuanlih residences</td>
</tr>
<tr>
<td>Thailand</td>
<td>AIA Tower</td>
</tr>
<tr>
<td></td>
<td>The Stock Exchange of Thailand</td>
</tr>
<tr>
<td>Vietnam</td>
<td>Indochina Plaza</td>
</tr>
<tr>
<td></td>
<td>Lotte Centre Hanoi</td>
</tr>
<tr>
<td></td>
<td>Viglacera Complex</td>
</tr>
</tbody>
</table>
When each journey through your building is perfect, everything changes.

Please contact one of the following addresses:

**Brunei**
Schindler Lifts Sdn. Bhd.
Level 7 (6th Flr), Setia Kenangan Complex
Kg Kluap Gadong BE1518
Bandar Seri Begawan
Brunei Darussalam
Telephone  + 673 2 236 515
+ 673 2 236 516
Fax  + 673 2 236 470
info@bn.schindler.com

**Cambodia**
Jardine Schindler (Cambodia) Ltd.
Unit 701, 7th Floor, Vattanac Capital Building
No. 66 Monivong Boulevard
Sangkat Wat Phnom Khan Daun Penh
Kingdom of Cambodia
855 Phnom Penh, Cambodia
Telephone  + 855 23 901 288
Fax  + 855 23 431 014
info@kh.schindler.com

**Hong Kong**
Schindler Lifts (Hong Kong) Ltd.
29th Floor, Devon House, Taikoo Place
979 King’s Road, Quarry Bay
Hong Kong
Telephone  + 852 2516 8168
Fax  + 852 2516 6026
info@hk.schindler.com

**Indonesia**
PT. Berca Schindler Lifts
Menara Rajawali, 2nd Floor, JI DR. Ide Anak Agung Gde Agung Lot 5.1, Kawasan Mega Kuningan
12950 Jakarta, Indonesia
Telephone  + 62 21 576 1476
Fax  + 62 21 576 1844
info@id.schindler.com
Website  www.schindler.co.id

**Macau**
Jardine Schindler Lifts (Macao) Ltd.
No. 398, Alameda Dr. Carlos D Assumpcao Edificio CNAC 9-andbox-G B H, Macau
Telephone  + 853 2875 7953
Fax  + 853 2883 7264
info@macau.schindler.com

**Malaysia**
Antah Schindler Sdn Bhd (3837-H)
8th Floor, Bangunan TH Uptown 3
No. 3 Jalan SS 21/39, Damansara Uptown
47400 Petaling Jaya, Selangor D Ehsan
Malaysia
Telephone  + 60 3 7725 1818
Fax  + 60 3 7725 1181
info@my.schindler.com
Website  www.schindler.my

**Myanmar**
Myanmar Jardine Schindler Ltd.
No 1/4, Parami Road, Hlaing Township
Yangon, Myanmar
Telephone  + 95 1 654 855
+ 95 1 654 356
Fax  + 95 1 654 854

**Philippines**
Jardine Schindler Elevator Corporation
20/F Tower 1, Insular Life Corporate Centre
Insular Life Drive, Filinvest Corporate City
Alabang Muntinlupa City 1781
Telephone  + 63 2 683 6800
Fax  + 63 2 843 1419
info@ph.schindler.com
Website  www.schindler.ph

**Singapore**
Schindler Lifts (Singapore) Pte. Ltd.
1 Kaki Bukit View No. 04-18/26, Techview
Singapore 415941
Telephone  + 65 6854 7888
Fax  + 65 6846 2212
info@sg.schindler.com
Website  www.schindler.sg

**Taiwan**
Jardine Schindler Lifts Ltd.
9th Floor, 35 Kwang Fu South Road
Taipei 105, Taiwan, R.O.C.
Telephone  + 886 2 2528 6626
Fax  + 886 2 2528 6656
info@tw.schindler.com
Website  www.schindler.tw

**Thailand**
Jardine Schindler (Thai) Ltd.
20th Floor, Times Square Building, 246 Sukhumvit Road
Klongtoey, Bangkok 10110
Thailand
Telephone  + 66 2 685 1600
Fax  + 66 2 685 1601
info@th.schindler.com
Website  www.schindler.co.th

**Vietnam**
Schindler Vietnam Ltd.
8th Floor, President Place, 93 Nguyen Du Street
Ben Nghe Ward, District 1
Ho Chi Minh City
Vietnam
Telephone  + 84 8 3521 4890
Fax  + 84 8 3821 3382
info@vn.schindler.com
Website  www.schindler.vn

Or visit our website:
www.jardineschindler.com

**Disclaimer**
The specifications, options and colors expressed within this brochure are indicative only and are subject to change without notice. They are not intended to, and do not, constitute an offer on the part of the Jardine Schindler Group.