AGIL®

Platform Screen Doors



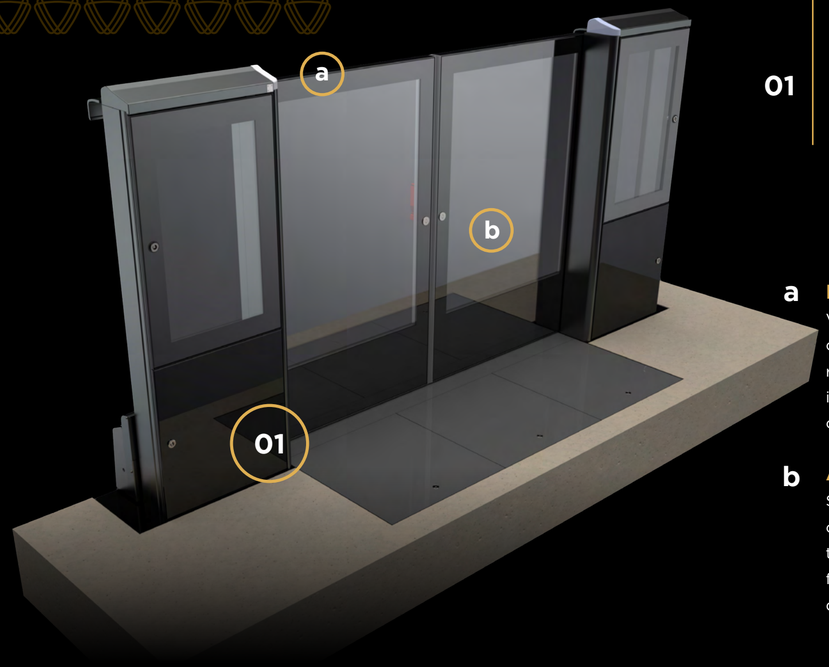
ST Engineering

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Designed for Various Platforms



Half Height Platform Screen Doors (HHPSD)

01 **Fixed Driving Panels**

Ingress Protection (IP) rated enclosure to house and protect critical electronics and mechanisms.

a **Door Operation Indicators**

Visual indicators are designed to alert commuters of moving doorways and update rail operators on the doorway status. Light indicator colours for the PSDs are fully customisable upon request.

b **Automatic Sliding Doors**

Sliding doors are designed to safeguard commuters from accidental falls onto the tracks. The doors automatically open to facilitate efficient passenger boarding and disembarking.



Full Height Platform Screen Doors (FHPSD)

Header Region **02**

The enclosed area is designed to allow easy access for maintenance of the header assembly, critical electronics, and drive mechanisms.



Designed for Harsh Environments

PSDs are deployed across various metro systems globally, adapted to suit diverse local environmental conditions.

Winter Prepared

Our PSDs are designed to withstand cold weather conditions. Our targeted heating mechanisms prevent mechanical seizing in the drive and locking regions, while our thresholds are integrated with heating elements to melt falling snow. This prevents snow accumulation, which can hinder door operations and pose a slip risk to commuters. Our winterised design has been successfully implemented in Toronto, Canada, where sub-zero temperatures and heavy snowfall are common during winter.

Standing Strong

Our PSDs are tailored to meet the specific loading requirements of each transit system. For instance, in Taiwan, where typhoons are prevalent, our PSDs are engineered to withstand extreme weather conditions such as heavy rainfall and wind gusts of up to 180 km/hr. They are structurally designed to endure the intense pressure loads from strong winds, ensuring stability and resilience even in the face of the most powerful typhoons.

Harsh Environment Survivor

Operating in the Middle East poses unique challenges such as sandstorms and high temperatures. The successful customisation and delivery of our PSDs in Riyadh (Kingdom of Saudi Arabia) demonstrates a proven solution that can withstand the harsh conditions of sand, dust and heat.

Customised Aesthetics

Besides the engineering and technical aspects of the PSD, we recognise that the aesthetics are equally important. Our PSDs have a wide range of customisable materials, colours, and finishes to integrate seamlessly with the surrounding station aesthetics.



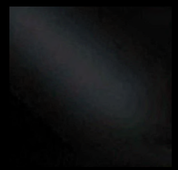
Aluminum Alloy
Powder coating
RAL K5 colors



Aluminum Alloy
Anodised finish
Neutral



Stainless Steel
Various finishes



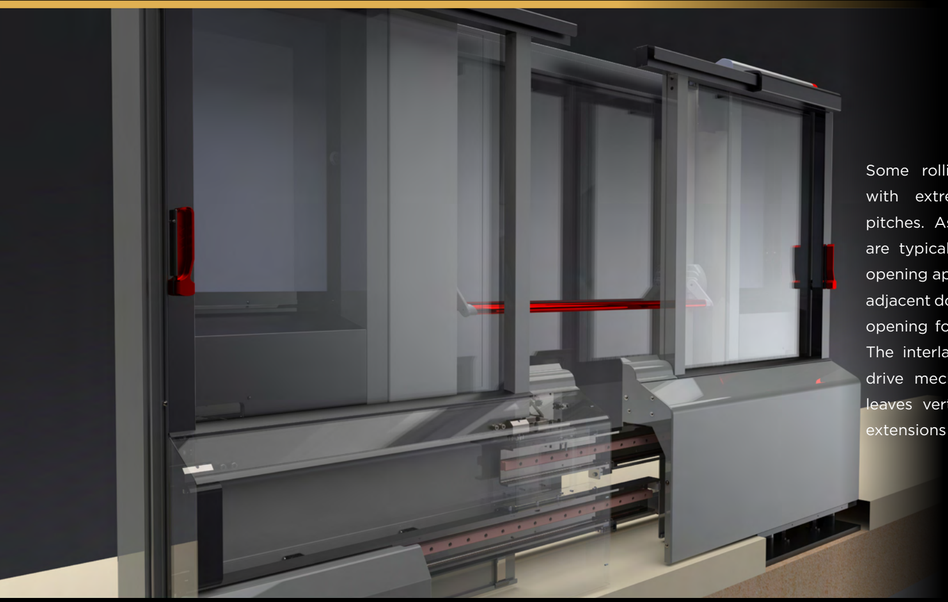
Monolithic Glass
Fully tempered
Black Frit





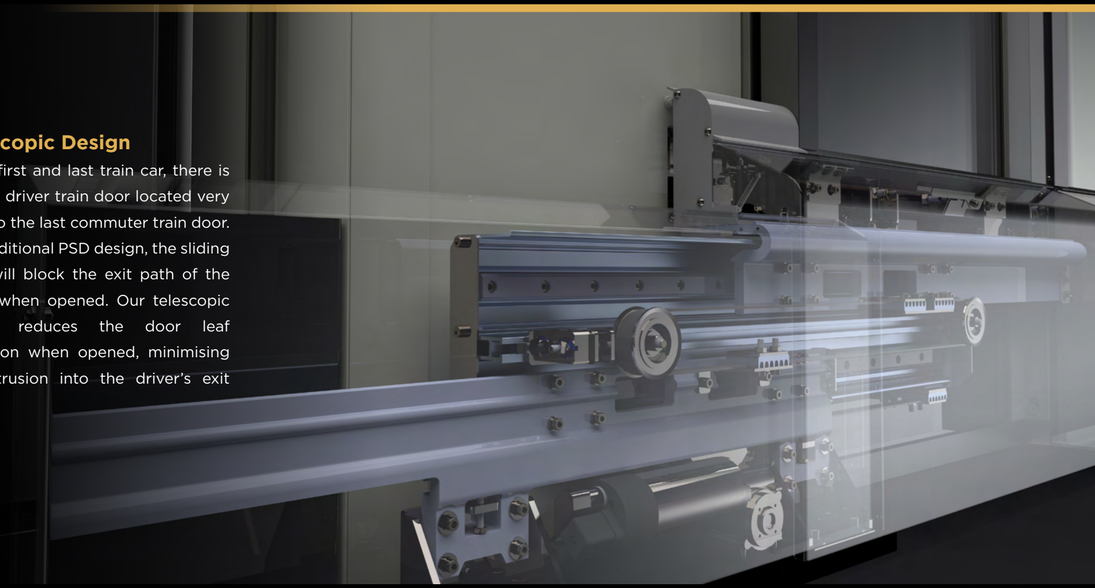
Bespoke Solutions

Are the solutions on this page considered bespoke? We take pride in designing PSDs that effectively address unique system and operational challenges faced by customers.



Interlacing Design

Some rolling stocks are designed with extremely close train door pitches. As PSD opening apertures are typically larger than train door opening apertures, the door leaves of adjacent doorways may collide during opening for traditional PSD designs. The interlacing design staggers the drive mechanism of adjacent door leaves vertically, allowing the drive extensions to interlace into the adjacent covers.



Telescopic Design

In the first and last train car, there is often a driver train door located very close to the last commuter train door. In a traditional PSD design, the sliding door will block the exit path of the driver when opened. Our telescopic design reduces the door leaf extension when opened, minimising the intrusion into the driver's exit path.

Independent Platform Screen Door (IPSD)

Reimagining PSD Modernisation

Platform Screen Doors are essential safety systems, but retrofitting PSDs to existing stations can be complex and costly.

As rail systems age, operators need a simpler path to modernisation.

IPSD delivers that next-generation approach for a safer, simpler and more cost-effective transition.



Safe by Design. Connected by Intelligence

Independent Platform Screen Door (IPSD) enables operators to enhance platform safety without the complexity of signalling system integration to deliver a practical, scalable solution for both new and existing rail networks.

Independent Architecture

Minimises reliance on signalling modifications and simplifies deployment.

Reduced Integration Complexity

Reduces engineering effort and implementation complexity.

Lower Lifecycle Costs

Supports cost-effective upgrades and long-term maintenance.

Rail-Proven Expertise

Backed by deep engineering capabilities and track record across global metro systems.

Designed for Driver-Operated Networks

Purpose-built for driver-operated rail systems and brownfield environments.

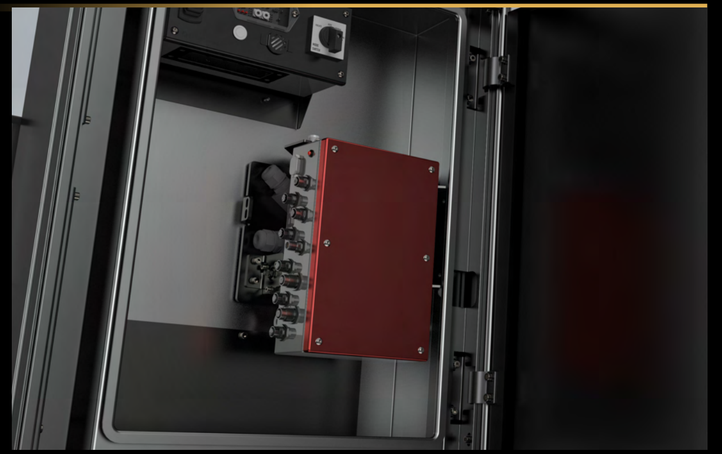
Revenue Generation

Platform screen doors offer prime locations for retail advertisements and information dissemination. By integrating digital media displays with our PSDs, the content can be remotely updated, generating significantly higher revenue, and reducing both manpower costs and time associated with printing and installing vinyl stickers on the doorway's fixed panels. This revenue can be utilised to cover maintenance costs and, over time, recoup the initial investment in the PSDs.



Connected by Intelligence (Gen 2 DCU)

Powered by our Generation 2.0 Door Control Unit, PSDs can serve as connected infrastructure that supports both passenger engagement and operational visibility.



Generation 2.0 DCU

Safety & Security

- Safety: IEC 61508/9, IEC 62425, EN50126/8/9
- Cybersecurity: IEC 62443-4-1

Environmental Resilience

- Tested to withstand demanding railway environments
- Certified to relevant EN 50125-3 requirements

Simplified Maintenance

- IP65-rated protection against dust and water ingress
- Fully connectorised architecture for easier maintenance

Operational Visibility

- Door, mode and lock status monitoring
- Event logging

Condition Monitoring

- PSD operational condition monitoring
- Real-time health monitoring
- Event and performance analytics
- Maintenance trend analysis

Future Ready Platform

- Adaptive maintenance capability
- AI-assisted diagnostics and analytics
- Predictive maintenance readiness
- Cybersecurity-ready architecture

Connectivity & Integration

- SMT interfacing
- Supports connected rail operations

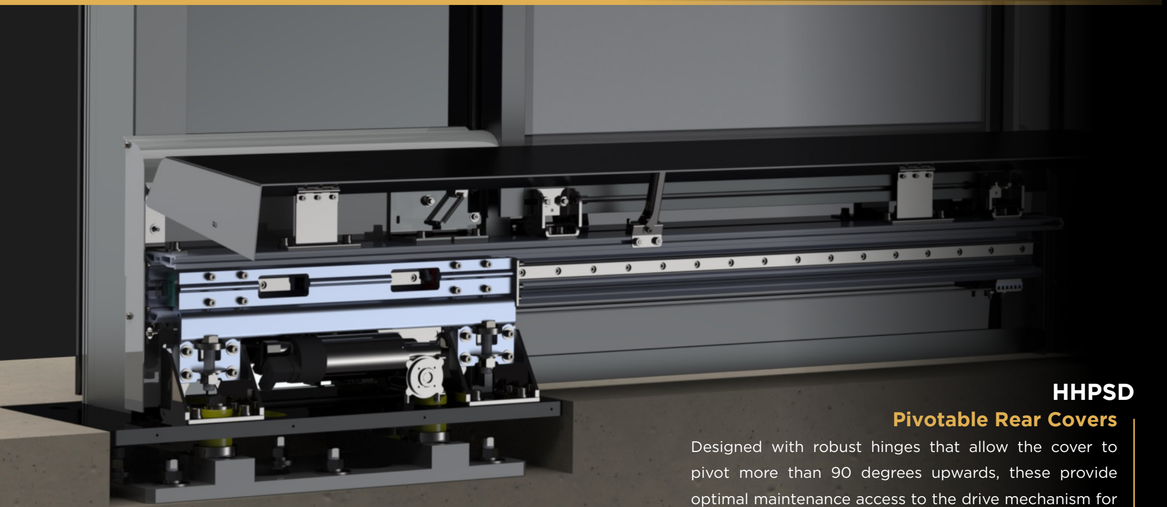


Smarter. Safer. Better.

Our Door Control Unit is designed fully in-house. Built on ARM-based microcontroller technology, the DCU incorporates smart calibration and auto profiling features that reduce the time required for doorway adjustments. A comprehensive set of parameters is configurable to the requirements of the railway and metro systems.

Commuter safety is crucial in the design of our product. Our PSDs are certified Safety Integrity Level 3 (SIL3) in accordance with both EN 50126/8/9 and IEC 62425/IEC 62278/9 standards.

Designed for Easy Upkeep



HHPSD

Pivotable Rear Covers

Designed with robust hinges that allow the cover to pivot more than 90 degrees upwards, these provide optimal maintenance access to the drive mechanism for maintenance staff standing on the trackbed. Our design eliminates the management of unassembled covers and loose parts that are required for traditional HHPSD designs.



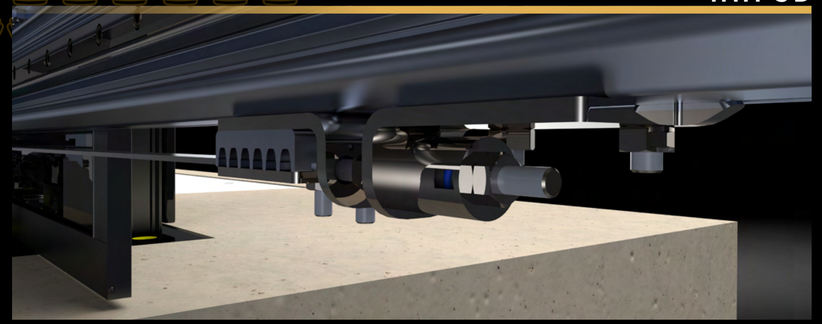
FHPSD

Header Covers

Openable covers that allow maintenance staff access to the header assembly, critical electronics, and drive mechanisms. These covers are fitted with either telescopic stays or gas springs that can provide assisted opening. Our closed frame design results in a stable header cover assembly that does not warp.

Designed for Easy Upkeep

HHPSD



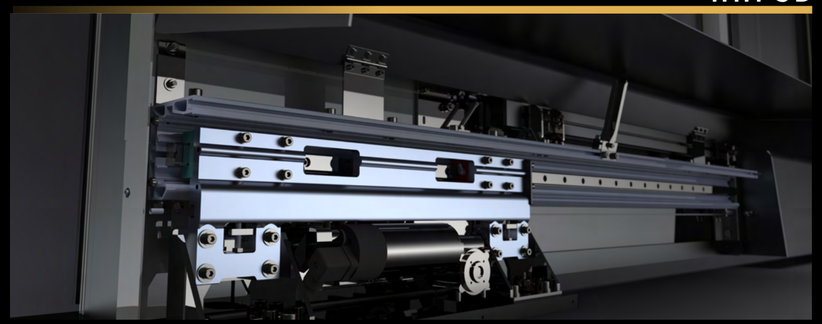
Quick Tensioner

Designed to allow maintenance staff to quickly adjust the belt tension to the optimal value without any measurement tools or jigs. Ensure the reliability of the belt system with minimal effort.

FHPSD



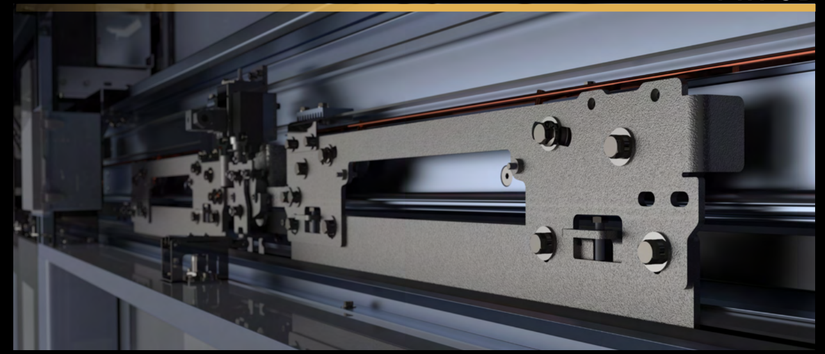
HHPSD



Door Adjustments

Integrated door adjustment mechanism designed for easy fine-tuning of each door leaf.

FHPSD



Redefining the Maintenance Experience

Our new Human Machine Interface incorporates an in-house, modern User Interface (UI) developed specifically to streamline activities for PSD operators and maintenance staff. Named MONIDOOR, this intuitive UI is designed for concise workflow operations, allowing users to effectively ascertain vital information with minimal gestures. It breaks free from traditional, industrial panel designs and sets the new standard for a modern PSD UI. Rethink and redefine your maintenance experience with our PSDs.



Cloud Powered Remote Maintenance Centre

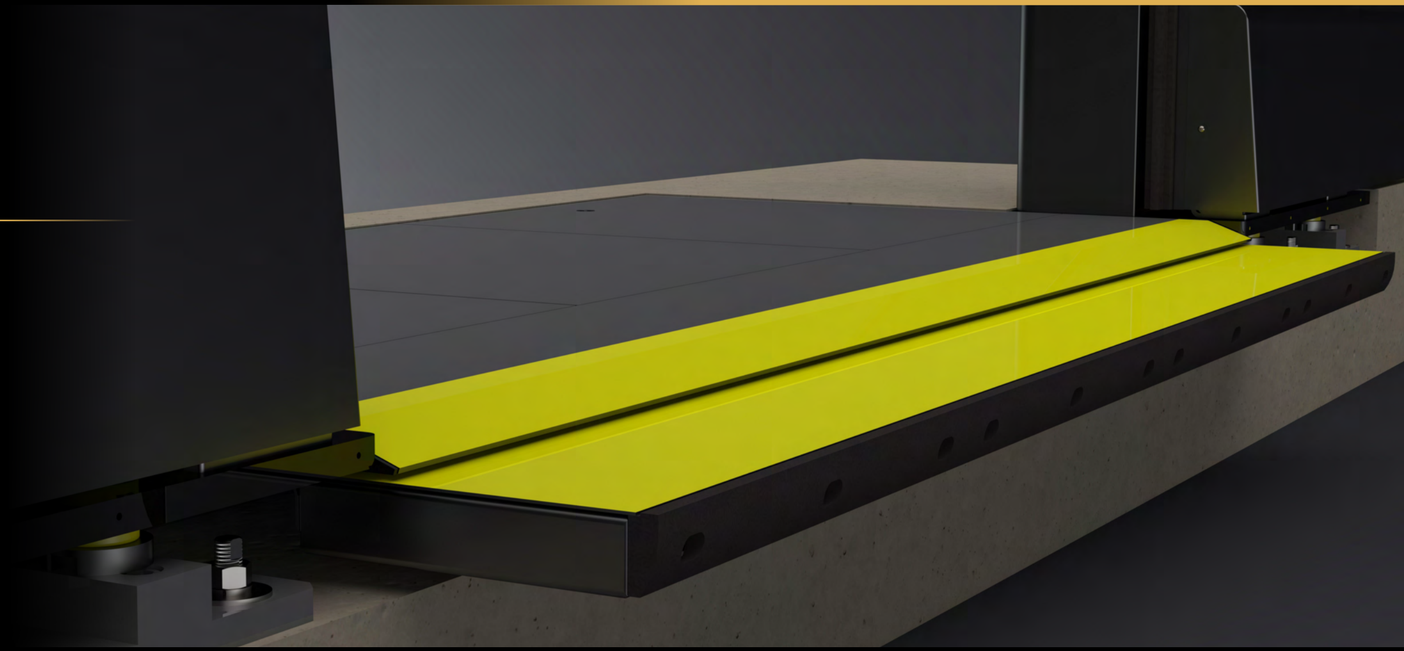
Our PSDs have in-built cloud compatibility features. Data and system alarms can be sent to MONIDOOR CLOUD, hosted on Cloud infrastructure. We will be able to proactively assess the system data, help to monitor system health, and provide remote assistance to on-the-ground maintenance staff. The MONIDOOR CLOUD is powered by automated decision analytics and powerful algorithms that take maintenance to the next level, significantly reducing site maintenance efforts and reducing life-cycle costs.



Motorised Gap Filler

The installed position of the PSDs (setting out) is mainly dependent on the Kinematic Envelope (KE) of the train and the curvature of the station platform. In some metro systems, the KE is extremely large, resulting in a large gap between the train floor and platform edge.

Our customisable Motorised Gap Filler bridges the gap between the platform edge and train floor by extending a laterally mobile threshold, ensuring the safe entry and exit of commuters from the train. This solution is designed to meet the loading requirements of both EN 14752 and EN 1991-1-1 standards.



Experts at Brownfield Retrofit

In the railway industry, “brownfield” is a term typically used to describe projects performed on a site that is already supporting revenue operations. Such projects are highly challenging and have various constraints. All works typically need to be performed during engineering hours and revenue service the next day needs to be minimally affected.

When conducting brownfield works, it is important to engage a solutions provider who fully understands the challenges, intricacies, and constraints.

We are proud to have led the largest brownfield PSD retrofit project in Singapore. In just four years, we have installed a total of 1,920 doorways on the North-South and East-West Lines on a total of 80 open platforms; all without affecting revenue service. Other PSD retrofit projects include 144 doorways for Taipei Rapid Transit Corporation in Taiwan and 480 doorways for Bangkok Mass Transit System in Thailand. With our track record of over 200 rail projects in more than 50 cities, we know what it takes to retrofit PSDs on existing metro and railways.



Our Track Record

AU

Brisbane
- Cross River Rail

Sydney
- Western Sydney Airport Line

CA

Ontario
- Ontario Line
- Toronto Airport Rail Link

ID

Jakarta
- Greater Jakarta LRT (Jabodebek)

IN

Chennai
- Chennai Metro Phase 1 Extension
- Chennai Metro Phase 2 ASA12A
- Chennai Metro Phase 3 ASA10A

MY

Johor Bahru
- Rapid Transit System (RTS) Link Project (Johor Bahru - Singapore)

Kuala Lumpur
- Klang Valley Mass Rapid Transit

SA

Riyadh
- Metro Lines 1, 2
- Metro Lines 4, 5, 6

SG

Singapore
- C752 North-East Line
- C830 Circle Line
- C852F Circle Line 6 and North-East Line Extension
- C1320 North-South and East-West Lines
- T252 Thomson-East Coast Line
- T252A Thomson-East Coast Line Extension
- C1592B Marina South Pier Station
- C152B Canberra Station
- C152E Tanah Merah Station
- CR1520C Pasir Ris Station
- Sentosa Express PSD Project
- Rapid Transit System (RTS) Link Project (Johor Bahru - Singapore)



TH

Bangkok
- Blue Line Extension
- BTS Sky Train*
- S5E6*
- Green Line* (6 stations)
- Green Line Extension
- Pink and Yellow Line Extension
- Purple Line
- Orange Line

TW

Kaohsiung
- Orange and Red Line
- Red Line Extension
- South Line Extension
- Yellow Line

Taichung
- Green Line
- Blue Line

Taipei
- Taipei Rapid Transit Corporation Retrofit
- Neihu Line
- San Ying Line
- XiDong Line

Taoyuan
- ME06A Extension
- Taipei-Taoyuan Airport Line
- Taoyuan Green Line
- Taoyuan Green Line Extension
- Taoyuan Brown Line



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