LTran-CX™
Communication Based Train Control System for Urban Rail
LSIS’ Advanced Train Control Technology Develops a New Phase of CBTC System by

- Implementing Remote Train Control System Based on Wireless Communication
- Achieving Top-Tier Level of Safety and Reliability with SIL4 Standard

LSIS CBTC System is a State-of-the-art Train Control System Based on Wireless Communication between Train and Track Equipment. LTran-CX™ has realised Moving Block Technology which enables Safe and Fast Movement Authority by Using Train Location Information. LTran-CX™ provides Driverless Operation with More Convenient and Safer Remote Control.

Top-Tier Level of Safety and Reliability
- SIL4 Complied with IEC & EN Standards
- 2 out of 2 Composite “Fail-Safe” Architecture

Enhanced Operational Availability
- Train Control by “Moving Block” Technology
- Higher Track Capacity from Improved Headway
- Hot & Standby Redundancy Architecture

Efficient Maintenance
- Easy Maintenance through Optimised System Architecture
- Low Life-Cycle Cost

Convenient Expansion and Integration
- Easy Integration with Existing System
- Interface with Diverse Communication Protocols [Wi-Fi, LTE-R]
Train Location Detection with Tag and Tachometer
Train Speed Supervision for Safety Train Operation
Generation of a Train Dynamic Speed Profile for Safety
Train Operation Monitoring
Train Operation Protection through Fail-Safe Brake Intervention
Monitoring of Precision Stop, Standstill and Rollaway
Train Stop Protection for Safety
Train Door Monitoring in Operation
Train Stop Protection for Safety
Train Departure Protection through Fail-Safe Brake Intervention
Fail-Safe Protection in Travel Direction Reversal
Handover
Train Operation Management through Handover for Safety
Open-Standard Radio Communication for Reliability and Safety
Automatic Train Operation
Automatic Train Speed Regulation
Automatic Train Stop
Automatic Train Stop at a Station
Inching Control
Remote Precision Stop Control
Train Door Management
Interlocking Control between Train Doors and PSD
Operation Management
Scheduled Operation with Stop Stations, Stop Time and Driving Strategy
Energy Saving Operation
Automatic Train Turnback
Automatic Train Travel Direction Reversal in Operation
Communication Management
Open-Standard Radio Communication for Reliability and Safety
Moving Block Determination Reflecting Train Location Information
Movement Authority Management for a Safe Train Distance
Emergency Management
Emergency Train Stop Control and Protection Zone Management
Track Environment Management
Track Data Management
Train Information Management
On-Board ATP System Operation Status Monitoring for Safety
Wayside Equipment Management
Safeguarding Passengers’ Safety through PSD Monitoring
Handover
Handover Management with Adjacent Wayside ATP System
Communication Management
Open-Standard Radio Communication for Reliability and Safety
Communication Based Train Control System for Urban Rail

- Driver-Machine Interface
- On-Board ATP/ATO System
- Transponder
- Tachometer
- Proximity Sensor

On-Board ATP/ATO System
Driver-Machine Interface
Transponder
Tachometer
Proximity Sensor