

Nanjing Metro System



SCADACOM Transit ICS monitors and controls massive metro-rail systems by integrating many independent transportation subsystems into one cohesive interface. In this case study, we explore Nanjing Metro where multiple large lines were deployed in full by a local system integrator, Guodian Nanjing Automation Co. Ltd. (SAC).

Quick Facts

- 6 Lines
- 122 Stations
- Line 4: 4-way redundant servers at the master control center; 46 servers total; over 100 concurrent users
- Line S8: Over 200,000 I/O points in a single database

Systems Integration

- Automatic Train Supervision (ATS)
- Traction Power System (TPS)
- Building Automation System (BAS)
- Fire Alarm System (FAS)
- Passenger Information System (PIS)
- Passenger Audio (PA)
- Closed Circuit Television (CCTV)
- Automatic Fare Collection (AFC)
- Platform Screen Doors (PSD)
- Telephony & Audio (TA)
- Air Compressor System (ACS)



Integrator Independence

Highlights of work done entirely by the system integrator without any assistance from Willowglen Systems:

- Full configuration of I/O, system objects, and custom database objects
- Full configuration of redundant devices and communication lines
- Full configuration of graphics, trends, and reports
- Full configuration of dynamic symbols (schematic models) and detailed control popups (faceplates)
- Full configuration of alarms, including alarm sounds
- Development of custom binaries to interface with core software APIs using SDK for integrators
- Installation on third-party server and workstation hardware of their choice
- Interface with third-party RTUs, PLCs, and IEDs of their choice
- Interface with third-party sub-systems of their choice
- Thorough testing on comprehensive lab setup before site deployment
- Compliance with regulatory requirements, including China Electric Power Research Institute (CEPRI)
- Communication protocols: Modbus, Siemens, Thales, Ingersoll Rand, Alcatel, Nari, Qinghua Tong Fang, Nanjing Kangni, etc.

