Budapest metro network accounts for three lines covering 33 km and ensuring mobility for 860,000 passengers every day. This network enlarges with its first fully automatic line, meaning the line will be operated without any driver or attendant on-board the trains to guarantee the best possible service to passengers and high safety.

The customers' expectations are expressed in terms of:
◊ Performance relative to the transport capacity, the headway, the availability and the energy consumption,
◊ Upgradability of the solution,
◊ Simplicity of line extensions,
◊ Durability of the solution: maintainability of the system, life length of the spare parts.
◊ Compliance with international standards (IEEE, IEC).

BKV entrusted Siemens France with the realization and installation, for the 7.4 km of line:
◊ of the CBTC system Trainguard-MT CBTC,
◊ of the free-propagation radio system Airlink ensuring communication between on-board and wayside equipment,
◊ of the Operation Control Centre (OCC),
◊ of the wayside signalling.

Our Trainguard MT CBTC technology, selected by BKV, inherits from a long experience of ATC systems as well as from our latest innovation in terms of radio communication.

This system is already installed on line 14 in Paris, on line L (Canarsie) in New York City and is being installed on lines 3 and 5 in Paris, on line 9 the new driverless line in Barcelona, on line 1 in Algiers, on line 1 in Paris which is being upgraded to driverless operation and on line M2 in Budapest.

Radio communication system Airlink contributes to the availability and reliability of the whole system installed on the line.

Trainguard MT CBTC solution by Siemens offers to BKV:
◊ A high level of safety thanks to reinforced anti-collision functions, the continuous speed control, the enforcement of speed limitations, the possibility to define temporary speed restrictions.
♦ More flexible operation of the trains thanks to:
  • the possible automatic turn back of the trains at any point on the line enabling a flexible management of traffic,
  • the possibility to operate trains in shuttle mode or with temporary single track,

♦ An optimized headway thanks to moving blocks which size is adapted to the own characteristics of each train,

♦ Reduced costs thanks to simplification of maintenance and a reduction of the number of wayside equipment due to moving blocks and Airlink radio system.

♦ A high availability of the system in revenue service thanks to redundancy of critical equipment.

For the passengers who will use line M4 daily, Siemens Trainguard MT CBTC means:

♦ Enhanced safety,

♦ Punctuality of the trains thanks to a higher availability of the ATC system,

♦ Reduced waiting time in station due to a 90 seconds headway,

♦ Shortest possible travel time thanks to an optimised operational speed for each train.

Characteristics of the line:
♦ Length of the line: 7.4 km
♦ Number of stations: 10
♦ Operation: 19/24, 7/7
♦ Commercial speed: 30 km/h
♦ Maximum speed: 80 km/h
♦ Operational headway: 90 s
♦ Number of trains: 15