

AGV Automated Transcar AGV System Guided Vehicle

Transcar AGV System Components

Navigation System

The Transcar employs industry-leading virtual path, laser contour-following guidance. This advanced technology requires no wall targets, embedded wires or other costly building modifications. Layout changes are simple using Swisslog's reconfiguration graphic editor program. Virtual path maps are stored at the System Control Center (SCC) and downloaded to each vehicle.

System Control Center

The exclusive Swisslog Transcar software package directs all system activities including vehicle movement and cart transfer. Included is a PC computer controller, a laser printer, integral modem and interface to system sub-controllers.

Power Requirements: 115 volt, single phase, 20-amp outlet. Dedicated analog direct inward dial (DID) phone jack



Pick-up and drop-off locations

Operators stage carts for dispatch at pick-up locations. Multiple spaces can be provided and configured for cart pick-up, drop-off or both. Operators position a cart in a cart pick-up space and enter the destination on a recessed wall-mounted input terminal. The system then handles all transport activities automatically.



Communication System

The communications system is a combination wired and wireless LAN. An Ethernet LAN connects the system control center to stationary elements including operator input terminals, RF antennas, lights, sensors and interfaces with fire doors, elevators, and cart washers. A dedicated RF communications system communicates with vehicles.

Power Requirements:

LAN switches—115 volt, single phase, 20 amps

RF antennas—115 volt, single phase, 3 amps

RF Communications System Specifications:

5 GHz, OFDM, 50 mW, compliant with FCC Par 15-Class B and IEEE 802.11a



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Battery Charger

The battery charger consists of a wall-mounted power supply panel connected to charge rails embedded in the floor. Charging is on an opportunity basis, per vehicle as directed by the system control center. A safe feedback communications link requires a vehicle to be positioned on the rails in order for power to be applied.

Power Requirements: 230/460 volt, 3 phase, 60 hz input, 24 vdc output

Peripherals

Elevator Interface:

Swisslog provides all control interface equipment, enabling vehicles to call enter, direct and exit elevators for automatic seamless vertical transport

Cart Washing and & Cart Washer Interface:

Swisslog provides equipment to control exiting cart washers for manual and automatic cart drop-off and pick-up. New cart washers complete with interface controls are also available.

Carts:

Swisslog can supply a wide range of cart types including automatic re-thermalization meal carts. Exiting carts can be retrofitted to interface with the Transcar.

Fully symmetric, full speed, bi-directional

Maximum layout flexibility
Minimum floor space consumption

On-board microprocessor

Full system navigation information resides in each vehicle
Downloadable from system control center

Full keyboard/LCD panel interface

Local diagnostics

Four point lifting

Smooth non-binding lifting of off-center loads

E-Stop switch

Direct immobilization

NiCd batteries

Quick charging for maximum vehicle use
Minimized vehicle count, 24/7 operation

Dual range laser
obstacle detection

(Located at front and back)

Fail safe non-contact obstacle detection
Safe class 1 lasers at floor level

Four wheel stability

Stable base, positive steering, even load distribution

Side contact bumpers

Side contact protection when turning



Due to ongoing improvement programs, Swisslog reserves the right of production or design change without notice or obligation.

For More Information Contact:

www.translogic-corp.com; email: contact@swisslog.com

USA & International:

10825 East 47th Avenue, Denver, CO 80239

Sales: 303 373-7883; Toll Free (800) 764-0300

Fax (303) 373-7932

Other inquiries: (800) 525-1841

Canada:

#7-1200 Aerowood Drive, Mississauga, ON L4W 2S7

Phone: (905) 629-2400; Toll Free (877) 294-2831

Fax: (905) 629-2799

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