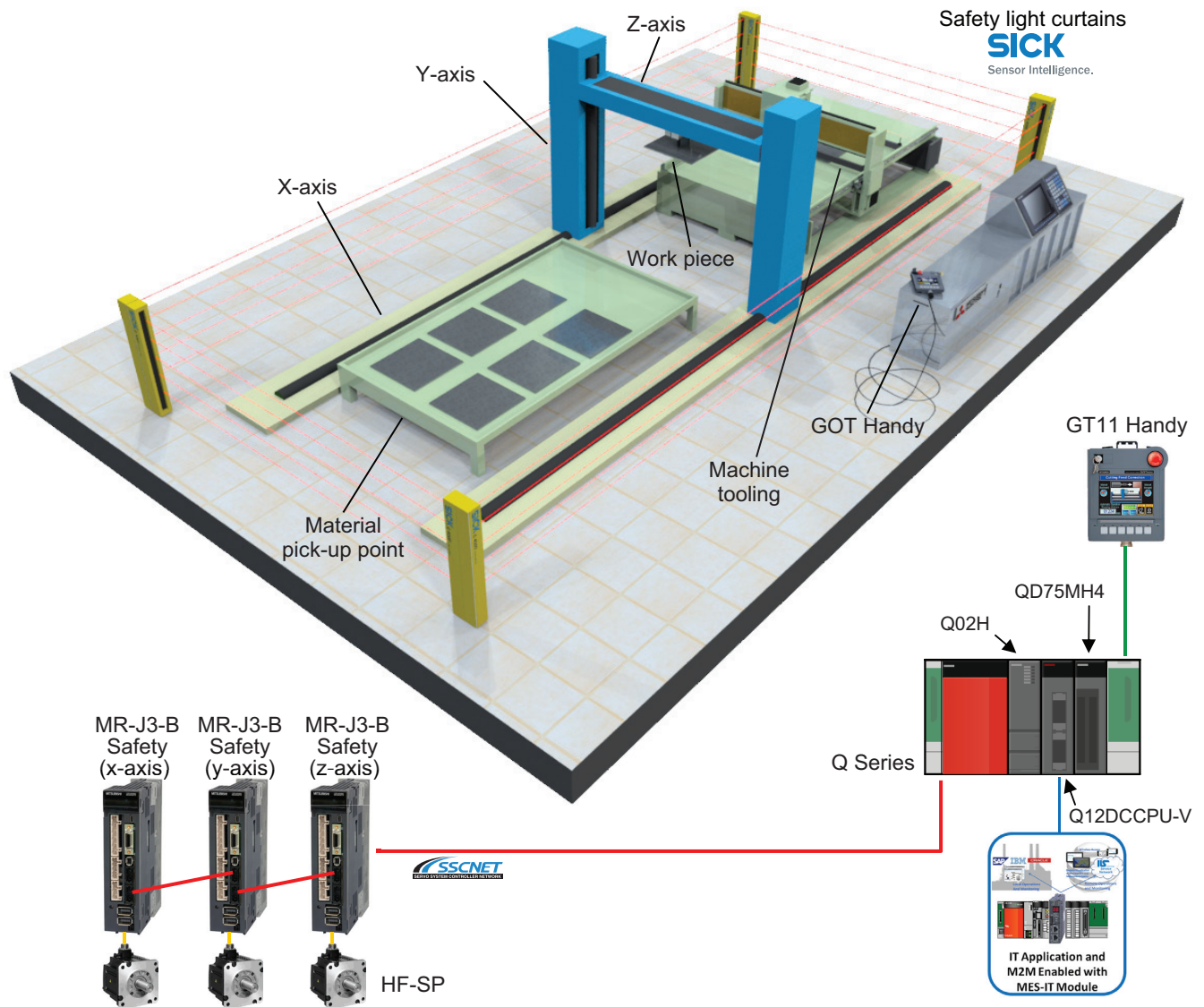


Gantry Applications

Mitsubishi Solution
 PLC: Q02H CPU
 Servo: MR-J3-B Safety

Positioning Controller: QD75MH4
 Motor: HF-SP

HMI: GOT11 Handy
 MES Interface IT module: Q12DCCPU-V



Example Applications

Gantry applications sit within a variety of different industries. Examples are listed below:

- ◆ General material handling
- ◆ Automotive assembly
- ◆ Lathe loading
- ◆ Machine tool loading
- ◆ Aircraft assembly
- ◆ CNC applications

Overview

A gantry is a positioning system that is used in material handling applications to move objects from point to point. Application sizes can vary considerably, from small applications requiring movement of light materials with high speed repetition to much larger applications requiring movement of heavier loads.

Features

SSCNETIII

- Optical fiber network
- Plug and play connectivity

Real-time auto-tuning

- Automatic setup of servo parameters for each gantry application
- Continuous auto-tuning

Increased response speed: 2100Hz speed-frequency response

Reduced component size

Durable design: Designed for performance and reliability

Interpolation of up to 4 axes: Linear and circular interpolation

Mechanical vibration suppression: Reduced machine wear and tear

High resolution absolute encoders: Smooth and accurate positioning with 18-bit resolution (262,144 ppr) absolute encoders

Acceleration/deceleration control

Increased motor IP ratings: IP65 (IP67 – 400V motors)

Options for expansion: Connectivity to SICK Safety Devices

MES Interface IT

- Direct data connection to IT systems
- Convert raw data to actionable events
- Data aggregation from other plant floor devices

Advantages and Benefits

- 100% mechanical noise elimination
- 80% reduced servo setup time
- Reduced risk of configuration errors during setup

- 80% reduced set up time
- Optimum system performance 24/7
- Minimal service visits for system repair

- 30% faster than existing Mitsubishi Electric servo products

- 40% Less cabinet space required for servos
- More flexible installation
- Reduced machine design costs

- High reliability and less time between system services

- Faster movement between points

- Reduced cost in servicing the machine
- Reduced risk in moving materials

- Much higher accuracy when moving object from point A to point B

- Less jarring of delicate materials

- Designed for use within heavy industrial applications

- Safe machine operation
 - Protection against injury creating safer working environment



- Simplify system architecture
 - Eliminate need for intermediate PC infrastructure to link shop floors to IT
 - Reduced integration time and effort
 - Improve security and standardization



Note: The values listed above are based on a real world application.

Customer Testimonials

- *"The MR-J3's encoder resolution provides excellent mapping of the work piece. This is a necessity for high-end gantry applications that require precise positioning."*