silex technology

FBR-100AN

Smart Connectivity for Factory Machines

Bridges factory machines and monitoring systems using MTConnect.

Product Summary

FBR-100AN monitors operation of CNC machines, and transfers data to the factory monitoring system/server. It supports MTConnect communication protocol, which is used by major manufacturers to efficiently connect machines with their host systems. FBR-100AN translates the machine protocol for the monitoring host, which traditionally is done using a PC. It also supports wireless bridge functionality which eliminates the use of wiring and cables in the factory. FBR-100AN allows machine tool manufacturers, system integrators, and their users to collect machine tool operation data in the factory and connect to a more sophisticated wired /wireless LAN system.

Features

● Connect to Multiple Networks in the Factory

This product supports three LAN interfaces. By using two independent wired LAN ports, it is possible to connect to a factory network divided into information and control systems. In addition, you can connect to the network without worrying about the installation location of the machine by using the wireless (IEEE 802.11a/b/g/n).

Factory Network Structure
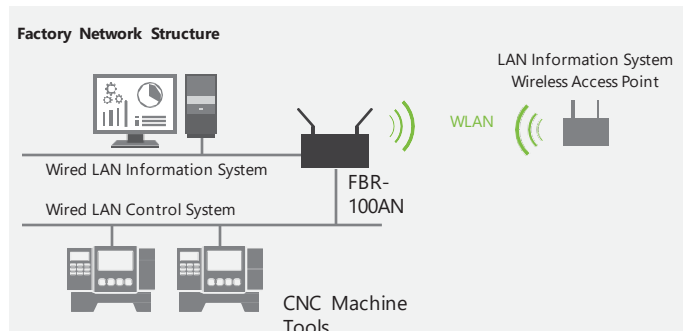
● Retrieve Machine Operation Data

FBR-100AN can directly connect to FANUC and other makers' CNC devices[*1] to monitor machine tools' operation data[*2] including NC programs and PMC data. The wired LAN and RS-232C[*3] interfaces can be used to connect with CNC devices. FBR-100AN's digital input interface or the wired LAN interface connected with PATLITE's AirGRID® allows the user to obtain legacy machines' information, which can be accessible only through signal-towers.

*1: CNC devices of FANUC and Brother Industries are supported (as of Aug 2020).
*2: One unit of FBR-100AN can collect the information of up to three CNC machine tools. When FBR-100AN connects to multiple machine tools, the collectable amount of PMC data will be limited.
*3: DPRNT is used for the communication. The specification of RS-232C interface may vary depending on machine tool makers.

System Configuration Example with CNC Machine Tools
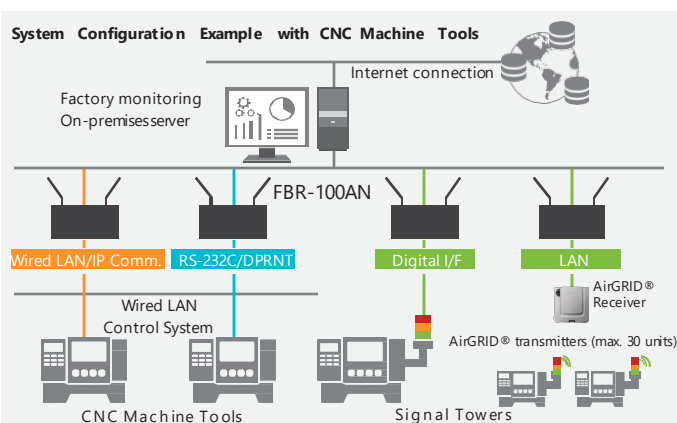
● MTConnect Protocol Support

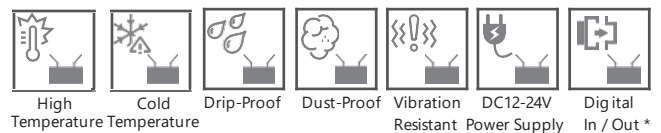FBR-100AN supports MTConnect protocol for comunication. This protocol is widely adopted by machine tool manufacturers in the United states. By using the MTConnect monitoring system used by the company, machine operation data can be efficiently transferred to the host system with the FBR-100AN.

FBR-100AN / MTConnect Communication
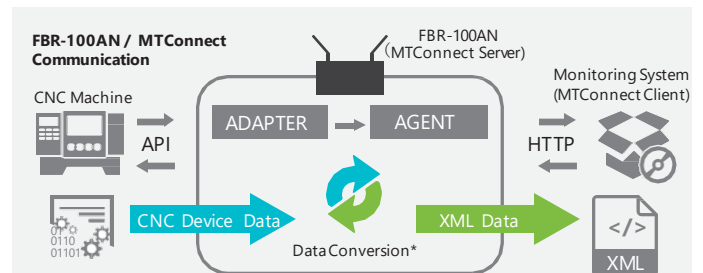
*The following tools are available from Silex for the conversion of CNC Device Data to MT Connect XML data:
• Point File Creation Tool
• Device Information Creation Tool

● Ideal for Factory Use

The product supports the operating temperature, drip-proof, vibration-proof, DC power input/surge treatment, DIN rail mounting required in general factories.


| High Temperature | Cold Temperature | Drip-Proof | Dust-Proof | Vibration Resistant | DC12-24V Power Supply | Digital In / Out * |

*Can be mounted using a commercially available DIN rail mounter.

● Wired-to-Wireless LAN bridge function

FBR-100 can convert the wired LAN interface of CNC devices to the wireless LAN[*4], so that the user can access CNC devices and change programs via the wireless LAN.

Bridge Function (Multi-client Mode)
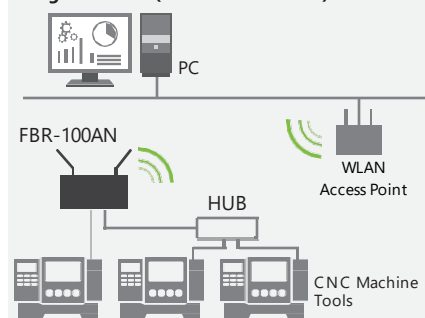
*4: FBR-100AN bridges up to 16 wired-LAN devices. Its wireless LAN port and two wired LAN ports can be configured and used individually.