

iAT2000 CNC Gateway

Main Features

- Plug-and-play CNC gateway connects controllers to the industrial internet of machines
- One click to establish connection with mainstream CNC controllers such as FANUC, Mitsubishi, Heidenhain, Siemens
- Collect important machine information including position, coordinate offsets, alarm etc.
- Up to 10 CNC controller can be connected via TCP/IP
- Transfer data to iAT2000 SCADA or MySQL/SQLite database
- Provide dashboard interface to monitor machine status

Product Overview

SMB200 series provides a user-oriented interface to integrate CNC controllers into the NexAIoT I4.0 solution network. NexAIoT’s software contains APIs to gather data from non-opened CNC systems and then uses SQL software to transfer the collected data to the database. The gateway is a one-for-all solution for many different types of CNC controllers available in the market. It is suitable for system integrators (SI) to develop various connection interfaces on their own. With the crucial device, SI can focus more on monitoring and analyzing, eventually, maximize the effectiveness of an automation factory.

Software Feature

Controller Connectivity

- A universal gateway to connects to several controllers
- FANUC: 0i-B/0i-C/0i-D/16i/18i/21i/30i/31i/32i
- Mitsubishi: M70/M700/M80/M800
- HEIDENHAIN: iTNC530/iTNC640
- Siemens: 828D/840D

CNC Data Collection

- NC file
 - Support NC file transfer to and from CNC controller
 - Verify the part under production matches MES
 - Record the production history of connected machines
- Controller status
 - Allow plant managers to have full awareness of all machine status
 - Record the complete status of all time for analysis
- Uptime analysis
 - Display uptime and graphical result to improve plant efficiency

- Alarm & history
 - Trace alarm history of each machine for review and optimization
- Servo spindle load
 - Monitor the reasonable working load to avoid excess temperature on machines, and elongate machine lifespan
- Maintenance management
 - Couple with CNC controller’s self-detection function to predict maintenance schedule and prevent unexpected downtime

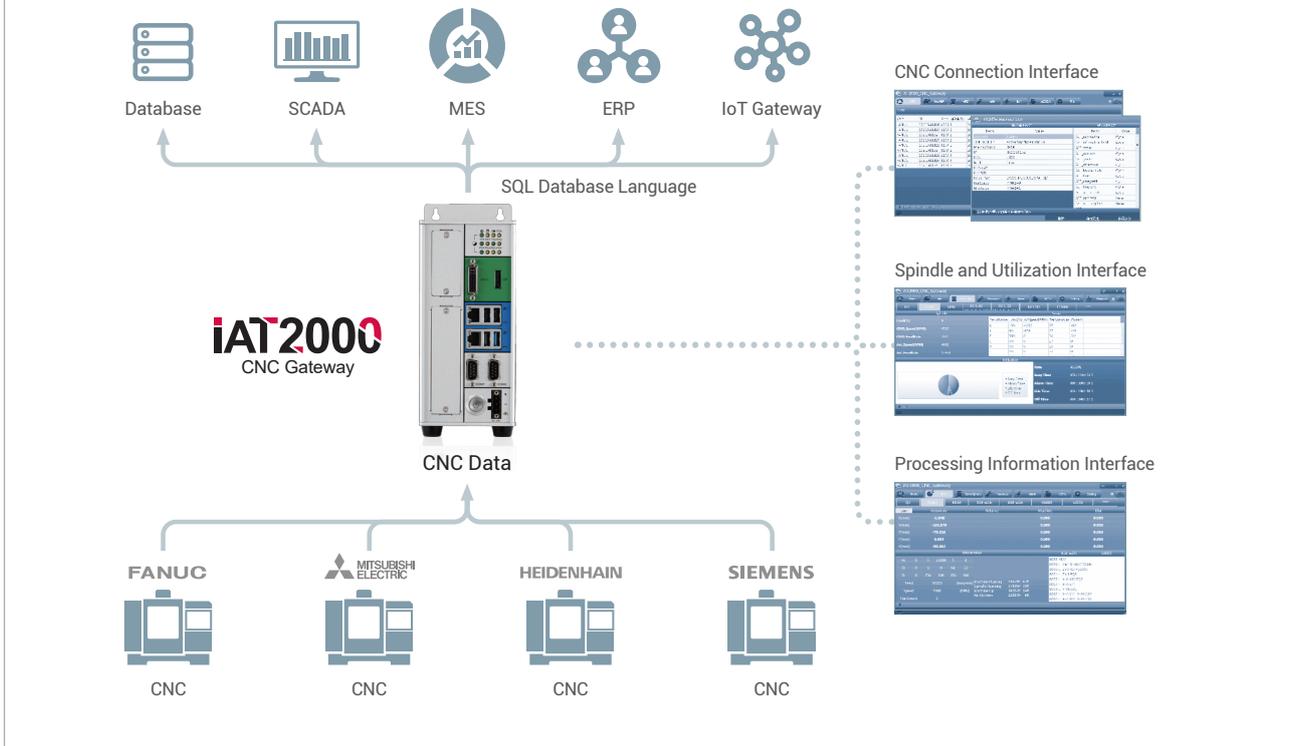
Internal MySQL Interface

- Data management
 - Collected data is stored in CNC gateway as a database in MySQL
 - The buffer database is available for SCADA, main Database, and other applications to retrieve

Cloud Service

- Cloud service compatible with an additional IoT gateway

CNC Gateway Architecture



Hardware Specification

Communication Protocols

- CNC protocol
- MySQL form database

System Configuration

- Intel® Celeron® J1900 2.42GHz, 4C4T,10W
- 4GB DDR3L system memory
- 128GB SATA3 SSD storage
- Windows 7 Pro 64-bit

I/O Interface

- 1 x SIM card holder
- 2 x 2 GbE Lan ports
- 3 x USB 2.0 (500mA per each), 1 x USB 3.0 (900mA)
- 2 x RS232/422/485* (COM1 support 2.5KV isolation protection)
- 1 x DVI-I, DisplayPort
- 2 x Antenna holes for optional Wi-Fi/4G antenna
- 1 x Optional mini-PCIe Wi-Fi/4G for wireless connectivity

Certification

- CE

- FCC Class A

Power & Dimension

- Power input: 1 x 3-pin DC input, support +24V DC input
- System dimension (W x D x H): 85 x 157 x 214 mm

Ordering Information

• SMB200 (P/N: 10J7052CNC4XR)

Connect to 5 CNC, 4GB RAM, 2.5" 128GB SSD, Windows 7 Pro SP1 for Embedded Label Microsoft: 42C-00039

• SMB210 (P/N: 10J7102CNC4XR)

Connect to 10 CNC, 4GB RAM, 2.5" 128GB SSD, Windows 7 Pro SP1 for Embedded Label Microsoft: 42C-00039