



Smart Factory IoT Integration & Connectivity Audit Checklist 2026

Sensor Deployment & Edge Computing Readiness

Evaluation of sensor density, connectivity range, and the deployment of edge gateways for real-time data processing.

Sensor ID/Asset Identifier

Write something...

Sensor Connectivity Type

- ☐ Wi-Fi
- ☐ Bluetooth/BLE
- ☐ Zigbee/LoRaWAN
- ☐ Ethernet (Wired)
- ☐ 5G/Cellular

Signal Strength (RSSI) dBm

Enter a number...

Edge Computing Hardware Present

- ☐ Edge Gateway
- ☐ Microcontrollers (ESP32/Arduino)
- ☐ Industrial PC (IPC)
- ☐ PLC-Integrated Edge

Deployment Environment Notes

Write something...

Sensor Installation Photo

 Upload File

Network Connectivity & Protocol Standardization

Audit of communication protocols (MQTT, OPC-UA, etc.), Wi-Fi/5G stability, and interoperability between legacy and modern hardware.

Supported Communication Protocols

- ☐ OPC-UA
- ☐ MQTT
- ☐ Modbus TCP/RTU
- ☐ EtherNet/IP
- ☐ PROFINET
- ☐ HTTP/REST API

Primary Network Backbone Type

- ☐ Industrial Ethernet
- ☐ Private 5G/LTE
- ☐ Wi-Fi 6/6E
- ☐ LoRaWAN

Average Network Latency (ms)

Enter a number...

Network Coverage Gaps Identified

Write something...

Network Topology Diagram

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Network Engineer Verification

Data Acquisition & Cloud Integration

Verification of seamless data streaming from shop floor to cloud platforms, including latency monitoring and data ingestion accuracy.

Primary Cloud Provider

- ☐ AWS IoT Core
- ☐ Microsoft Azure IoT Hub
- ☐ Google Cloud IoT
- ☐ On-Premise Server
- ☐ Other

Data Ingestion Methods Used

- ☐ MQTT
- ☐ HTTP/HTTPS
- ☐ AMQP
- ☐ CoAP
- ☐ FTP/SFTP

Average Data Latency (ms)

Enter a number...

Last Integration Synchronization Date

Enter date...

Data Mapping Documentation

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Identified Data Gaps or Connectivity Bottlenecks

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Cybersecurity & Industrial IoT (IIoT) Security

Assessment of device authentication, end-to-end encryption, network segmentation, and vulnerability management for connected assets.

Implemented Security Protocols

- ☐ End-to-End Encryption (E2EE)
- ☐ Multi-Factor Authentication (MFA)
- ☐ Network Segmentation (VLANs)
- ☐ Intrusion Detection Systems (IDS)
- ☐ Device Identity & Authentication (PKI)

Last Security Patch Date

Write something...

Number of Unsecured/Legacy Devices Identified

Enter a number...

Identified Vulnerabilities & Mitigation Plan

Write something...

Network Security Audit Report/Certificate

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IT Security Officer Authorization

Data Integrity & Analytics Capability

Review of data accuracy, timestamp synchronization, and the functionality of real-time dashboards for predictive insights.

Data Accuracy Level

- ☐ High (Verified via calibration)
- ☐ Medium (Manual verification required)
- ☐ Low (Requires immediate investigation)

Data Latency (Milliseconds)

Enter a number...

Data Sources Monitored

- ☐ PLC/SCADA Systems
- ☐ Environmental Sensors
- ☐ ERP/MES Integration
- ☐ Manual Logbooks

Data Discrepancy Report

Write something...

Last Data Integrity Audit Date

Enter date...

Data Auditor Verification

Scalability & Future-Proofing Architecture

Evaluation of the system's ability to integrate new machinery, sensors, and expanded datasets without significant infrastructure overhaul.

Current Connectivity Architecture Type

- ☐ On-Premise Server
- ☐ Hybrid Cloud
- ☐ Full Cloud-Native
- ☐ Edge-Only

Planned Expansion Capabilities

- ☐ Additional Sensor Integration
- ☐ New Production Line Expansion
- ☐ Cross-Plant Data Integration
- ☐ Integration of Autonomous Mobile Robots (AMRs)

Infrastructure Bottleneck Assessment

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Estimated Device Capacity Margin (%)

Enter a number...

Next Infrastructure Scalability Review Date

Enter date...

Lead Systems Architect Approval

Maintenance & Firmware Management

Audit of automated firmware update procedures, device lifecycle management, and remote diagnostic capabilities.

Last Firmware Update Date

Enter date...

Devices Requiring Firmware Updates

- ☐ PLCs (Programmable Logic Controllers)
- ☐ IoT Gateways
- ☐ Edge Sensors
- ☐ Industrial Robots
- ☐ HMI (Human Machine Interface) Panels

Firmware Version Number

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Update Status

- ☐ Up to date
- ☐ Update Pending
- ☐ Critical Update Required
- ☐ Incompatible Version

Firmware Release Notes/Logs

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Maintenance Technician Approval

< Previous

> Next

✔ Finish

✎ Generate Sample Report