

MindConnect IoT2040

Product Sheet



MindConnect IoT2040 is a device for transferring data and allows connectivity to Insights Hub. Different protocols are supported in order to collect data. The device supports transmission of data through a secure internet connection to Insights Hub to enable cloud-based applications and services. MindConnect IoT2040 can only be used in conjunction with Insights Hub.

Prerequisites

Subscription	A valid Insights Hub Capability Package (Basic/Standard/Premium) subscription is required.
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Functions

Field protocol – S7	Siemens S7 Put/Get Access (for all S7 PLCs as non-symbolic addressing).
Field protocol – OPC UA	OPC UA Client (Data Access).
Field protocol – Modbus	Connections to Modbus devices via TCP/RTU.
Field protocol – EtherNet/IP	Connections to EtherNet/IP devices.
System adapter	Read device specific parameter like memory consumption.
Arduino shield	Arduino connector to IO Module 5x DI 2x AI 2x DI.
Configuration of data collection	With Asset Configuration tool in Insights Hub.
Data buffering	Up to 500 MB buffering space for collected data.
Local webserver	Support at local diagnose and easy onboarding.
Proxy Support	Yes
DHCP Support	Yes
Security	Connection outbound via HTTPS on port 443 to Insights Hub only. No incoming connection accepted. SSL/TLS encryption of data in transit to Insights Hub.

Installation Type/Mounting

Mounting	DIN rail, wall mounting, portrait mounting.
Design	IoT Gateway, Built-in unit.

Supply Voltage

Type of supply voltage	24 V DC
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Mains buffering

Mains/voltage failure stored energy time	5 ms
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Processor

Processor type	Intel Quark X1020
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Mass storage

MicroSD Card	8 GB
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Memory

Type of memory	DDR3-SDRAM
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Main memory	1 GB
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Hardware Configuration

Slots

Free slots	1x Arduino (available only on conjunction with Insights Hub). 1x mPCIe (available only in conjunction with Insights Hub).
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Interfaces

USB port	1x USB 2.0
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Serial interface	2x COM ports (RS 232, RS 485) (available only in conjunction with Insights Hub).
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Industrial Ethernet

Industrial Ethernet interface	2x 10/100 Ethernet RJ45
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Monitoring Functions

Watchdog	Yes
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Status LEDs	Yes
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Fan	No
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EMC	
Interference immunity against discharge of static electricity	
Interference immunity against discharge of static electricity	±6 kV contact discharge acc. to IEC 61000-4-2; ±8 kV air discharge acc. to IEC 61000-4-2
Interference immunity to cable-borne interference	
Interferences immunity on supply cables	±2 kV acc. to IEC 61000-4-4, burst; ±1 kV acc. to IEC 61000-4-5, surge symmetric; ±2 kV acc. to IEC 61000-4-5, surge asymmetric
Interference immunity on signal cables > 30 m	±2 kV acc. to IEC 61000-4-5, surge, length > 30 m
Interference immunity on signal cables < 30 m	±2 kV acc. to IEC 61000-4-4, burst; length < 30 m
Interference immunity against voltage surge	
asymmetric interference	±2 kV acc. to IEC 61000-4-5, surge asymmetric
symmetric interference	±1 kV acc. to IEC 61000-4-5, surge symmetric
Interference immunity to magnetic fields	
Interference immunity to magnetic fields at 50 Hz	100 A/m; to IEC 61000-4-8
Emission of conducted and non-conducted interference	
Interference emission via line/AC current cables	EN 61000-6-4:2007 +A1:2011

Degree and Class of Protection	
IP (at the front)	IP20

Standards, Approvals, Certificates	
Approval	CE (industry), UL, cULus
CE mark	Yes
UL approval	Yes
cULus	Yes
KC approval	Yes
EMC	CE, EN 61000-6-4:2007 +A1:2011, EN 61000-6-2:2005, EN 61000-6-3:2007 +A1:2011, EN 61000-6-1:2007

Ambient Conditions

Ambient temperature during operation

Ambient temperature during operation 0 °C up to 50 °C

Minimum 0 °C

Maximum 50 °C

Relative humidity

Relative humidity Tested according to IEC 60068-2-78, IEC 60068-2-30: Operation: 5 % to 85 % at 30 °C (no condensation), storage / transport: 5 % to 95 % at 25 / 55 °C (no condensation)

Vibrations

Vibration load in operation Tested according to IEC 60068-2-6: 5 Hz to 9 Hz: 3.5 mm; 9 Hz to 200 Hz: 9.8 m/s²

Shock testing

Shock load during operation Tested according to IEC 60068-2-27: 150 m/s², 11 ms

Software

MindConnect Software Pre-installed MindConnect IoT2040 Software

Dimensions

Width 144 mm

Height 90 mm

Depth 53 mm

Security Information

General In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept.

Third Party Terms

General Third-Party Terms for MindConnect IoT2040 are available via the following web link: <https://support.industry.siemens.com/cs/ww/en/view/109745562>

Support

Technical Support Technical Support is defined in the General Maintenance Services Terms for Software and Hardware available at <https://www.siemens.com/sw-terms/mes>.

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