TI01525S/04/EN/04.25-00
71693042
2025-01-01

Technical Information
FieldEdge SGC500

Industrial edge device for connecting field devices to the Netilion Cloud

Application

- Enables the connection of field devices in an industrial plant to the Netilion Cloud.
- Data transmission is via the Internet connection in the plant.
- Information required for Netilion Services is regularly read out of the field devices and saved in Netilion.

Your benefits

- Connects field devices to the Netilion Cloud.
- Secure data transfer via encrypted https communication.
- Transmission of device parameters from connected field devices – Endress+Hauser devices and third-party devices.
- Easy installation and commissioning.
- No integration into customer automation system necessary.
- Connectivity for remote Heartbeat Verification.

Endress+Hauser
People for Process Automation

About this document

Symbols

Safety symbols

⚠ DANGER
This symbol alerts you to a dangerous situation. Failure to avoid this situation will result in serious or fatal injury.

⚠ WARNING
This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in serious or fatal injury.

⚠ CAUTION
This symbol alerts you to a dangerous situation. Failure to avoid this situation can result in minor or medium injury.

NOTICE
This symbol contains information on procedures and other facts which do not result in personal injury.

Symbols for certain types of information

Symbol	Meaning
	**Permitted** Procedures, processes or actions that are permitted.
	**Preferred** Procedures, processes or actions that are preferred.
	**Forbidden** Procedures, processes or actions that are forbidden.
	**Tip** Indicates additional information.
	Reference to documentation.
	Reference to page.
	Reference to graphic.
	Visual inspection.

Function and system design

Function

The FieldEdge SGC500 enables the connection of field devices in an industrial plant to the Netilion Cloud. Data transmission is via the Internet connection in the plant. The information required for Netilion Services is regularly read out of the field devices and saved to the Netilion Cloud.

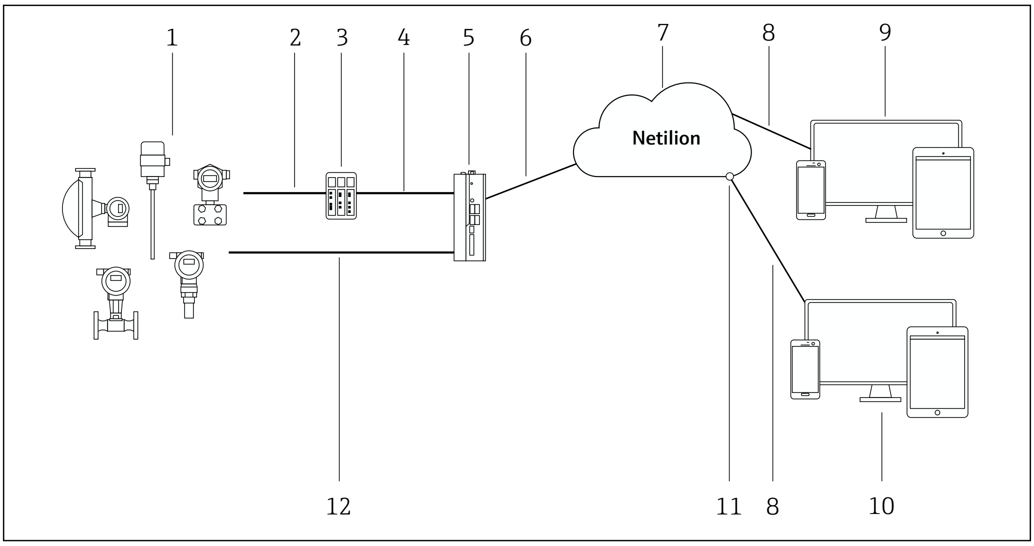
You can use the transmitted data via the following offers:
- Netilion Connect or
- Netilion Services

Netilion Connect
The transmitted data can be retrieved directly via a software interface (REST JSON Application Programming Interface (API)) and integrated into a user application.

 The Application Programming Interface (API) is provided as part of the Netilion Connect Subscription.

Netilion Services
The transmitted data enable digital Netilion Services, such as Analytics, Health, Library and Value.

System design



1 Network architecture

1 *Endress+Hauser field devices and third-party field devices*
2 *Fieldbus communication*
3 *Supported field gateways for conversion from fieldbus protocol to an IP protocol*
4 *Ethernet communication*
5 *FieldEdge SGC500, reads field device data and transmits it securely to the Netilion Cloud*
6 *WAN Internet connection – https, plant-side connection*
7 *Netilion Cloud*
8 *https Internet connection*
9 *Netilion Services: Netilion Service app based on internet browser*
10 *User application*
11 *Netilion Connect: Application Programming Interface (API)*
12 *Industrial Ethernet*

- For detailed information on Netilion Connect, see: https://developer.netilion.endress.com/discover
- For detailed information on Netilion Services, see: https://netilion.endress.com

Communication and data processing

Supported fieldbus communication	Connection to FieldEdge
HART	Fieldbus via field gateway to Ethernet connection
WirelessHART	
PROFIBUS	
Modbus TCP	Direct via industrial Ethernet connection
EtherNet/IP	
PROFINET	

FieldEdge	Connection to the Netilion Cloud
FieldEdge SGC500	Internet connection: WAN – https

Performance characteristics

Hardware

CPU
Intel Atom x5-E3930 dual core

Storage
4 GB LPDDR4 onboard memory

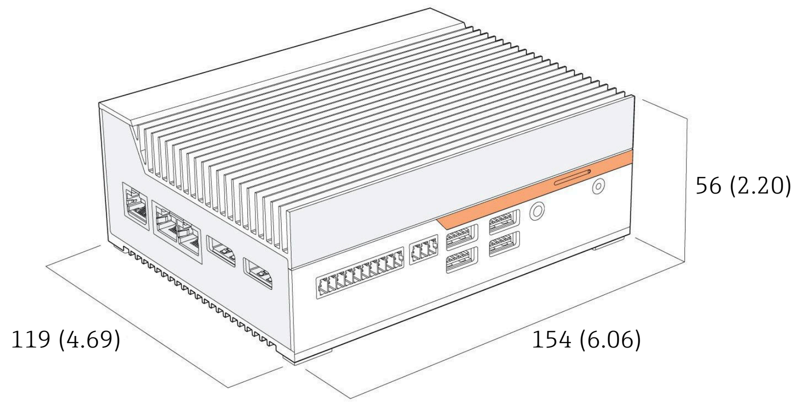
Integrated graphics card
Intel HD Graphics 500 (not used)

Environment

Ambient temperature range	−25 to 70 °C (−13 to 158 °F)
Storage temperature	−40 to 85 °C (−40 to 185 °F)
Humidity	0 to 90 %, non-condensing
Vibration resistance	Tested acc. to ▪ IEC 60068-2-64 ▪ MIL-STD-810G
Shock resistance	Tested acc. to ▪ IEC 60068-2-27 ▪ MIL-STD-810G
Electromagnetic compatibility (EMC)	▪ CE Declaration of Conformity ▪ Low Voltage Directive (2014/35/EU) ▪ EN 62368-1:2014 / A11:2017 ▪ Electromagnetic compatibility (2014/30/EU) ▪ EN 55024:2010 ▪ EN 55032:2015/AC:2016 Class A ▪ EN 61000-3-2:2014 Class D ▪ EN 61000-3-3:2013 ▪ EN 61000-4-2:2009 ▪ EN 61000-4-3:2006+A1:2008+A2:2010 ▪ EN 61000-4-4:2012 ▪ EN 61000-4-5:2014+A1:2017 ▪ EN 61000-4-6:2014+AC:2015 ▪ EN 61000-4-8:2010 ▪ EN 61000-4-11:2004+A1:20 ▪ EN 55035:2017 ▪ EN 301 489-1 V2.2.0 (2017-03) Draft ▪ EN 301 489-17 V3.2.0 (2017-03) Draft ▪ RoHS 3 (2015/863/EU) ▪ EN 63000:2018 ▪ WEEE (2012/19/EU) ▪ EN 50419:2006 ▪ EN 50625-1:2014

Mechanical construction

Design, dimensions	56 mm (2.20 in) · 154 mm (6.06 in) · 119 mm (4.69 in)



2 *Dimensions of SCG500, engineering unit: mm (in)*

Sufficient space around the SGC500 is required for heat dissipation.

Certificates and approvals

CE mark

The SGC500 meets the requirements of the EU Directives as per the CE mark.

Other standards and guidelines

- FCC & Canada ISED DoC
- CE EMC, Safety, RoHS 3.0 DoC
- UL listing card
- CB certificate

Detailed list:
- FCC 47 CFR Part 15
- UL-listed configurations available
- CB schematics
- EN 55024
- EN 55032
- EN 62368-1
- 2011/65/EU (RoHS 2 Directive)
- WEEE Directive (2012/19/EU)
- IEC 60068-2-27
- IEC 60068-2-64

Ordering information

For detailed information on using the SGC500, see www.netilion.endress.com.

Detailed information on the product structure are available as follows:
From your Endress+Hauser Sales Center: www.addresses.endress.com

- For detailed information on Netilion Connect, see: https://developer.netilion.endress.com/discover
- For detailed information on Netilion Services, see: https://netilion.endress.com

Scope of delivery

The scope of delivery comprises:
- SGC500
- 1 × power terminal block connector
- 1 × fastening clip for DIN rail mounting
- 1 × dust protection cap
- 1 × documentation

Registered trademarks

EtherNet/IP™
Trademark of ODVA, Inc.

HART®
Registered trademark of the FieldComm Group, Austin, Texas, USA

Modbus®
Registered trademark of SCHNEIDER AUTOMATION, INC.

PROFIBUS®
Registered trademark of the PROFIBUS User Organization, Karlsruhe, Germany

PROFINET®
Registered trademark of the PROFIBUS Nutzerorganisation e.V. (PROFIBUS User Organization), Karlsruhe, Germany

WirelessHART®
Registered trademark of the FieldComm Group, Austin, Texas, USA

71693042

www.addresses.endress.com

Endress+Hauser

People for Process Automation