

PERFECTRON

SCN300

IEC-61850-3 , IEEE-1613
SUBSTATION FANLESS COMPUTER



IEC 61850-3

IEEE 1613

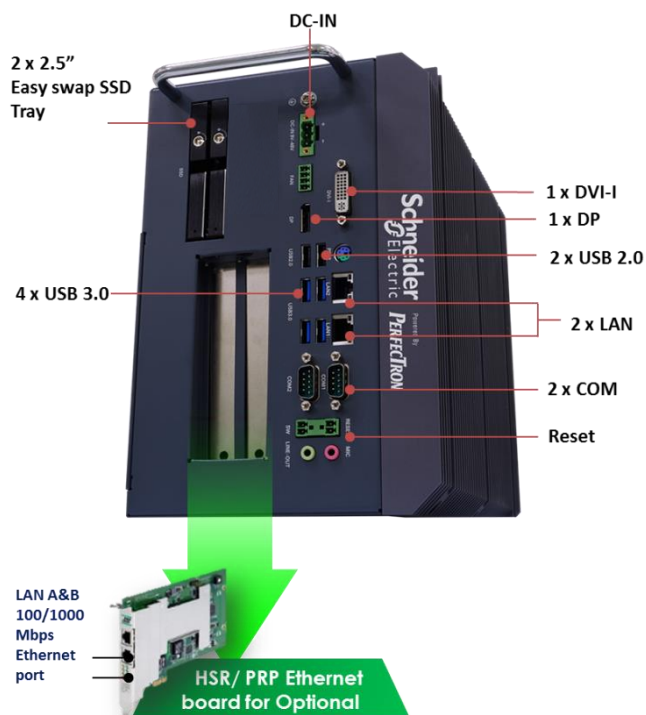
- 9th Gen. Intel® Core™ i9/i7/i5 Processors
- SO-DIMM DDR4 2400/2666 MHz up to 64GB
- 2 x 2.5" Easy swap SSD Tray
- 2 x RJ45 LAN
- 4 x USB3.0, 2 x USB2.0
- 1 x DP, 1 x DVI, 4 PoE,
- 6 x COM (RS232/422/485)
- TPM Security on Board
- Extended Operating Temp. :-20°C~60°C

Introduction

SCH300, a sophisticated fanless power substation solution with rich and powerful I/O connectors, such as 4 x PoE (RJ45 or M12), 6 x COM (RS232/422/485) with isolated DIDO (4 x DI, 4 x DO), and also 8 x USB ports. According to your actual requirement, there are flexible options like up to 10 x COM (RS232/422/485), or up to 10 x LAN (RJ45), and even at most 8 x POE (RJ45 or M12) for our energy customers.

Moreover, 9V-48V, an Ultra-Wide DC power input is really crucial for a stable and reliable power substation system. SCH300 allows the system to be utilized in extensive power types. And also, sudden drop or surge of power posts absolutely no threat to this smart and outstanding system.

One more thing, it's the optional HSR/ PRP Ethernet board. Which is an Ethernet Redundancy concept, and allows user to have a more stable and efficient solution for troubleshooting without any delay. As well as its extended operation temperature, -40~60°C, SCH300 is really a best solution of your smart power substation!



Key Features of SCH300



(1) SECURITY REDUNDANCY

(2) NETWORK REDUNDANCY

(3) RICH COMMUNICATION

(4) IEC-61850-3

INTERFACE

(5) COMPREHENSIVE

(6) IEEE-1613

EXTENSION MODULE

(7) EXTREME OPERATING

(8) ULTRA WIDE VOLTAGE

TEMPERATURE

SUPPORT

Key Feature

(1) SECURITY REDUNDANCY

Integrating TPM module, operating systems can require an authentication to protect keys, data or systems.

(3) RICH COMMUNICATION INTERFACE

In advantage of SCH300's diverse I/O, 6 x COM (All support RS232/422/485), 8 x USB, 4 x POE, 2 x LAN, the SCH300 system can meet all clients' communication requirement.

(5) COMPREHENSIVE EXTENSION MODULE

No matter POE or LAN, M12 or RJ45 port, as well as full function RS232/422/485 COM port, SCH300 offers user with variety of options, which can meet all industrial/ energy critical needs.

(7) EXTREME OPERATING TEMPERATURE

Ensure high reliability and stability while operating under a harsh environment such as temperature from -40°C up to 60°C

(2) NETWORK REDUNDANCY

PRP/HSR network is an efficient and cost effective solution to construct a seamless/bumpless communication infrastructure.

(4) IEC-61850-3

IEC 61850 defines the communication protocols for intelligent electronic devices at electric substations. IEC-61850-3 defines the complete testing requirement for the equipment which conforms to the standard.

(6) IEEE-1613

Detail environment and testing requirements for communications networking devices in electric power substations.

(8) ULTRA WIDE VOLTAGE SUPPORT

9V-48V, a very wide range voltage of DC-input capability, allows users to adopt all kinds of working site and applications scenario.

Specifications

SYSTEM

| | |
|-------------|---|
| CPU | 9th Generation Intel® Core™ i9/i7/i5 Processors Intel® Core™ i7-9700TE (12M Cache, up to 3.80 GHz) Intel® Core™ i5-9500TE (9M Cache, up to 3.60 GHz) Intel® Core™ i3-9100TE (6M Cache, up to 3.20 GHz) |
| Memory type | 2 x SO-DIMM up to 64GB DDR4-2666MHz |

REAR I/O

| | |
|----------------|---|
| Storage Device | 2 x 2.5" Easy swap SSD Tray |
| Expansion Slot | 2 x PCIe 3.0 X8 |
| Power Input | DC 9V~48V |
| USB | 4 x USB3.1, 2 x USB2.0 |
| Ethernet | 2 x RJ45 LAN |
| DisplayPort | 1 x 20Pin DisplayPort connector (Female), resolution up to 4096x2160@60Hz |
| DVI | 1 x 20Pin DVI-I connector, resolution up to 2560x1600@60Hz |
| COM | 6 x RS232 / 422 / 485 (Support Power 5V / 12V) |

FRONT I/O

| | |
|--------------|--------------------------|
| Power Button | 1 x (with LED indicator) |
|--------------|--------------------------|

OS SUPPORT LIST

| | |
|---------|---|
| Windows | Win10 IoT Ent LTSB 2016, Win 10 IoT Ent 2019 LTSC |
| Linux | Ubuntu18.04 |

MECHANICAL & ENVIRONMENT

| | |
|-------------------|----------------------------------|
| Dimension | 170 x 264 x 250 mm (W x D x H) |
| System Design | Fanless |
| Mounting | Rackmount Cube |
| Operating Temp. | -20°C to 60°C (35W CPU) |
| Storage Temp | -40°C to 85°C |
| Relative Humidity | 5% to 95%, non-condensing |

CERTIFICATION

| | |
|-----|-------------------|
| EMC | CE, FCC compliant |
|-----|-------------------|

MIL-STD-810G Test

Operating Tests

| | | |
|------------------|-----------------------------|--|
| Low Temperature | Method 502.5 Procedure 2 | exposure(24h x 3 cycle) at -40°C min. |
| High Temperature | Method 501.5 Procedure 2 | 60°C for 2 hours after temperature stabilization. |
| Humidity | Method 507.5 Procedure 2 | RH -95%. Test cycles: ten 24-hours , functional test after 5th and 10th cycles |
| Vibration | Method 514.6 Category 20 | 10—500Hz 1.04Grms Test duration: 1 hours x 3 axis (total 3 hours) |
| Shock | Method 516.6 Procedure 1 | 20G, 11mSec, 3 per axis |

Non-Operating Tests

| | | |
|--------------------------|-----------------------------|---|
| Low Temperature Storage | Method 502.5 | exposure(24h x 7 cycle) at -40°C min. |
| High Temperature Storage | Method 501.5 Procedure 1 | 71°C for 2 hours after temperature stabilization. |
| Vibration | Method 514.6 Category 24 | 200 to 2000Hz Test duration: One hour per axis; rms = 7.7 gs |
| Shock | Method 516.6 Procedure V | 40G, 11ms, 3 pluse. |



Ordering Information

SCH300

Cube Fanless Computer for EcoStruxure Computer with 9th Generation Intel® Core™ i9/i7/i5 Processors, 2 x RJ45 LAN , RAID 0/1 support, TPM onboard, HSR/PRP for optional, 6 x COM Ports, 4 x PoE (Up to 10 PoE for Optional), Wide range 9~48V DC-in, Operating Temperature -20°C to 60°C

SCH3X1

Cube Fanless Computer for EcoStruxure Computer with 9th Generation Intel® Core™ i9/i7/i5 Processors, 2 x RJ45 LAN, RAID 0/1 support, TPM onboard, HSR/PRP for optional, 2 x COM Ports, Wide range 9~48V DC-in, Operating Temperature -20°C to 60°C

Mechanical Dimensions

