CONTROLLERS DATASHEET

DF127

DCN Compute

smar
Technology Company

DF127 DCN Compute

TECHNICAL INFORMATION

Product Description

The O-PAS Architecture allows the construction of reliable, secure and scalable process automation systems, which do not require process shutdown to perform updates and extensions, and which can be applied in existing plants and in new constructions.

The main elements of this architecture are the DCNs, Distributed Control Nodes, which can be physical or virtual. The DCNs are responsible for performing I/O acquisition, control and gateway function applications for integration with existing devices and systems.

Smar's DF127 was developed in collaboration with Intel®, a company that is also part of OPAF. In this way, we bring to the world of industrial automation the powerful processors of the Intel® family, designed for complete distributed control solutions in full compliance with O-PAS.

Main Characteristics

- Hardware developed in collaboration with Intel®;
- O-PAS compatibility, version 2.1;
- Portability;
- Interconnectivity;
- Industrial installation;
- Intel Atom® x6200FE processor;
- 4x1000 Mbps RJ45 Ethernet ports;
- OPC-UA communication;
- 24V power supply with 2A consumption;
- USB 3.1 port;
- Debian Linux operating system.

System Composition

The Standalone System (DCN Base) consists of:

- A DCN module and its base.
- A Bridge board for interconnection between DCN and FIB.
- A Field Interface Board (FIB) that provides access to additional interfaces.

The DCN is responsible for computing, control and communication tasks.

The Field Interface Board provides communication/connectivity between the controller module and the accessible connectors. The DCN Base main power connector is installed in the FIB and requires a single 24 V power supply.

The following interfaces are available in FIB:

- Four RJ45 connectors, two on the top of the module (ETH0 and ETH1) and two on the bottom (ETH2 and ETH3). ETH0 and ETH1 are designated enp1s0 and enp2s0, respectively. ETH2 and ETH3 are reserved for future use.
- Two CAN-FD (Controller Area Network Flexible Data-Rate) interfaces – Future use
- Two 10BASE-T1S interfaces (option for RS-485 on the controller module) – Future use
- One USB 3.1 port.
- One 24 V power supply port.

A DIP switch allows the user to set the onboard termination to CAN-FD or 10BASE-T1S if required. Termination configuration can be monitored by on-board LEDs.

Power Supply

Input Points	One point
Input Voltage (nominal)	24 V ±15 %
Maximum Ripple	100 mV peak-to-peak
Input Voltage Slew Rate	Minimum: 0.1 ms Maximum: 20 ms
Input Current	2 A

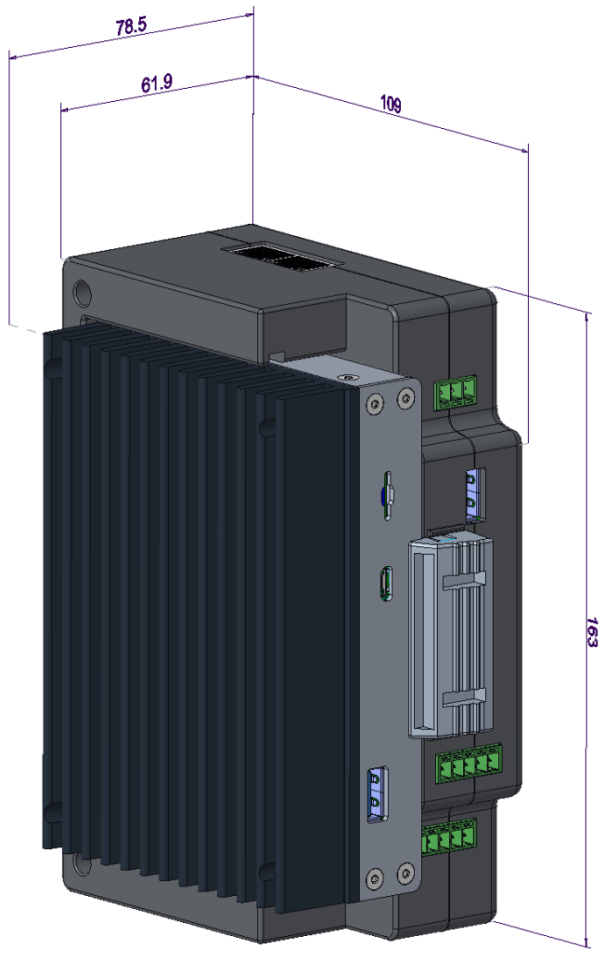
Energy Dissipation

Idle boot on Linux	11 W

Temperature Limits

Operating Temperature	-40 to 45 ºC

Dimensions



Measurements in mm.

Note: For most recent updates, please consult Smar website https://www.smar.com.br/en

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