DA-682C Series

Intel® 7th Gen Core™ CPU, IEC-61850, 2U rackmount computers with 2 expansion slots

Features and Benefits

- IEC 61850-3, IEEE 1613, and IEC 60255 compliant for power substation automation systems
- 7th Generation Intel® Core™ Processor
- DDR4 memory slot; up to 32 GB capacity
- Two hot-swappable 2.5-inch HDD or SSD storage expansion trays
- EN 50121-4 compliant for railway wayside applications
- Redundant power supply (100 to 240 VAC/VDC)

Certifications

IEC 61850-3 IEEE 1613 EN 50121-4 CE cULus

Introduction

The DA-682C computer is built around an Intel® Celeron® or Intel® Core™ i3, i5, or i7 CPU and comes with dual display ports (2 x HDMI), 6 USB ports, 6 Gigabit LAN ports, two 3-in-1 RS-232/422/485 serial ports, 6 digital input ports, and 2 digital output ports. The DA-682C is equipped with 2 hot-swappable 2.5” HDD/SSD slots and supports the Intel® RST RAID 0/1 functionality.

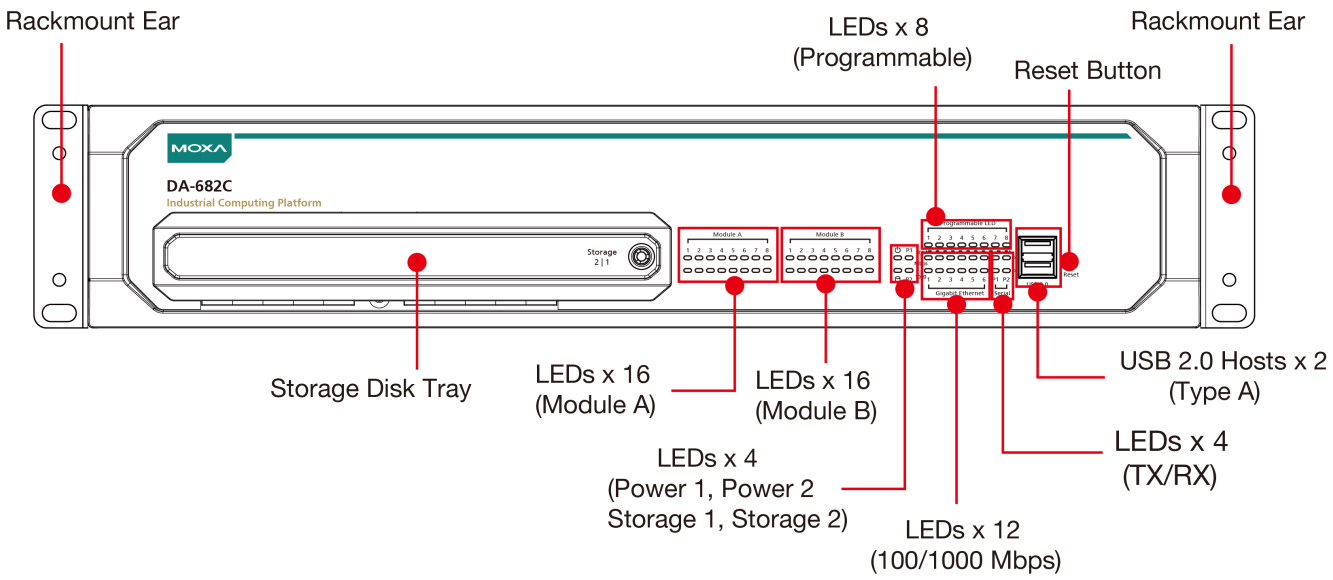
Additional value and convenience is provided through a modular design with two independent slots for flexible system integration and expansion. Users have the option to add a variety of different communications modules, including an 8-port RS232/422/485 module and a 4-port 10/100/1000 Mbps LAN module.

With IEC 61850-3 and IEEE 1613 compliance, the DA-682C is sure to deliver stable and reliable system operation for power applications. It also complies with the IEC 60255 standard, which covers the protection of electrical relays in a smart substation. IEC 60255 is one of the most widely used standards for testing relays and protection equipment, and compliance with the standard ensures that the DA-682C will work reliably and seamlessly with IEDs as part of a robust substation automation system.

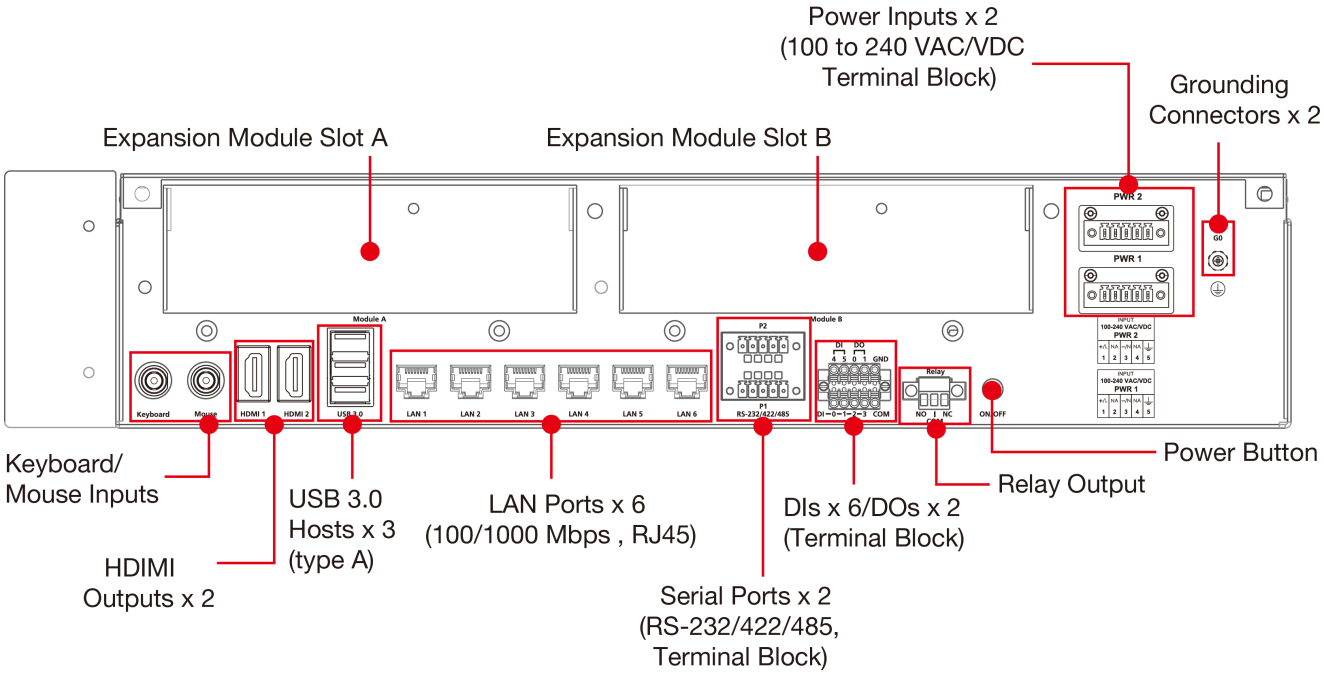
EN 50121-4 compliance confirms that the DA-682C can deliver stable and reliable system operations in rail wayside applications, such as station SCADA systems, wayside disaster prevention, traction power, and signaling and safety systems to provide an integrated view of your smart rail setup. The housing is a standard 2U, 19-inch wide, rack-mountable rugged enclosure. This robust, rackmount design provides the hardened protection needed for industrial environment applications.

Appearance

Front View



Rear View



Specifications

Computer

CPU	Intel® Core™ i7-7600U Processor (4M Cache, 2.8 GHz) Intel® Core™ i5-7300U Processor (3M Cache, 2.6 GHz) Intel® Core™ i3-7100U Processor (3M Cache, 2.4 GHz) Intel® Celeron® 3965U Processor (2M Cache, 2.2 GHz)
System Memory Slot	SODIMM DDR4 slot x 2

DRAM	32 GB max. capacity (SODIMM x 2, each supporting 2133 MHz and 16 GB maximum per module)
Graphics Controller	Intel® HD Graphics 630
Storage Slot	2.5-inch HDD/SSD slots x 2
Supported OS	Windows 10 Embedded IoT Ent 2019 LTSC 64-bit Linux Debian 9 Note: OS available by CTOS

Computer Interface

Video Output	HDMI x 2, HDMI connector (type A)
USB 2.0	USB 2.0 hosts x 3, type-A connectors 2 ports on the front panel, 1 port inside the computer
USB 3.0	USB 3.0 hosts x 3, type-A connectors 3 ports on the rear panel
Ethernet Ports	Auto-sensing 10/100/1000 Mbps ports (RJ45 connector) x 6
Serial Ports	RS-232/422/485 ports x 2, software-selectable (terminal block)

LED Indicators

System	Power x 1 Storage x 1 Programmable x 8
Serial	2 per port (Tx, Rx)
LAN	2 per port (10/100/1000 Mbps)

Serial Interface

Baudrate	300 bps to 115.2 kbps
ESD	8 kV (level 4)
Isolation	2 kV
Serial Standards	RS-232/422/485
Surge	2 kV
Connector	Terminal block

Serial Signals

RS-232	TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND
RS-422	Tx+, Tx-, Rx+, Rx-, GND
RS-485-2w	Data+, Data-, GND
RS-485-4w	Tx+, Tx-, Rx+, Rx-, GND

Power Parameters

Power Button	Reset button (front panel) ON/OFF (rear panel)
Power Consumption	900 mA @ 100-240 VAC 900 mA @ 100-240 VDC

Physical Characteristics

Housing	Metal
Dimensions (without ears)	440 x 282 x 88 mm (17.32 x 11.08 x 3.46 in)
Weight	9,900 g (21.82 lb)
Installation	19-inch rack mounting

Environmental Limits

Operating Temperature	-40 to 70°C (-40 to 158°F)
Storage Temperature (package included)	-40 to 85°C (-40 to 185°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMC	EN 55032/35
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV IEC 61000-4-5 Surge: Power: 4 kV; Signal: 4 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8: 300 A/m IEC 61000-4-11
Power Substation	IEC 61850-3, IEEE 1613
Shock	IEC 61850-3 Edition 2.0, IEC 60068-2-27, IEC 60255-21-2
Safety	UL 60950-1, UL 62368-1, EN 62368-1
Protection Relay	IEC 60255

Declaration

Green Product	RoHS, CRoHS, WEEE

MTBF

Time	365,750 hrs
Standards	Telcordia SR332

Warranty

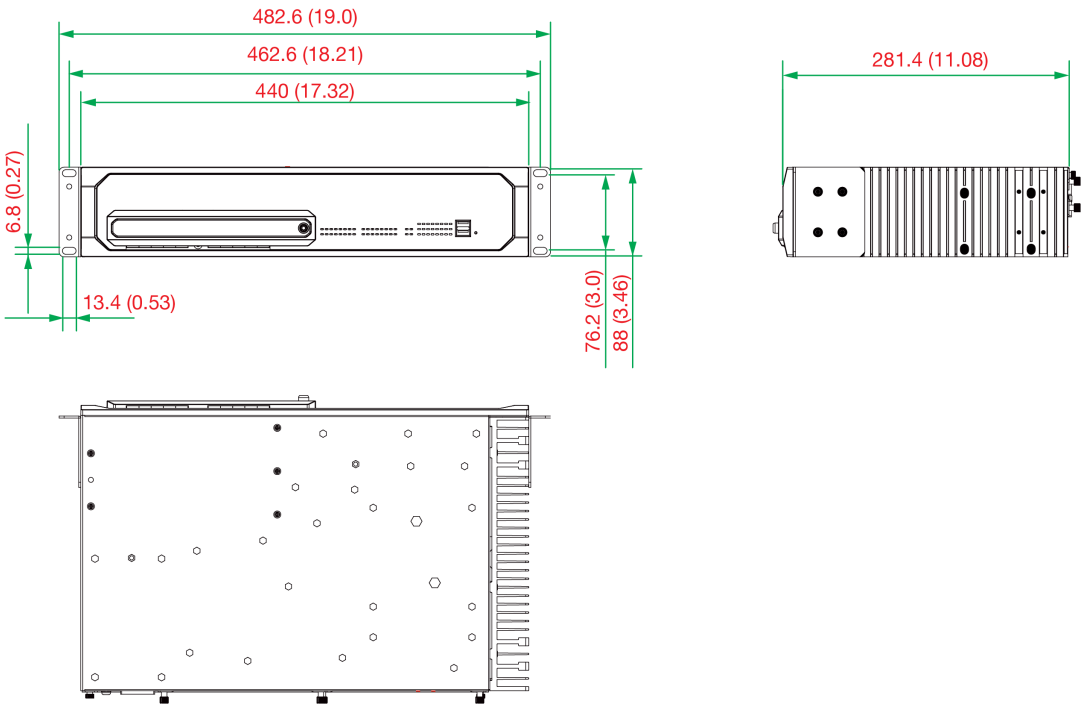
Warranty Period	3 years
Details	See www.moxa.com/warranty

Package Contents

Device	1 x DA-682C Series computer
Installation Kit	1 x rack-mounting ear
Documentation	1 x quick installation guide 1 x warranty card
Note	This product requires additional modules (sold separately) to function.

Dimensions

Unit: mm (inch)



Ordering Information

Model Name	CPU	Power Input 100-240 VAC/VDC	Operating Temp.
DA-682C-KL1-HH-T	Intel® Celeron® 3965U	Dual Power	-40 to 70°C
DA-682C-KL3-HH-T	Intel® Core™ i3-7100U	Dual Power	-40 to 70°C
DA-682C-KL5-HH-T	Intel® Core™ i5-7300U	Dual Power	-40 to 70°C
DA-682C-KL7-HH-T	Intel® Core™ i7-7600U	Dual Power	-40 to 70°C

Accessories (sold separately)

Expansion Modules

DN-LN04-RJ	4-port 10/100/1000 Mbps PCIe LAN module (RJ-45 connectors)
DN-SP08-I-TB	8-port RS-232/422/485 PCIe serial module (Terminal Block, software selectable)
DN-SP08-I-DB	8-port RS-232/422/485 PCIe serial module (DB9 connector, software selectable)