DA-682A Series

x86 2U 19-inch rackmount computers with 2nd Gen Intel® Celeron® or Core™ i7 CPU, 6 Gigabit Ethernet ports, and 2 PCI expansion slots

Features and Benefits

- EN 50121-4 compliant for railway wayside applications
- 2nd Gen Intel core processor (Sandy Bridge)
- Built-in DDR3 SDRAM and industrial DOM
- 6 Gigabit Ethernet ports for network redundancy
- 2 PCI expansion slots for expansion modules
- 1 CompactFlash socket for storage expansion
- 4 high-speed, system-bootable USB 2.0 ports
- 19-inch 2U rack-mountable case
- 100 to 240 VAC power input
- Ready-to-run Linux or Windows Embedded Standard 7 platform

Certifications

EN 50121-4   CE   FC   c(UL)us LISTED

Introduction

The DA-682A Series computers are x86 platforms with VGA, 6 Gigabit Ethernet ports, CompactFlash, USB, and two PCI ports for DA Series expansion modules. The DA-682A comes in a standard 19-inch 2U rack-mountable case. With their robust design, DA-682A computers are specialized for industrial automation applications: power substations, transportation and shipping, and oil and gas production and supply.
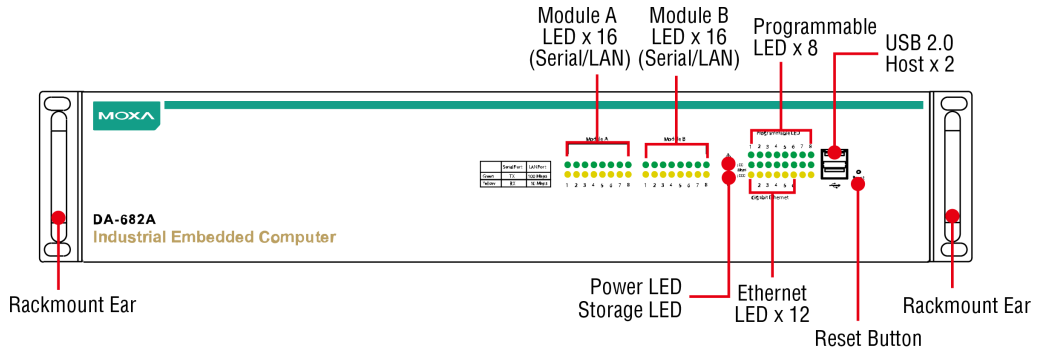
The DA-682A runs either Linux or Windows Embedded Standard 7, providing a friendly environment for developing sophisticated application software. Moxa's ready-to-run software and readily available after-service support make the programmer's job easier by helping them develop bug-free code quickly and at a lower cost. In addition, the DA-682A comes with three different CPU options and basic models that allow system designers to install the DOM, RAM, and operating system according to their specific requirements. These options provide greater versatility for building custom industrial solutions.

EN 50121-4 compliance confirms that the DA-682A can deliver stable and reliable system operations for rail applications. For station ISCS (Integrated Supervisory Control System) and wayside control and monitoring systems, a powerful front-end processor is needed for controlling the local SCADA and traction power relay house. The expandable serial interfaces and 6 Gigabit Ethernet ports enable the integration of station subsystems, including AFC, PAS, PSD, and FAS, on a single platform. For wayside applications, you can also integrate disaster prevention, traction power, and signaling and safety systems to provide an integrated view of your smart rail setup.
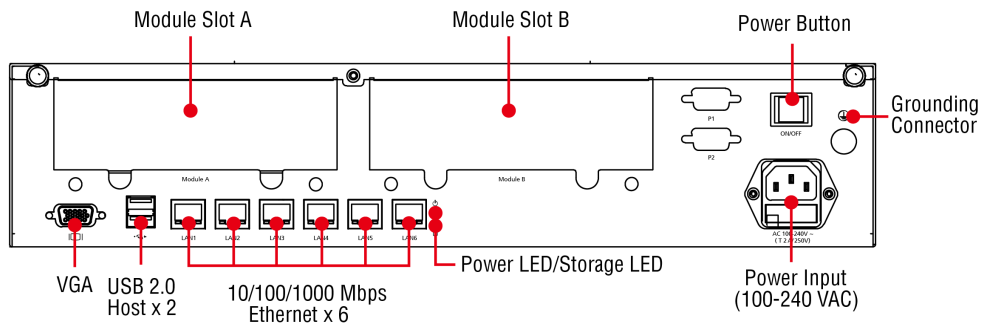
The DA-682A comes with 2 PCI ports that accept DA Series expansion modules. Moxa provides a variety of communication modules for the DA Series, including an 8-port RS-232/422/485 module, a 4-port 10/100 Mbps LAN module, and a universal PCI expansion module. This friendly design gives users the advantage of being able to swap out modules quickly and easily, making the DA-682A an ideal solution for a wide array of industrial automation applications.

Appearance

Front View

Module A LED x 16 (Serial/LAN)
Module B LED x 16 (Serial/LAN)
Programmable LED x 8
USB 2.0 Host x 2
Rackmount Ear
Power LED Storage LED
Ethernet LED x 12
Reset Button
Rackmount Ear

Rear View

Module Slot A
Module Slot B
Power Button
Grounding Connector
VGA
USB 2.0 Host x 2
10/100/1000 Mbps Ethernet x 6
Power LED/Storage LED
Power Input (100-240 VAC)

Specifications

Computer

CPU	DA-682A-C0 Series: Intel® Celeron® Processor 827E (1.5M Cache, 1.40 GHz) DA-682A-C1 Series: Intel® Celeron® Processor 847E (2M Cache, 1.10 GHz) DA-682A-C7 Series: Intel® Core™ i7-2610UE Processor (4M Cache, up to 2.40 GHz)
System Chipset	Mobile Intel® HM65 Express Chipset
Graphics Controller	Intel® HD Graphics
System Memory Pre-installed	DA-682A LX Series: 1 GB DDR3 DA-682A W7E Series: 2 GB DDR3
System Memory Slot	SODIMM DDR3/DDR3L slot x 1
Supported OS	Linux Debian 7 Windows Embedded Standard 7 (WS7P) 32-bit Windows Embedded Standard 7 (WS7E) 32-bit
Storage Slot	2.5-inch HDD/SSD slots x 2 DOMs x 1
Storage Pre-installed	DA-682A LX Series: 2 GB DOMs DA-682A W7E Series: 8 GB DOMs

Computer Interface

Ethernet Ports	Auto-sensing 10/100/1000 Mbps ports (RJ45 connector) x 6
USB 2.0	USB 2.0 hosts x 4, type-A connectors
Expansion Slots	PCI slots x 2
Video Input	VGA x 1, 15-pin D-sub connector (female)

LED Indicators

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

Power Parameters

Input Voltage	100 to 240 VAC
Power Button	ON/OFF (rear panel) Reset button (front panel)
Power Consumption	30 W (max.)

Physical Characteristics

Housing	Metal
Dimensions (without ears)	440 x 315 x 90 mm (17.32 x 12.40 x 3.54 in)
Weight	7,000 g (15.56 lb)
Installation	19-inch rack mounting

Environmental Limits

Operating Temperature	-10 to 60°C (14 to 140°F)
Storage Temperature (package included)	-20 to 80°C (-4 to 176°F)
Ambient Relative Humidity	5 to 95% (non-condensing)

Standards and Certifications

EMC	EN 61000-6-2/-6-4
EMI	CISPR 32, FCC Part 15B Class A
EMS	IEC 61000-4-11 DIPs IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 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: 20 A/m
Safety	EN 60950-1, UL 60950-1
Shock	IEC 60068-2-27

Declaration

Green Product	RoHS, CRoHS, WEEE

MTBF

Time	527,124 hrs

Warranty

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

Package Contents

Device	1 x DA-682A 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)
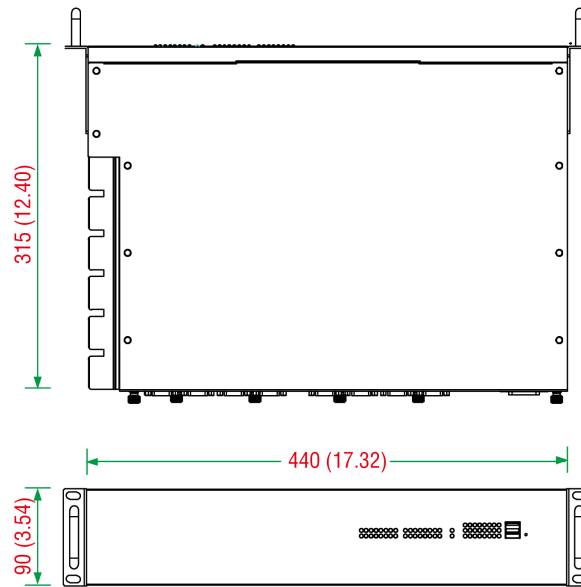
Ordering Information

Model Name	CPU	DDR3 RAM	OS Storage (DOM)	Linux Debian 7 32-bit	Windows Embedded Standard 7 32-bit	Power Input 100-240 VAC	Operating Temp.
DA-682A-C0	827E	–	–	–	–	✓	-10 to 60°C
DA-682A-C0-LX	827E	1 GB	2 GB	✓	–	✓	-10 to 60°C
DA-682A-C0-W7E	827E	2 GB	8 GB	–	✓	✓	-10 to 60°C
DA-682A-C1	847E	–	–	–	–	✓	-10 to 60°C
DA-682A-C1-LX	847E	1 GB	2 GB	✓	–	✓	-10 to 60°C
DA-682A-C1-W7E	847E	2 GB	8 GB	–	✓	✓	-10 to 60°C
DA-682A-C7	i7-2610UE	–	–	–	–	✓	-10 to 60°C
DA-682A-C7-LX	i7-2610UE	1 GB	2 GB	✓	–	✓	-10 to 60°C
DA-682A-C7-W7E	i7-2610UE	2 GB	8 GB	–	✓	✓	-10 to 60°C

Accessories (sold separately)

Expansion Modules

DA-SP08-I-EMC4-DB	8-port RS-232/422/485 serial module with DB9 connector and isolation; suitable for EMC Level 4 environments

DA-SP08-I-EMC4-TB	8-port RS-232/422/485 serial module with terminal block connector and isolation; suitable for EMC Level 4 environments
DA-SP08-I-DB	8-port RS-232/422/485 serial module with a digitally isolated DB9 connector
DA-SP08-DB	8-port RS-232/422/485 serial module with DB9 connector
DA-SP08-I-TB	8-port RS-422/485 serial module with digitally isolated terminal block
DA-SP38-I-TB	8-port RS-422/485 serial module with digitally isolated terminal block
DA-SW08-RJ	8-port 10/100 Mbps unmanaged switch module
DA-LN04-RJ	4-port 10/100 Mbps LAN module
DA-UPCI-DK	Universal PCI development kit
DA-FX04-MM-ST-T	4-port (100BaseFX) fiber LAN module with multi-mode, ST connector, supports IP Teaming

Storage Kits

DA-682A HDD Kit	DA-682A HDD kit

USB Dongle Kits

USB Dongle Kit	Internal USB dongle kit installation package

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