

POC-100 Series

Ultra-compact Atom D525 Fanless Embedded Controller



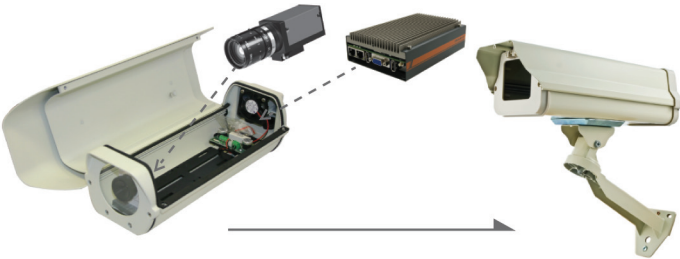
- Ultra-compact in 15 cm x 10 cm dimension
- Intel® Atom™ D525 1.8GHz Dual-core processor
- Rugged, -20 °C to 60 °C fanless operation
- On-board soldered 2GB DDR3 memory
- Dual Gigabit Ethernet ports
- mSATA and 2.5" SATA HDD dual storage devices
- Up to two RS-232/422/485 ports and two RS-232 ports
- Versatile mounting design

Introduction

Take advantage of the ultra compactness of Neousys’ POC-100 fanless embedded controller! POC-100 condenses a complete computer system into the size of a 3.5” hard drive. It comprises Intel® Atom™ D525 processor, on-board soldered 2GB DDR3, dual GbE ports, COM ports and USB ports to fit general application requirements. Inside POC-100, there are SATA port, mSATA socket, mini-PCIe socket and two optional COM ports for further system configuration. Reliability is another key advantage of POC-100. Its fan-less and cable-less mechanical design give POC-100 superior durability, while soldered DDR3 memory offers exceptional shock/vibration resistance. The aluminum-extrusion heat sink is cautiously designed to allow a -20 °C to 60 °C operating temperature range. The compactness of POC-100 introduces a great benefit for deployment. This highly integrated controller module can be placed and replaced easily in any restricted space. Compact but delicate with full completion, POC-100 is the fitting “brain” for various machines and equipments.

Application Example (I) – A Smarter Smart Camera

Off-the-Shelf smart cameras are typically come with built-in DSP and pre-defined image processing algorithms. This brings convenience but also limitation, as DSP programming is relatively difficult compared to x86-based programming. The compact size of POC-100 makes it possible to integrate a GigE camera and a x86 controller in a common camera housing. Now you can have a camera system incorporates greatest flexibility for customized algorithms, storing image data, and dealing with database server. That is, you’ll have a Smarter Smart Camera.



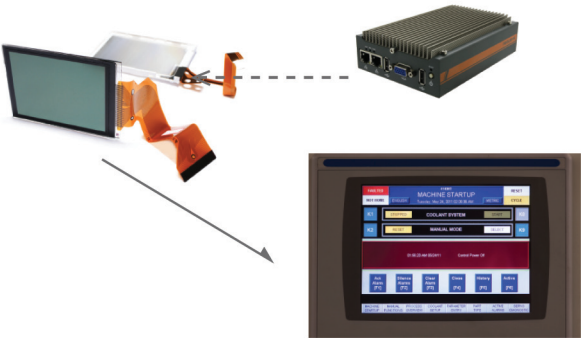
Application Example (II) – The Brain of a PCB Alignment Machine

PCB alignment machine is a typical application that incorporates both motion control and image processing. As POC-100 supports multiple RS-232/422/485 ports and GbE ports, and is capable to communicate with PLC/drive and grab images from cameras. The compact, modular design of POC-100 makes it not only simple to install in a narrow space, but also easy to maintain. In addition, its fanless architecture brings exceptional reliability for a machine/equipment especially operated in a harsh environment.



Application Example (III) – A Rugged HMI Panel or Hand-Held Device

Providing LVDS and backlight control signals, POC-100 can be directly attached to a LCD panel to compose an integrated device with display. We give POC-100 a flexible mechanical design so you can easily fit it to a customized case. And its fanless design eliminate thermal concerns for system integrators when developing a rugged HMI panel. As the size of POC-100 is smaller than a typical 7” LCD panel, it is also a good fit for a rugged hand-held device.



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POC-100 Series Specifications

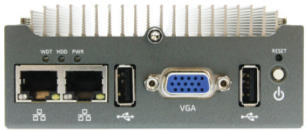


System Core		Power Supply	
Processor	Intel® Atom™ D525 1.8GHz dual-core processor	DC Input	Built-in 8~25 VDC DC input
Chipset	Intel® ICH8-M I/O Control Hub	Input Connector	1x 2-pin pluggable terminal block for DC input(POC-100BK) 1x DC jack (ø2.5) for AC/DC adapter input(POC-100RK)
Graphics	Integrated Intel® GMA 3150 graphics		
Memory	On-board soldered 2GB DDR3 800MHz SDRAM	Mechanical	
Panel I/O Interface		Dimension	149mm (W) x 105 mm (H) x 44 mm (D)
Ethernet	2x Gigabit Ethernet ports by Intel® I210	Weight	1.0 kg (including one 2.5” HDD)
Video Port	1x DB-15 connector for VGA output, supporting 2048 x 1536 resolution	Mounting	Wall-mounting (standard) or DIN-Rail mounting (optional)
Internal I/O Interface		Environmental	
Serial Port	1x software-programmable RS-232/422/485 (COM1) 1x RS-232 (COM2)	Operating Temperature	-20°C ~ 60°C with SSD or mSATA, 100% CPU loading */** -10°C ~ 50°C with HDD, 100% CPU loading */**
USB	3x USB 2.0 ports	Storage Temperature	-40°C ~85°C
Audio	1x Speaker-out	Humidity	10%~90% , non-condensing
Storage Interface		Vibration	Operating, 5 Grms, 5-500 Hz, 3 Axes (w/ SSD, w/o add-on card, according to IEC60068-2-64)
SATA HDD	1x SATA ports with 2.5” HDD/SSD bracket	Shock	Operating, 50 Grms, Half-sine 11 ms Duration (w/ SSD, w/o add-on card, according to IEC60068-2-27)
mSATA	1x mSATA socket	EMC	CE/FCC Class A, according to EN 55022 & EN 55024

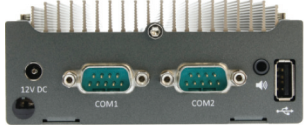
\* The CPU loading is applied using Intel® Thermal Analysis Tool. For detail testing criteria, please contact Neousys Technology  
\*\* For sub-zero operating temperature, a wide temperature HDD drive or Solid State Disk (SSD) is required.



POC-100 Inside



POC-100 Front



POC-100 Back



POC-100BK



POC-100RK