



# PCOM-B21A

Intel® Atom™ Processor N2600/N2800 based  
Type 10 Nano COM Express Module with DDR3  
SDRAM, VGA, LVDS, DP, Gigabit Ethernet and USB



The footprint of Portwell's PCOM-B21A Nano COM Express module is only the size of a business card (84mm x 55mm). The multi-core Intel Atom processor N2600/N2800 and the Intel NM10 chipset enable the PCOM-B21A to provide rich I/O interfaces and expansions such as PCIe, LAN, USB and multi-display features. The Portwell PCOM-B21A series is designed to perform with less than 12W low power consumption and cost-effective dual-core solution. The PCOM-B21A features a fan-less system capable of withstanding a wide temperature range of -40 to 80 degree Celsius, making it suitable for military and aerospace communications and the environments in which they operate.

## GENERAL

processor	- Intel® Atom™ N2600 1.60GHz dual-core CPU (3.5W) - Intel® Atom™ N2800 1.86GHz dual-core CPU (6.5W)
Chipset	Intel® NM10 (2.1 W)
BIOS	Phoenix BIOS Support UEFI 2.0, ACPI 3.0, SMBIOS 2.7 compatibility support module
Memory	- N2600 / Support DDR3 modules at speed of 1066MT/s up to 2 GB - N2800 / Support DDR3 modules at speed of 1066MT/s up to 4 GB
Storage Devices	- 2x SATA 3.0Gb/s - (Optional) On board SATA SSD
Watchdog Timer	Programmable via S/W from 1 sec to 255 min
Hardware Monitoring	LM87 CPU, voltage and temperature
Expansion Interface	4x PCI Express x1 Gen1 (2.5GT/s) of which can be configured to one PCI Express x4 Gen1

## FEATURES

- The Intel® Atom N2600 / N2800 embedded processor and NM10 platform that provides cost effective solutions with low power and dual core processor technology
- Supports four PCI Express lanes, four x 1 lanes can be configured to one x 4 lane
- Supports one DDR3 1067MT/s SDRAM, UP to 2GB
- Supports eight USB2.0
- Supports dual independent displays of LVDS and DP

## ORDERING GUIDE

AB1-3874	(R).PCOM-B21A-N2600. TYPE 10, Mini COM-Express
AB1-3875	(R).PCOM-B21A-N2800. TYPE 10, Mini COM-Express

## I/O INTERFACE

Super I/O	N/A
Audio	Intel® High Definition Audio (2x channels delivering 192-KHz 32-bits, and 8x channels delivering 96-KHz 32-Bits)
Ethernet	- Intel® 82583V Gigabit LAN - Support Message Signaled Interrupts (MSI)
USB	8x USB 2.0 (480 Mb/s bus comprehends the high-speed/full-speed/low-speed data ranges)
GPIO	8bit configurable controlled by embedded controller

## DISPLAY

Graphic Controller	Intel® Graphics Media Accelerator 3650/3600, support DX10.1, OGL3.0, graphic core frequency up to 640MHz
Display Interface	- CRT: Resolution up to 1920x1200 - LVDS: N2600/N2800 1x18bps, resolution up to 1366x768 - DP: N2600/N2800: resolution up to 1600x1200

## Mechanical & Environment

Dimension	84mm (L) x 55mm (W)
Power Supply	Support wide voltage input 4.75V~20V
Environment	- Operation temperature: N2600: -40~80°C, N2800: 0~60°C - Storage temperature: -40~85°C - Relative humidity: 5~95%, non-condensing
MTBF	Over 120,000 hours at 40°C

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