



## Features

- LGA1156 Intel® Core™ i7/i5/i3, Pentium® Dual Core Processor
- Intel® Q57 Express Chipset supports PCI Express 2.0
- Intel® Matrix Storage Technology, supports RAID 0/1/5/10
- Dual-Channel DDR3-1066/1333 MHz, up to 8GB
- PCIe Mini Card slot
- 6x COM ports (including 2x RS-232/422/485)

## Specifications

### Processor & System

CPU	Intel® Core™ i7-860 Processor, 2.80 GHz, 8M Cache, 45nm, 95W TDP, LGA1156 (4 cores/8 threads) Intel® Core™ i5-750 Processor, 2.66 GHz, 8M Cache, 45nm, 95W TDP, LGA1156 (4 cores/8 threads) Intel® Core™ i5-660 Processor, 3.33 GHz, 4M Cache, 32nm, 73W TDP, LGA1156 (2 cores/4 threads) Intel® Core™ i3-540 Processor, 3.06 GHz, 4M Cache, 32nm, 73W TDP, LGA1156 (2 cores/4 threads) Intel® Pentium® Dual Core G6950 Processor, 2.80 GHz, 3M Cache, 32nm, 73W TDP, LGA1156 (2 cores/4 threads)
Chipset	Intel® Q57 Express Chipset (Ibex Peak)
Memory	2x 240-pin DIMM sockets Dual-channel DDR3 1066/1333MHz, up to 8GB
TPM	Infineon® SLB9635 TT1.2 (optional)
BIOS	AMIBIOS® 8MB SPI flash memory
Watchdog Timer	1-255 sec. or min. software programmable, can generate system reset
Hardware Monitor	CPU/System temperature, fan speed and onboard DC voltages
Operating Systems	Windows® XP, 7 32/64-bit, Server 2008 Fedora™ 12, Redhat Enterprise Linux 5

### I/O Interfaces

Serial ATA	6x SATA 3 Gb/s ports Intel® Matrix Storage Technology, supports RAID 0/1/5/10
Expansion Slots	1x PCIe Mini Card slot
USB	8x USB 2.0 ports (2x faceplate, 6x onboard pin headers)
KB/MS	1x onboard pin header for PS/2 keyboard/mouse
Parallel Port	1x LPT
Serial Port	4x RS-232, 2x RS-232/422/485

### Audio

Audio Codec	Realtek® ALC262 support by DB-Audio2 daughter board
Interface	Pin header for High Definition Audio interface

### Display

Integrated Graphics	Integrated in i5-660/i3-540/G6950 processor
External Graphics	PCI Express Mini Card slot for optional mPCIe-8770 Onboard pin header for DVI-D (optional)

### Ethernet

Controller	Dual Intel® 82574L Gigabit Ethernet Controller (optional)
Interface	PCIe x1 bus
Wake On LAN	Yes

### Mechanical and Environmental

Form Factor	PICMG® 1.0
Dimensions	338 mm x 122 mm (L x W)
Operating Temp.	0°C to 60°C
Storage Temp.	-20°C to 80°C
Certifications	CE, FCC Class A
Relative Humidity	10% to 90%, non-condensed

## Ordering Information

Model Number	Description/Configuration
NuPRO-A331/DV	PICMG 1.0® Full-Size Intel® Core™ i7/i5/i3 LGA1156 SBC with DDR3, Dual-GbE, mini PCIe slot, TPM, DVI
NuPRO-A331/LV	PICMG 1.0® Full-Size Intel® Core™ i7/i5/i3 LGA1156 SBC with DDR3, Single-GbE

## Optional Accessories

Model Number	Description/Configuration
LGA1156 1U CPU Cooler	LGA1156 1U Thermal Module
LGA1156 2U CPU Cooler	LGA1156 2U Thermal Module
LGA1156 3U CPU Cooler	LGA1156 3U Thermal Module
DB-Audio2	High Definition Audio daughter board with Mic-in/Line-in/Line-out
mPCIe-8770	PCIe 2D VGA Display Card
DVI cable with bracket	
LPT cable with bracket	
PS/2 cable with bracket for keyboard/mouse	

## Packing List

NuPRO-A331	1x USB 2.0 cable with bracket
3x 2-port COM cables with bracket	2x SATA data cable
Driver DVD	User's manual