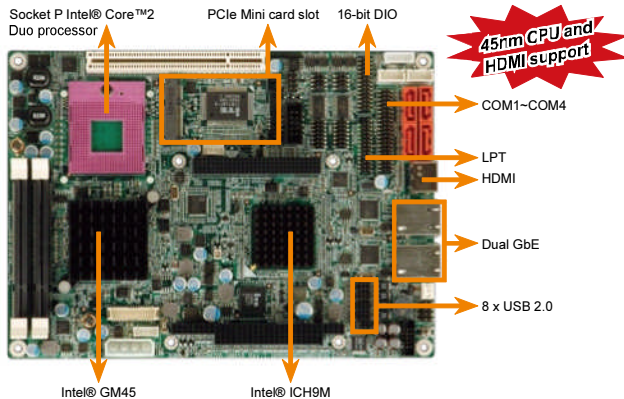


# NOVA-GM45A

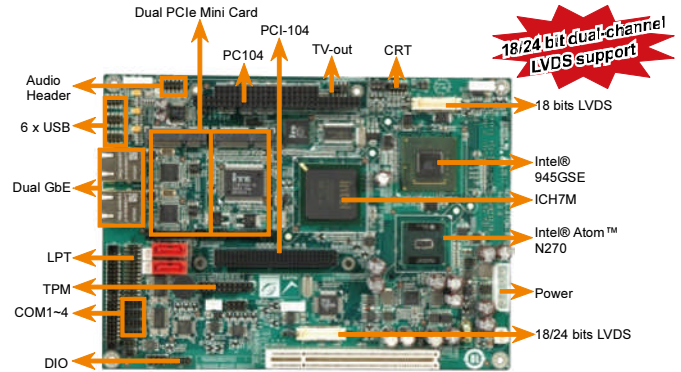
5.25" SBC with Socket P for Intel® 45nm mobile Core™2 Quad/Duo Penryn CPU, VGA/HDMI/LVDS, Dual PCIe GbE, USB 2.0, PCIe Mini, SATA 3Gb/s and Audio



45nm CPU and HDMI support

# NOVA-945GSE-R20

5.25" SBC, Intel® Atom™ N270 1.6GHz, LVDS/ VGA/ HDTV, Dual PCIe Mini, Dual PCIe GbE, USB 2.0, SATA, RoHS



18/24 bit dual-channel LVDS support



## Features

1. Socket P for Intel® 45nm mobile Core™2 Quad processor with 1066MHz FSB and DDR2 800MHz memory support.
2. Intel® GMA X4500 for DX10, Shader Model 4.0, high-performance MPEG-2 decoding, WMV9 (VC-1) and H.264 (AVC) support
3. VGA, LVDS and HDMI display output interfaces supported
4. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

## Specifications

- ◆ CPU  
Socket P Intel® 45nm Core™ 2 Quad/Duo processor with 1066/800MHz FSB  
Socket P Intel® 45nm Pentium® M/ Celeron® M processor with 800/667MHz FSB
- ◆ FSB  
667/800/1066MHz
- ◆ System Chipset  
Intel® GM45+ICH9M
- ◆ Memory  
Two 200-pin 800/667 MHz DDR2 SDRAM SO-DIMM supported (system max. 4GB)
- ◆ BIOS  
AMI BIOS Label
- ◆ Graphic  
Intel® GMA4500MHD
- ◆ Display Output  
VGA integrated in the Intel®GM45 support up to QXGA  
1 x 18/24-bit dual-channel LVDS  
1 x HDMI output resolution supports up to 1080p resolution
- ◆ LAN  
Dual Realtek RTL8111CP PCIe GbE controllers
- ◆ I/O interface  
4 x RS-232 2 x RS-232/422/485  
8 x USB 2.0 1 x LPT  
4 x SATA 3Gb/s  
1 x KB/MS (by 6-pin header 2.00mm pitch)
- ◆ Digital I/O  
16-bit digital I/O, 8-bit input / 8-bit output
- ◆ Extension  
1 x PCI slot  
1 x PC/104+ (ISA+PCI bus)  
1 x PCIe Mini card slot ( USB+PCIe signal)
- ◆ Fan connector  
1 x 4-pin CPU fan  
1 x 3-pin system fan
- ◆ Super I/O  
ITE IT8718F
- ◆ Audio  
Realtek ALC888 HD Codec
- ◆ Watchdog Timer  
Software Programmable support 1~255 sec. system reset
- ◆ Power  
+12V only, AT/ATX power support
- ◆ Power Consumption  
12V@5.76A ((2.26GHz Intel® Core2 Quad Q9100 with a 1066MHz FSB and two 2GB 800MHz DDR2 SO-DIMM running 3D Mark2001SE)
- ◆ Temperature  
Operation: 0°C ~ 60°C (32 ~ 140°F)
- ◆ Humidity  
Operation: 5% ~ 95%, non-condensing
- ◆ Dimensions  
203 mm x 146 mm
- ◆ Weight  
GW: 850g / NW:290g

## Packing List

1 x NOVA-GM45A single board computer	
2 x SATA 5V power output cable kit (P/N: 32801-000100-100-RS)	
1 x Quad ports RS-232 adapter cable (P/N: 32100-147900-RS)	
1 x Audio cable (P/N: 32000-072100-RS)	
1 x KB/MS Y cable (P/N: 32000-023800-RS)	1 x VGA cable (P/N: 32000-033800-RS)
1 x USB cable (P/N: 32000-070301-RS)	1 x Mini jumper pack
1 x Utility CD	1 x QIG

## Ordering Information

Part No.	Description
NOVA-GM45A-R10	5.25" SBC with Socket P for Intel 45nm mobile Core 2 Quad/Duo Penryn CPU, VGA/HDMI/LVDS, Dual PCIe GbE, USB2.0, PCIe mini, SATA 3Gb/s and Audio
CB-USB02A-RS	Dual USB cable with bracket
32102-000100-200-RS	SATA power cable
32200-026500-RS	RS-232/422/485 cable
CF-479B-RS	CPU cooler (50mm x 50mm x 26mm, 50W)
SAIDE-KIT01-R10	SATA to IDE/CF converter board
WMPCIE-V01-R30	PCIe mini card wireless LAN module
WMUSB-V01-R20	USB mini card wireless LAN module
32200-015100-RS	LPT cable



## Features

1. Intel® Atom™ Processor N270 1.6GHz for fanless support
2. DDR2 400/533 SO-DIMM memory support up to 2GB
3. Support dual PCIe mini card/ PCI slot for expansion
4. Dual LVDS support dual display output
5. CF socket for storage expansion
6. TPM support
7. IEI One Key Recovery solution allows you to create rapid OS backup and recovery

## Specifications

- ◆ CPU  
Intel® Atom™ N270 1.6GHz with a 533MHz FSB
- ◆ System Chipset  
Intel® 945GSE+ICH7M
- ◆ BIOS  
AMI BIOS
- ◆ Memory  
One 200-pin 400/533 DDR2 SDRAM SO-DIMM supported (system max. 2GB)
- ◆ Ethernet  
Dual Realtek PCIe RTL8111CP GbE LAN
- ◆ Graphic  
On Intel® Graphics Media Accelerator 950
- ◆ I/O Interface  
3 x RS-232 1 x RS-232/422/485  
6 x USB2.0 2 x SATA with 5V output  
1 x LPT 1 x IDE  
1 x 6-pin header for KB/MS
- ◆ Expansion  
1 x PC/104+ (ISA+PCI bus)  
2 x PCIe mini card  
1 x PCI
- ◆ Digital I/O  
8-bit digital I/O (4-bit input, 4-bit output)
- ◆ Infrared Interface  
1x 5-pin Infrared Interface by pin header
- ◆ Super IO  
ITE8718F
- ◆ Display Output  
Analog CRT Support for CRT Hot plug  
Support HDTV by component interface  
18/24 bit dual-channel LVDS by Chronitel CH7308B (NOVA-945GSELVDS2-N270-R20)  
18 bit dual-channel LVDS by Intel® 945GSE
- ◆ Audio  
AC'97 ALC655 codec
- ◆ SSD  
CF Type II
- ◆ Watchdog Timer  
Software programmable support 1~255 sec. system reset
- ◆ TPM  
1x 20-pin header
- ◆ Power Supply  
5V only, 12V for LCD/System FAN, AT/ATX Power
- ◆ Power Consumption  
5V@3.49A (Intel® Atom™ N270 with 512MB DDR2)
- ◆ Temperature  
Operation: 0 ~ 60° C (32 ~ 140° F)
- ◆ Humidity  
Operation: 5% ~ 95%, non-condensing
- ◆ Dimensions: 203mm x 146mm
- ◆ Weight: GW:1000g, NW:400g

## Packing List

1 x NOVA-945GSE-R20 single board computer	
1 x KB/MS Y cable (P/N: 32000-023800-RS)	
1 x Audio cable (P/N: 32000-072100-RS)	1 x VGA cable (P/N: 32000-033804-RS)
2 x SATA cable (P/N: 32000-062800-RS)	1 x USB cable (P/N: 32000-070301-RS)
4 x RS-232 cable (P/N: 32200-000049-RS)	1 x Mini jumper pack
1 x Utility CD	1 x QIG

## Ordering Information

Part No.	Description
NOVA-945GSE-N270-R20	5.25" SBC, Intel® Atom™ N270 1.6GHz, 18 bits LVDS/ VGA/ HDTV, Dual PCIe Mini, Dual PCIe GbE, USB2.0, SATA, RoHS
NOVA-945GSELVDS2-N270-R20	5.25" SBC, Intel® Atom™ N270 1.6GHz, 18+24 bits LVDS/ VGA/ HDTV, Dual PCIe Mini, Dual PCIe GbE, USB2.0, SATA, RoHS
HDTVCAABLESET-01	HDTV cable set with S-Video, composite and component Interfaces
32200-000009-RS	44pin 2.5" IDE cable
32102-000100-200-RS	SATA power cable
32200-015100-RS	LPT cable
WMPCIE-V01-R30	802.11b+g PCIe mini card wireless LAN module
WMUSB-V01-R20	802.11b+g USB embedded module
32200-833600-RS	RS-422/485 cable

Solder side



SO-DIMM CF Type II

1 Industrial Computing Solutions

2 Video Capture Solutions

3 Embedded Computing Solutions

4 Industrial Data Collector and Controller

5 Panel Solutions Introduction

6 ORing Network Communication

7 Power Supply/ Peripherals