GAINWARD

Premium Brand of #1 NVIDIA Board Partner

GAINWARD GeForce GTX 980 Ti
PHOENIX *"Golden Sample"*

Specifications

Process Technology	28nm	Base Clock	1152 MHz
Processor Cores	2816 cores	Boost Clock	1241 MHz
Memory Amount	6144MB	Memory Clock	3500 MHz
Memory Type	384b GDDR5	Memory Bandwidth	336 (GB/Sec)

Key Features

- NVIDIA Maxwell architecture, 6GB on board memory
- NVIDIA GPU Boost 2.0
- NVIDIA Dynamic Super Resolution technology
- NVIDIA MFAA technology
- NVIDIA GameStream technology
- NVIDIA GameWorks technology
- NVIDIA SHIELD ready
- NVIDIA Adaptive Vertical Sync
- NVIDIA G-SYNC ready
- Microsoft DirectX 12 support
- NVIDIA PhysX technology
- NVIDIA CUDA technology
- NVIDIA 3D Vision and NVIDIA Surround ready
- NVIDIA SLI technology
- PCI Express 3.0 support
- OpenGL 4.5 and OpenCL support
- Support for four concurrent displays

Gainward Unique Features

OC Performance 11%
- ✓ Factory over-clocked

Extreme Silent 6dB
- ✓ Extreme silent acoustics in 3D heavy loading under factory over-clocked speed

Extreme Cool 10°C
- ✓ Extreme cool in 3D heavy loading under factory over-clocked speed

Expertool II
- ✓ Gainward's Expertool II – the brand-new utility adds flexible fan curve control and BIOS saving feature for powerful GTX 980 Ti card.
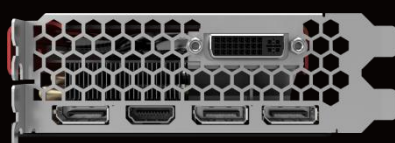
Output Support

HDMI : (max. resolution) 4096x2160@60Hz
DP *3 : (max. resolution) 4096x2160@60Hz
DVI-I : (max. resolution) 2560x1600@60Hz

Minimum system requirements

Graphics card require:
- PCI Express-compliant motherboard with one dual-width x16 graphics slot
- 8-pin + 6-pin PCI Express supplementary power connectors
- Minimum 600W or greater system power supply
- Microsoft Windows 10, 8, 7, Vista

Dimension

Board: 292mm(L)x112mm(W)
Cooler : 2 slot
Bracket: 2 slot

Accessory

1. Driver Disc
2. Manual
3. Power cable
4. DVI to VGA adapter

GW GTX980Ti_Phoenix_GS_bar code: 426018336-3477

Gamer's Spirit!
www.gainward.com

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PHOENIX

SUPERIOR Hardware Design

EXPER X TOOL II

DrMOS

✓ Gainward new fan design

Two-slot, Triple fan

- ✓ great thermal performance
- ✓ super low acoustic level
- ✓ low components temperature to ensure long life time
- ✓ 2-slot design

Zero RPM fan design

- ✓ All the fans will start to work for cooling the board when the GPU's temperature raises to 60°C or higher.
- ✓ Keep silent while under light loading operation

Back plate

✓ A back plate is fabricated on the back side of the board. To prevent from any accidently damaging to the components located on solder side. Also, help to lower the temperature of the board.

Extreme silent acoustics in heavy loading mode

Gainward GTX 980 Ti Phoenix "GS" with factory over-clocked speed gets **6dB** quieter than reference board under full load operation.

Extreme cool temperature in heavy loading mode

Gainward GTX 980 Ti Phoenix "GS" with factory over-clocked speed performs **10°C** lower GPU temperature than reference board with reference clock.

✓ Gainward superior hardware design

With the experience of the Gainward's award winning high-performance/wide-bandwidth hardware design, GeForce GTX 980 Ti, again, with re-designing the entire hardware, that brings –
1) lower energy loss
2) lower EMI level
3) higher stability under high current operation (heavy loading operation).

6-phase + 2 PWM Power Balance

Gainward designs six phases +2 power supply with DrMOS for GPU core and two phases power supply for graphics memory that helps to supply enough fuel to the 3D graphics engine and memory chips. Those 6 phases +2 PWM for those 2816 cores dynamically balance current loading for each phase to maximize the efficiency and stability the voltage level , the overall efficiency can be improved, the choke noise and EMI noise also be reduced.

DrMOS

Gainward continues using DrMOS in those phases of PWM for core power circuit. DrMOS is designed to handle high current with low noise operation and less heat generating.

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