

ASUS TURBO-GTX1080-8G

ASUS GeForce GTX 1080 TURBO-GTX1080-8G Graphics Card User Manual

1. PRODUCT OVERVIEW

The ASUS GeForce GTX 1080 TURBO-GTX1080-8G is a high-performance graphics card designed for an immersive gaming and computing experience. It features NVIDIA GeForce GTX 1080 GPU with 8GB GDDR5X memory, delivering exceptional graphics processing power. Key features include a dual-ball bearing fan for extended lifespan and efficient cooling, ASUS Auto-Extreme Technology for premium quality and reliability, and VR-friendly HDMI ports for virtual reality applications. The card also supports NVIDIA Ansel for advanced in-game screenshots and NVIDIAameworks for enhanced cinematic experiences.



Image 1: Front view of the ASUS GeForce GTX 1080 TURBO-GTX1080-8G Graphics Card.

2. SETUP AND INSTALLATION

Follow these steps to properly install your ASUS GeForce GTX 1080 graphics card into your computer system:

1. **Prepare Your System:** Power off your computer and unplug all cables from the power outlet. Open your computer case.
2. **Locate PCI Express Slot:** Identify an available PCI Express 3.0 x16 slot on your motherboard. This card requires a dual-slot space.
3. **Remove Slot Covers:** Remove the two corresponding expansion slot covers from the back of your computer case.
4. **Insert Graphics Card:** Carefully align the graphics card with the PCI Express slot and press it firmly until it is securely seated. Ensure the retention clip on the motherboard slot locks into place.
5. **Secure the Card:** Use screws to fasten the graphics card to the computer case at the expansion slot bracket.
6. **Connect Power:** Connect the required PCIe power connectors from your power supply unit (PSU) to the graphics card. The GTX 1080 typically requires one 8-pin PCIe power connector. Ensure your PSU has sufficient wattage.
7. **Close Case and Connect Peripherals:** Close your computer case. Reconnect all peripherals, including your display monitor, to the graphics card's output ports (DisplayPort, HDMI, DVI-D).
8. **Install Drivers:** Power on your computer. Once the operating system loads, install the latest NVIDIA drivers for your graphics card. These can be downloaded from the official ASUS or NVIDIA website.

3. OPERATING INSTRUCTIONS

Once installed and drivers are updated, your ASUS GeForce GTX 1080 is ready for use. Here are some operational guidelines:

- **Display Connection:** Connect your monitor(s) to the available DisplayPort, HDMI, or DVI-D ports on the graphics card. For optimal performance, use DisplayPort for high refresh rate monitors.
- **VR Experience:** Utilize the VR-friendly HDMI ports for seamless connection to virtual reality headsets, ensuring an immersive experience.
- **GPU Tweak II:** Install and use the ASUS GPU Tweak II software for intuitive performance tweaking, monitoring, and instant gameplay streaming with XSplit Gamecaster. This utility allows you to adjust clock speeds, voltage, and fan performance.
- **NVIDIA Features:** Take advantage of NVIDIA Ansel for capturing professional-grade in-game photos and NVIDIA Gameworks for realistic visual effects in supported games.
- **Driver Updates:** Regularly check for and install the latest NVIDIA graphics drivers to ensure optimal performance, stability, and compatibility with new games and applications.

4. MAINTENANCE

Proper maintenance ensures the longevity and optimal performance of your graphics card:

- **Dust Removal:** Periodically clean dust from the graphics card's heatsink and fan using compressed air. Ensure the computer is powered off and unplugged before cleaning. Dust accumulation can hinder cooling efficiency.
- **Driver Management:** Keep your graphics drivers updated. New drivers often include performance optimizations and bug fixes.
- **Temperature Monitoring:** Use GPU Tweak II or other monitoring software to keep an eye on your GPU temperatures, especially during heavy loads. Ensure temperatures remain within safe operating limits to prevent thermal throttling and potential damage.
- **System Airflow:** Ensure your PC case has adequate airflow to dissipate heat effectively. Proper case ventilation is crucial for maintaining low GPU temperatures.

5. TROUBLESHOOTING

If you encounter issues with your graphics card, consider the following troubleshooting steps:

- **No Display Output:**
 - Ensure the monitor cable is securely connected to both the graphics card and the monitor.
 - Verify the graphics card is fully seated in the PCI Express slot.
 - Check that all PCIe power connectors are properly attached to the graphics card.
 - Test with a different display cable or monitor if possible.
- **Poor Performance in Games/Applications:**
 - Ensure you have the latest graphics drivers installed.
 - Check in-game settings; reduce graphics quality if necessary.
 - Monitor GPU temperature and usage using GPU Tweak II to identify potential thermal throttling or bottlenecks.
 - Verify your power supply unit meets the minimum wattage requirements for your system.

- **System Instability or Crashes:**

- Ensure your operating system is up to date.
- Check for any conflicting software or background applications.
- If overclocking, revert to default settings to rule out instability caused by overlocks.
- Run a memory diagnostic to check for RAM issues.

- **Fan Noise:**

- High fan noise can indicate high temperatures. Refer to temperature monitoring.
- Clean dust from the fan and heatsink.
- Adjust fan curves using GPU Tweak II for a balance between cooling and noise.

6. SPECIFICATIONS

Feature	Detail
Graphics Coprocessor	NVIDIA GeForce GTX 1080
Brand	ASUS
Graphics RAM Size	8 GB
Video Output Interface	DVI, DisplayPort, HDMI
Graphics Processor Manufacturer	NVIDIA
Graphics RAM Type	GDDR5X
Compatible Devices	Desktop
Display Resolution Maximum	3840x2160
Graphics Card Interface	PCI Express
Memory Clock Speed	10010 MHz
Number of Fans	1
Video Processor	NVIDIA
Model Name	TURBO-GTX1080-8G
Graphics Description	NVIDIA GeForce GTX 1080 with 8GB GDDR5, 1733 MHz core clock, 10010 MHz memory clock
Manufacturer	Asus
UPC	889349426661
Item Weight	2.8 Pounds
Unit Count	1.0 Count

7. WARRANTY AND SUPPORT

For detailed warranty information, please refer to the warranty card included with your product packaging or visit the official ASUS support website. ASUS provides comprehensive support for its products, including driver downloads, FAQs, and contact information for technical assistance.

ASUS Support Website: <https://www.asus.com/support/>