



# ROG RAPTURE GT-AX11000 PRO



PRODUCT OVERVIEW

# Key Features

## Tri-Band WiFi

### Fast & Flexible

With dual 5GHz bands and the 2.4GHz frequency, the Rapture offers up to 11,000 Mbps wireless throughput, and each band can act as its own network. In a multi-router AiMesh setup, using the second 5GHz band as dedicated backhaul still allows the main node to offer a full-spectrum network.

## UNII-4 Support

### Uncontested Spectrum

The Rapture GT-AX11000 Pro support expanded UNII-4 spectrum on the 5GHz band to add a wide 160MHz channel that does not encounter DFS interference. When used in an AiMesh environment, this expands the backhaul capacity and improves signal efficiency for roaming and coverage.

## 10G & 2.5G WAN/LAN

### Future-Proof Ethernet

Two powerful Ethernet ports have plenty of throughput overhead above even the fastest ISPs for years to come. Both are interchangeable between WAN and LAN, freeing one up to tether to the house's prime data guzzler. If that's not enough, the Rapture is also armed with four Gigabit LAN ports.

## Triple-Level Acceleration

### Game Optimization

In order to improve pings as much as possible, the Rapture can streamline gaming at every layer. Mobile Game Mode and Gaming Ports give a direct line to the router, gaming-focused QoS filters traffic to offer more throughput, and routing latency can be reduced courtesy of the gaming private network.

## RangeBoost Plus

### Longer, Stronger Signal

ASUS and Broadcom have teamed up to improve signal strength at the outskirts of the network via enhancements to our RangeBoost technology. By fusing beamforming buffs with power management optimizations, connections are more reliable at the fringes of the Rapture's expansive range.

## Multi-Layer Security

### Top-Tier Defense

In order to shield the network from outside attackers, the Rapture comes with AiProtection Pro for malware protection, web filtering, and parental controls. Protection doesn't need to stop when away from home, as the Rapture can be used to reroute traffic through the InstantGuard VPN service.

# Specifications

## ROG Rapture GT-AX11000 Pro

Data Rate	802.11a	54 Mbps
	802.11b	11 Mbps
	802.11g	54 Mbps
	802.11n	600 Mbps
	802.11ac (5GHz)	1733 Mbps
	802.11ax (2.4GHz)	1148 Mbps
	802.11ax (5GHz-1)	4804 Mbps
	802.11ax (5GHz-2)	4804 Mbps
Operating Frequencies	2.4GHz 4x4	2412 to 2472 MHz
	5GHz-1 4x4	5180 to 5925 MHz
	5GHz-2 4x4	5180 to 5925 MHz
Gaming Features	Game Port, Mobile Game Mode, Game Radar, Gaming Private Network, Gear Accelerator, Open NAT, Aura RGB	
Router Features	ASUS Router app, AiMesh, RangeBoost Plus, Traffic Analyzer, Adaptive QoS, AiCloud, Link aggregation (802.3ad), 3G/4G data sharing, DFS channel selection, Multiple SSIDs, AiDisk, IPTV support, Roaming assist	
WiFi 6 Features	x3 160MHz channels, MU-MIMO, OFDMA, TWT, BSS coloring, beamforming, 1024-QAM	
Security Features	AiProtection Pro, Parental controls, Instant Guard, Firewall, SPI intrusion detection, DoS protection, URL filter, port filter, network service filter, guest networks	
Ports	x1 RJ-45 10Gbps, x1 RJ-45 2.5Gbps, x4 RJ-45 1Gbps, x1 USB 3.2 Gen 1x1 port, x1 USB 2.0 port	
Encryption	WPA2-PSK, WPA-PSK, WPA-Enterprise , WPA2-Enterprise, WPA3-Personal, WPS	
Management	UPnP, IGMP v1/v2/v3, DNS Proxy, DHCP, NTP client, DDNS, PPPoE with MPPE support, PPTP, L2TP	
VPN	IPSec Pass-Through, PPTP Pass-Through, L2TP Pass-Through, L2TP client, OpenVPN server, OpenVPN client, PPTP client, PPTP server	
Buttons	Reset button, WPS bypass, LED lighting toggle, power switch	
LEDs	Main surface lighting, x8 status indicators	
Dimensions	14 x 14 x 7.6 inches or 354 x 354 x 193 mm	

# AiMesh

The AiMesh architecture was designed to deliver uninterrupted WiFi with no dead spots. Supported ASUS routers can connect together, so users can fill their home with reliable coverage, oftentimes using older routers as network nodes. As users roam from room to room, their device automatically swaps to the closest node, so they maintain seamless connectivity without interruptions.

The Rapture GT-AX11000 Pro has been designed from the ground up so it can act as the main router in a modern AiMesh environment. With its 11,000 Mbps throughput, the Rapture has significant overhead that it can use to connect to other routers.

Specifically, having dual 5GHz bands offers flexibility in that one of those bands can be used as a dedicated backhaul for inter-device communication. In that scenario, the Rapture itself still has coverage across both the 2.4 and 5 GHz frequency bands.



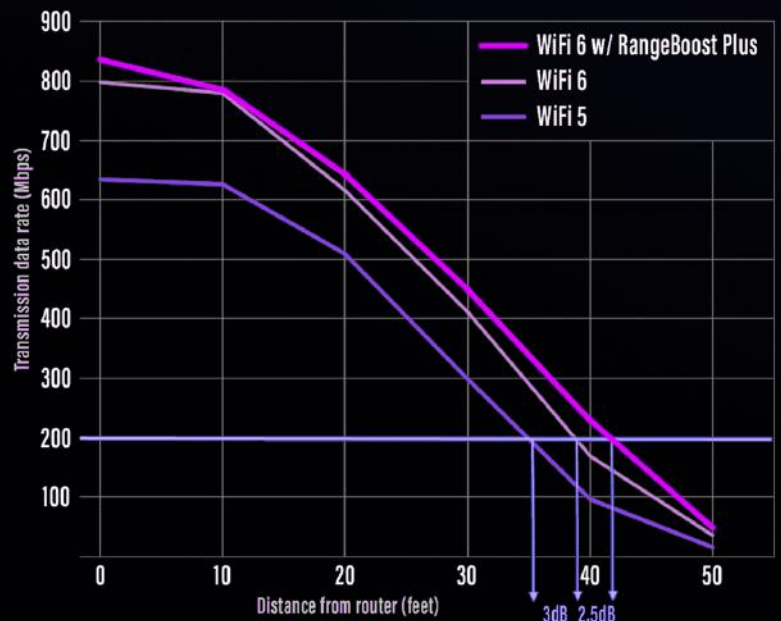
# RangeBoost Plus

Typically, as a device moves farther away from an access point, the expected bandwidth loss follows an S-shaped arc that varies in curvature depending on the antenna and power design of the router. However, efficiency improvements with WiFi 6 have opened up new opportunities for signal gain, so ASUS and Broadcom teamed up to flatten the drop-off curve through a new technology called RangeBoost Plus.

With the 802.11ax standard, the effects of co-channel interference between APs have been reduced due to new spatial reuse operations, and the identification feature known as BSS coloring. This means that cross-network interference can be identified and accounted for, and the receiver can more easily decode signals.

What this allows the ROG Rapture GT-AX11000 Pro to do is shift its processing priority slightly away from per-channel error correction and move it toward signal amplification and optimization of Tx and Rx gain. At short ranges, this has less effect because the signal integrity is already high, but the added power can significantly improve performance far away from the router.

As shown in the graph below, when using RangeBoost Plus, WiFi 6 performance increases roughly 30 feet away from the router. Between 30 and 40 feet, the improvements are more pronounced, allowing an internal benchmark of 200Mbps transmitted data rate to reach 3 feet farther, which equates to a boost of roughly 2.5dB connection strength.



Tests performed in an obstruction-free environment using 80MHz channels.

# IO Layout



- Reset button
- x4 Ethernet 1Gbps LAN ports
- x1 Ethernet 2.5Gbps WAN port

- x1 Ethernet 10Gbps WAN/LAN port

*LAN 1 & LAN2 are capable of LAN aggregation.  
LAN 4 & 2.5G WAN are capable of WAN aggregation.*



- WPS bypass button
- LED toggle button



- DCIN power port
- Power switch
- USB 2.0 port
- USB 3.2 Gen 1x1 port

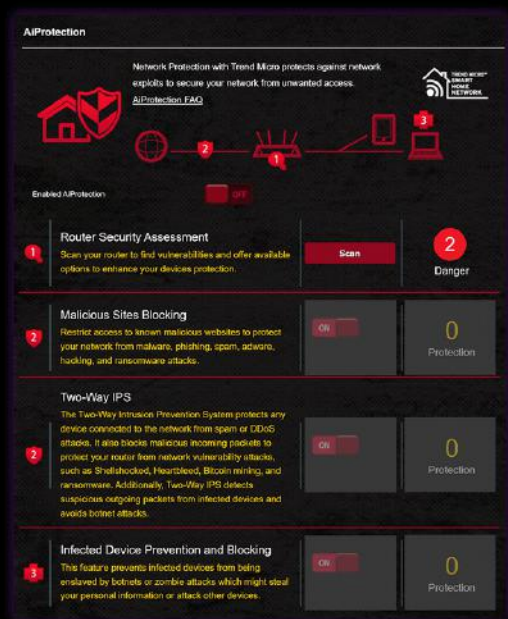


# Software

## ASUS Router App

The ASUS Router app is the one-stop platform to set up, connect, and control networks based on ASUS products. Its intuitive interface makes router installation a breeze, and once the network is running, traffic can be monitored by simply opening the app.

A myriad of options are available on the across the app, including Aura lighting adjustments, Mobile Game Mode, AiMesh node management, and security settings.

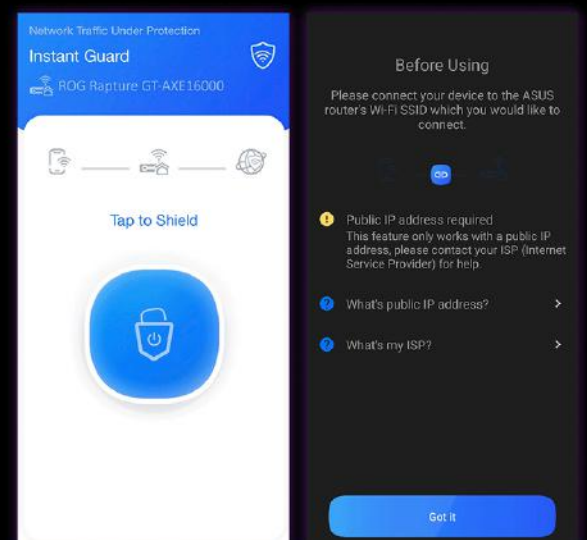


## AiProtection Pro

The internet is full of malicious actors, and the first point of impact is the router. ASUS and Trend Micro continue to team up to bring AiProtection Pro, industry-leading defense with minimal impact on performance. Using a combination of heuristic and signature-based detection, AiProtection stops threats before they reach connected endpoints, but if a device does get compromised, it can be quarantined automatically. Additional options include filtering malicious domains, setting up a temporary guest networks, or leveraging a whole suite of parental controls.

## Instant Guard

Obscuring online traffic is a necessity for internet hygiene, and the Instant Guard app makes it extremely easy to keep mobile activity secure by using the Rapture GT-AX11000 Pro as a VPN. With a single press of a button, devices can encrypt all of their packets via the IPsec protocol and then route them through their home network, keeping their location and data hidden from malicious actors. Note that Instant Guard relies on the stability of a public, static IPv4 address.





**THANK YOU!**