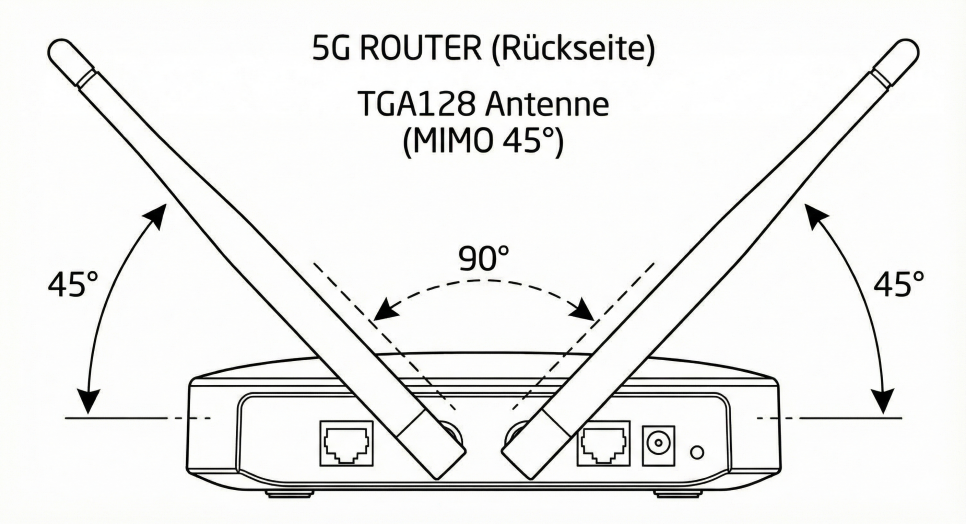
Installation Guide

TGA128V1 High-Performance Antenna Set

Thank you for choosing our antennas. This guide will help you get the maximum speed and stability out of your 5G/LTE router.



Step 1: Choosing the Right Connection

Your router has two ports for external antennas on the back.

- **Case A: Screw Thread (SMA)** (e.g., Huawei Gigacube, FritzBox 6850, ZTE)
  → Screw the antennas directly onto the ports until finger-tight.
- **Case B: Small Plug-in Connectors (TS9)** (e.g., Netgear Nighthawk)
  → First, attach the included **TS9 adapters** to the antennas and then carefully connect them to the router.

Step 2: Correct Antenna Position X-Pol (MIMO)

For modern 5G/LTE, we use "cross-polarization" (see sketch above):

1. Tilt the left antenna **45 degrees to the left**.
2. Tilt the right antenna **45 degrees to the right**.
3. The angle *between* the antennas is now 90 degrees.

IMPORTANT

Point the **broadside** of the antenna rods into the room or towards the window. Do **not** point the tip of the antenna at the cell tower (like a finger), as no signal is received from that direction.

Step 3: The Optimal Location

- **Aim high:** Place the router as high as possible (e.g., on top of a cabinet).

- **Free-standing:** Do not hide the router in drawers or behind the TV.
- **Near windows:** Glass dampens signals less than concrete walls.

Step 4: Choose Your Optimization Method

Method A: Maximum Speed

Recommended for locations with normal reception where more speed is desired.

1. Set up the router (with the antennas in a V-shape).
2. Perform a **speed test** (e.g., speedtest.net) and note the value.
3. Rotate the entire router by approx. **30 degrees**.
4. **Wait 2–3 minutes** for the router to adjust to the signal.
5. Perform another speed test.
6. Repeat this until you have rotated the router once around its own axis.
7. Finally, choose the position with the highest speed.

Method B: Maximum Stability

Recommended for areas with very poor reception or frequent connection drops.

1. Set up the router on Day 1. Use the internet as usual.
2. If the connection was unstable, rotate the router by **45 degrees**.
3. Leave it there for a period of time, e.g., an **entire day**.
4. Repeat this over several days until you find the position where the router works most reliably in everyday use.

Our Satisfaction Guarantee

Every environment is different. Sometimes structural conditions (e.g., metal-coated windows or thick reinforced concrete walls) are so challenging that physical limits are reached.

If the TGA128V1 antennas do not provide a noticeable gain in stability or speed, we will gladly take the set back.
Simply contact us to process your return.