

BILAL KHAN

RF Engineer



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Objective

Detail-oriented RF Engineer with 4 years of hands-on experience deploying, configuring, and optimizing Ubiquiti wireless networks. Proficient in UniFi and airMAX platforms with a strong background in RF planning, link budget analysis, interference mitigation, and throughput optimization. Adept at site surveys, spectrum analysis, and outdoor/indoor wireless link design. Experienced in managing large-scale point-to-point (PtP) and point-to-multipoint (PtMP) deployments.

Education

Aptech Computer Education – North Nazimabad, Karachi, Pakistan

- (ACCP AI) Aptech Certified Computer Professional Artificial Intelligence (**Ongoing**)
Expected Completion: [August, 2027]

AIOU University - Federal B Area, Naseerabad, Karachi, Pakistan

- Bachelor of Science (BS) in Physics (**Ongoing**)

Govt. Boys Science College – Buffer zone, Karachi, Pakistan

- Intermediate (Pre-Engineering)

Skills

- **Ubiquiti Platforms:** UniFi, airMAX, airFiber, EdgePoint, UISP (UNMS), LTU
- **Wireless Technologies:** 802.11a/b/g/n/ac/ax, 60GHz, 5GHz, 2.4GHz, licensed and unlicensed bands
- **Tools:** Ubiquiti Link Planner, airView, airOS, WiFiman, Wireshark, Ekahau (optional)
- **Networking:** TCP/IP, VLANs, OSPF, BGP, NAT, QoS, VPN, DHCP, DNS
- **Diagnostics:** Signal-to-noise ratio (SNR), RSSI, throughput tests, alignment tools
- **Compliance:** FCC Part 15, EIRP calculations, country-specific wireless regulations.

Experience

RF Engineer – Ubiquiti Networks Deployment Specialist

Gerry's.Net – South Division – Karachi, Pakistan [Jan, 2020 – current]
The Internet People

- Designed and deployed Ubiquiti-based wireless networks across rural and urban areas for ISP and enterprise clients.
- Engineered PtP and PtMP links using airMax and airFiber radios, including long-range(20km+) backhaul links.
- Conducted RF site surveys using airView and external tools to assess channel noise and logically on Google earth.
- Optimized antenna alignment, EIRP output, and channel width to enhance link stability and reduce latency.
- Maintained and monitored networks via UISP, proactively identifying and resolving performance issues.
- Configured Unifi APs, switches, and security gateways for seamless indoor/outdoor coverage in hotels, campuses, and office environments,
- Installed and aligned Ubiquiti antenna devices for customer premises and performed throughput validation tests.
- Provided support for firmware updates, device provisioning, and emergency link restoration.
- Documented installation, including link distances, RSSI readings and device configure.
- Trained junior techs on Ubiquiti hardware, alignment techniques, and best practices.

Languages

- Urdu (Native)
- English (Normal)

Interests (Optional)

- SDR (Software Defined Radio) Projects using GNU Radio
- Long-range Wi-Fi Mesh Experiments
- Antenna Prototyping & Tuning
- Community Wireless Networks.