

## COMPANY OVERVIEW

Alicom is a Houston-area small business providing RF and wireless systems engineering for terrestrial, non-terrestrial (satellite), and hybrid networks. We support NASA programs and prime contractors as a technical subcontractor and advisor: link and spectrum analysis, 3GPP 5G/LTE and NTN standards guidance, campus and facility wireless design, multi-vendor integration, and RF test and acceptance. Alicom is led by a 25-year RF systems engineer whose career spans five RAN OEMs and tier-1 operators, giving primes a vendor-neutral technical voice that can be on site at Johnson Space Center within the hour.

## CORE CAPABILITIES

- **RF Systems Engineering:** link budget analysis, propagation modeling, spectrum and frequency planning, interference and coexistence analysis, coverage and capacity dimensioning (Atoll, iBwave, MATLAB).
- **3GPP and NTN Standards Advisory:** 5G NR SA/NSA, LTE, Massive MIMO, and Non-Terrestrial Network architecture (Rel-17 to Rel-19); satellite direct-to-device and hybrid terrestrial-satellite connectivity; 6G roadmap.
- **Private 5G, CBRS, DAS, and Wi-Fi:** campus, facility, and large-venue wireless design; in-building and outdoor DAS; CBRS band 48 and SAS coordination; licensed, shared, and unlicensed coexistence.
- **Multi-Vendor RAN Integration:** O-RAN / Open CPRI, S1 and X2 interoperability, vRAN (vDU/vCU) dimensioning; Samsung, Ericsson, Nokia, Huawei, and Motorola platforms.
- **RF Test, Verification, and Acceptance:** parameter governance and audits, feature trials and proof-of-concept evaluations, MOP authoring, KPI acceptance, drive test and benchmark analysis.
- **Technical Program Management:** PMP-led requirements definition, RFI/RFQ/tender support, FCC and regulatory compliance submissions, cross-functional and multi-continent team leadership, executive briefing.

## WHERE ALICOM SUPPORTS NASA AND PRIME CONTRACTORS

- RF link and spectrum engineering support for ground segment, campus, and mission communications programs.
- Vendor-neutral technical evaluation of 5G/NTN and commercial wireless technologies for space and ground applications.
- Private 5G / DAS / Wi-Fi design and performance assurance for NASA centers, test facilities, and contractor sites.
- On-demand senior RF engineering capacity for primes filling subcontracting plan goals (small business, minority-owned).

## REPRESENTATIVE EXPERIENCE OF PRINCIPAL

*Alicom is a newly formed entity; the following is the delivery record of its Director, Nasir Hussain.*

- **Verizon, Houston Gulf Coast (2024 to present):** macro and small cell design, vDU/gNB dimensioning for vRAN migration, C-band congestion study, regulatory compliance submissions.
- **Samsung Electronics America, Verizon national 5G account (2020 to 2024):** customer-facing technical authority; owned the national Golden Parameter List across 5G/4G elements; resolved O-RAN and S1 interoperability issues; cut parameter release cycle from two weeks to one via Python automation.
- **T-Mobile USA, New Jersey (2018 to 2020):** 5G SA/NSA launch optimization and Massive MIMO tuning; traffic balancing that increased usable capacity 20 percent.
- **Verizon, Super Bowl LI (2016 to 2017):** led RF readiness for NRG Stadium: small cell, COW, NOW, and DAS rollout under national executive visibility.

## COMPANY DATA

**Legal name:** Alicom

**Principal:** Nasir Hussain, Director

**Location:** Sugar Land (Houston), TX 77479

**Website:** alicom.ai

**Business type:** Small Business; Minority-Owned (self-certified)

**SAM.gov / UEI / CAGE:** registration pending

**Primary NAICS:** 541330 Engineering Services

**Secondary NAICS:** 541715 R&D in Physical and Engineering Sciences; 517919 All Other Telecommunications

**Contracting:** available as subcontractor, consultant, or teaming partner

## DIFFERENTIATORS

- 25 years of RF engineering across Samsung, Nokia, Ericsson, Huawei, and Motorola for Verizon, T-Mobile, AT&T, Vodacom, and du.
- Published standards voice: IEEE INGR Massive MIMO chapter co-author (2021 to 2024); 5G Americas contributing author; IEEE Future Networks Massive MIMO Working Group co-chair.
- Ongoing published technical series on 3GPP NTN, 6G, and satellite direct-to-device architecture.
- Houston based, minutes from JSC; no travel restrictions.
- U.S. citizen principal, eligible for security clearance.

## CREDENTIALS

**Education:** M.S. Electrical and Computer Engineering, University of Delaware; B.E. Electrical Engineering, NED University

**Certifications:** PMP (PMI); CCNA (Cisco); CWNA (CWNP); LTE Radio Network Planning and Optimization (Nokia); INCOSE CSEP in progress