Kazam (EV Charging) - Investment Report

I. Executive Summary

Kazam presents a compelling investment opportunity within India's rapidly expanding electric vehicle (EV) market. The company strategically aligns with the significant growth trajectory of EV adoption in India, a market that has witnessed a fourfold increase in the past two years [1]. This expansion is further propelled by consistent governmental support through initiatives like the Faster Adoption and Manufacturing of Electric Vehicles in India (FAME) scheme, which provides substantial subsidies to both EV manufacturers and consumers [1]. The Indian government's ambitious target of achieving 30% EV penetration for passenger vehicles by fiscal year 2030 underscores a long-term commitment to electrification, creating a stable and predictable market environment for related infrastructure and services [3]. The FAME II scheme, with its allocation of ₹10,000 Crore, demonstrates the government's financial commitment to fostering EV adoption and developing the necessary charging infrastructure [2].

Kazam's core mission is to establish the world's largest EV charging ecosystem by delivering innovative and scalable software solutions [4]. The company's journey began with a keen understanding of the Indian EV landscape, originating from a YouTube channel that explored the viability of EV adoption, particularly for the two- and three-wheeler segments . This early focus provided valuable grassroots market knowledge that continues to inform their strategy. Kazam manufactures a range of EV charging stations, including Light Electric Vehicle AC (LEV AC) and DC (LEV DC) chargers, ensuring compatibility with major Indian vehicle manufacturers such as Bajaj, Hero, Mahindra, and TVS . Their primary target market encompasses charge point operators, vehicle original equipment manufacturers, e-commerce platforms, fleet operators, and residential communities, indicating a versatile solution applicable across various use cases .

Key highlights of Kazam's achievements include a substantial charging network across India, facilitated by a user-friendly mobile application that accurately locates charging stations . Unlike many competitors focused solely on operating charging services, Kazam distinguishes itself by providing interoperable hardware solutions underpinned by proprietary technology . The company has secured multiple patents for its charging station design and functionality, including innovations in component placement and communication protocols, signifying a commitment to technological advancement and intellectual property protection . Their early and continued focus

on the high-volume two- and three-wheeler market in India positions them uniquely within the competitive landscape . Kazam has demonstrated impressive growth, with over 40,000 chargers deployed and a tenfold increase in sales within the past year . Their platform supports over 1.2 million charging sessions annually, reflecting significant user engagement .

The investment opportunity in Kazam is underscored by their successful fundraising efforts, including a recent $8 million Series A3 funding round led by prominent venture capital firms . This investment reflects strong investor confidence in Kazam's potential and provides the necessary capital for continued growth and market expansion. Furthermore, their earlier seed round of ₹7 crore indicates a consistent ability to attract investment . The potential return on investment is significant, given the high growth projections for the Indian EV market and Kazam's strong competitive positioning within this expanding ecosystem.

II. Company Overview

- **A. Mission and Vision:** Detailed description of Kazam's objectives.

Kazam's overarching mission is to establish the world's largest electric vehicle (EV) charging ecosystem through the provision of innovative and scalable software solutions [4]. This ambition reflects a clear understanding of the transformative potential of electric mobility and the critical role of a robust charging infrastructure in realizing this potential. The company aims to lead the charge in simplifying and streamlining the EV charging experience for all stakeholders. Their focus on scalable software suggests a strategic approach that prioritizes efficiency and the ability to manage a vast and growing network of charging points, aligning with the anticipated exponential growth of the EV market in India and beyond .

The company's vision centers on democratizing electric mobility, making it accessible to everyone by offering the most cost-effective and intelligent internet-based electric vehicle charging stations . These stations are designed for both personal and commercial applications, emphasizing ease of use and requiring no manual intervention for operation . This focus on user convenience and affordability directly addresses key barriers to EV adoption in the Indian market, where price sensitivity and ease of access are paramount [6]. By providing solutions that are both technologically advanced ("intelligent") and economically viable, Kazam aims to lower the entry barriers for EV ownership and contribute to a more sustainable transportation future for all .

Kazam positions itself as an agnostic EV charging software platform dedicated to building India's largest smart and affordable EV charging network . Their vision extends beyond the domestic market, aspiring to leadership in EV charging both within India and internationally . To achieve this, they leverage their capabilities in both software and hardware, recognizing that a comprehensive approach is necessary to create a seamless and reliable charging experience . Partnerships form a cornerstone of their strategy, collaborating with fleets, charge point operators (CPOs), Resident Welfare Associations (RWAs), and original equipment manufacturers (OEMs) to establish a robust and widespread charging network . This collaborative approach underscores their understanding that building a comprehensive EV ecosystem requires the participation and integration of various key players [5].

- **B. Products and Services:** Detailed specifications of EV chargers (AC, DC, power output).

Kazam offers a suite of EV charging solutions encompassing both hardware and software . Their hardware portfolio includes several AC charging stations designed for various needs. The Kazam 3.3 is a SIM-based, IoT-enabled AC charging station capable of handling 3.3 kW of power . It requires only a standard 16A 3-pin socket for installation and is designed to be weatherproof and equipped with a burglar alarm, making it suitable for both personal and public use . This charger is compatible with a wide range of electric vehicles, including cars, bicycles, scooters, and cargo vehicles . Technically, the Kazam 3.3 operates at an input voltage of 250V and a maximum current of 16A, featuring IP67 certification for dust and water resistance and utilizing MQTT/TCP for communication with the CMS platform .

The Kazam Mini is another 3.3 kW AC smart charging station, but it utilizes Wi-Fi for IoT connectivity . It boasts a premium design, smart app control, and weatherproofing, also supporting all types of electric vehicles . The Kazam Mini operates at an output voltage of 250V and a maximum current of 16A, with connectivity options including Wi-Fi and Bluetooth Low Energy (BLE) . It incorporates safety features such as surge protection with MCB and full charge auto cut-off .

Beyond these primary models, Kazam's product line also includes the LEVAC PRO (3.3 kW), a 7.4 kW AC charger, and the LEVDC . The LEVAC PRO also has a capacity of 3.3 kW and uses an IEC socket with IP54 safety and protection, connecting via GSM, Wi-Fi, and BLE . The 7.4 kW AC charger is designed for faster charging and is suitable for electric cars, bikes, and scooters, featuring internet connectivity and remote operation via the Kazam mobile app . It has an IP65 rating, making it suitable for all

weather conditions . The LEVDC marks Kazam's entry into the fast-charging segment, specifically designed for two- and three-wheelers with a customizable power output ranging from 6 to 12 kW . This enables rapid charging, bringing a two-wheeler's battery from 20% to 80% in approximately 20 minutes, and a three-wheeler's in about one hour . Kazam has deployed 150 LEVDC chargers and aims to deploy 2000 more in the next 12 months through partnerships with OEMs .

Kazam's Charging Management System (CMS) is a crucial component of their offering, providing a comprehensive platform for managing EV charging infrastructure . This OCPP-compliant system facilitates seamless communication across various charging hardware brands and models, enhancing interoperability . The CMS offers a range of features, including real-time monitoring of charger status and usage , flexible tariff management allowing for customized pricing models , remote maintenance and troubleshooting capabilities , load management to optimize power distribution , and driver and vehicle management functionalities . It supports both OCPP 1.6 and OCPP 2.0 based charging stations and offers interoperability via OCPI . The CMS also provides features like automatic receipt generation, dynamic tariffs, platform fees, taxation details, and customizable load limits .

The Kazam EV charging app is designed to provide a user-friendly experience for EV drivers . Available on both Android and iOS platforms, the app allows users to accurately locate nearby charging stations, check real-time availability, and make hassle-free payments through various methods like UPI, credit card, and net banking . The app features a polished interface with multiple filter options, enabling users to easily find the information they need . Key functionalities include QR code scanning for initiating charging , in-app wallet for payments , charging history tracking , and integration with Google Maps for navigation . Users can also build their own charging stations through the app and start earning . The app provides real-time charger status updates and 24/7 chat support . Some users have noted occasional issues with starting and stopping charging smoothly .

Kazam's solutions incorporate robust IoT implementation, ensuring reliable connectivity through GSM, Bluetooth, and Wi-Fi . This allows for real-time data transmission between the chargers, the CMS platform, and the mobile app, enabling features like remote monitoring, diagnostics, and control . The system can dynamically switch between connectivity methods to maintain a stable connection . Furthermore, Kazam leverages data analytics to identify trends, patterns, and insights from the vast amounts of data collected . This data-driven approach supports

predictive analytics, helping to optimize charger deployment, maintenance schedules, and pricing strategies . The company also provides data visualizations and dashboards to communicate these insights to both technical and non-technical stakeholders .

- **C. Target Market:** Breakdown of target segments (individual owners, fleets, real estate, public operators).

Kazam strategically targets a diverse range of customer segments within the burgeoning Indian EV ecosystem . Individual EV owners represent a significant market for their home charging solutions, such as the Kazam 3.3 and Mini chargers, offering convenience and affordability for personal vehicle charging . These solutions cater to the growing number of individuals adopting electric two-wheelers, three-wheelers, and cars for personal transportation .

Fleet operators constitute another crucial target segment, particularly with the increasing electrification of commercial fleets for e-commerce, logistics, and last-mile delivery . Companies like BigBasket, Zypp, and Mahindra Logistics are already partnering with Kazam for their charging infrastructure needs . Kazam's solutions for fleet operators include features like overnight charging management and comprehensive fleet management software (FMS), addressing the specific operational requirements of this segment . Their FMS seamlessly integrates OEMs, finance, fleet operations, service centers, and commerce to construct a holistic EV ecosystem .

Real estate developers and Resident Welfare Associations (RWAs) are also key targets for Kazam's charging solutions . As EV adoption rises, providing charging infrastructure in residential complexes, apartments, and commercial buildings is becoming increasingly important . Kazam offers solutions tailored for these settings, enabling residents and visitors to conveniently charge their vehicles .

Public charging operators and Charge Point Operators (CPOs) form another vital segment for Kazam's offerings . Their OCPP-compliant CMS platform is particularly attractive to CPOs as it allows them to manage charging networks comprising hardware from various manufacturers . This interoperability provides flexibility and avoids vendor lock-in, making Kazam a valuable technology partner for establishing and managing public charging infrastructure [7]. Locations such as marketplaces and petrol pumps are specific areas where Kazam focuses on deploying public charging stations, providing convenient charging options for EV users on the go . Kazam also

supports EV leasing companies and utilities .

The Indian EV charging market presents a substantial opportunity, valued at USD 588.6 million in 2023 and projected to reach USD 5695.6 million by 2030, exhibiting a robust CAGR of 39.1% [9]. The overall Indian EV market is also experiencing rapid growth, with projections indicating a surge to US$7.09 billion by 2025 . This market expansion, particularly in the two- and three-wheeler segments where Kazam has a strong early foothold , signifies a large and growing addressable market for their products and services . India has even surpassed China as the largest market for electric three-wheelers .

- **D. Business Model:** Revenue streams (hardware sales, subscriptions, charging fees, data monetization).

Kazam operates with a hybrid business model that encompasses multiple revenue streams . A primary source of revenue is the sale of their EV charging hardware, including AC chargers like the Kazam 3.3 and Mini, as well as their newer fast-charging LEVDC units . These chargers are sold to individual consumers for home charging, to businesses and RWAs for community charging, and to CPOs for public charging networks . The pricing for these chargers varies based on features and charging speed, with models like the Kazam Mini being positioned as affordable options .

Another significant revenue stream is generated through subscriptions and licensing of their Kazam Charging Management Software (CMS) platform . This software provides a comprehensive solution for businesses and organizations to manage their EV charging infrastructure, offering features like remote monitoring, tariff management, and user management . The CMS is agnostic to hardware, allowing it to connect with chargers from various manufacturers, making it an attractive offering for a wide range of clients, including CPOs and fleet operators . Kazam offers flexible pricing models for their CMS, including both fixed and subscription-based options, catering to different customer needs .

While not always a direct revenue stream for Kazam, their platform facilitates the collection of charging fees from EV users by charging station owners who utilize Kazam's hardware and software . Kazam's CMS includes features like the Driver Tariff Feature, which enables customized pricing models for different user segments, allowing charging station operators to optimize their revenue . Kazam may generate revenue from these transactions through commission fees or as part of their CMS

subscription packages .

The potential for data monetization also exists within Kazam's business model [4]. The vast amounts of data collected through their IoT-enabled chargers and CMS platform, including usage patterns, charging behavior, and energy consumption, can be analyzed to provide valuable insights to various stakeholders, such as utilities, OEMs, and urban planners . While the current extent of revenue from data monetization is unclear from the provided material, it represents a potential future growth area [11].

For the fiscal year 2022-23, Kazam reported a revenue of ₹3.88 Cr [4]. While expenses during this period were ₹12.97 Cr, resulting in a net loss of ₹9.09 Cr, this is typical for early-stage companies focused on rapid growth and market expansion [4]. Kazam has demonstrated a strong revenue growth trajectory, reporting a fourfold increase in the last fiscal year and projecting a 300% revenue growth from FY23 to FY24 . The company is trending towards $4.5 million in annual recurring revenue (ARR) and expects around $6 million ARR by year-end, anticipating profitability in the next 8-10 months . This rapid growth, coupled with their diversified revenue streams, positions Kazam for significant future financial success as the Indian EV market continues to mature .

III. Founders and Team

- **A. Founder Profiles:** Detailed backgrounds and relevant experience.

Kazam was co-founded in 2020 by Akshay Shekhar and Vaibhav Tyagi .

Akshay Shekhar serves as the Co-Founder and CEO of Kazam . He holds a Certificate in Management Essentials from Harvard Business School Online (2020), an MBA in Finance from the National Institute of Industrial Engineering (NITIE), Mumbai (2014-2016), and a Bachelor of Technology (B.Tech.) in Industrial Engineering from Savitribai Phule Pune University (2010-2014) [12]. Prior to founding Kazam, Akshay held positions such as Business Operations Lead at Godrej Consumer Products Limited (2020-2021), Manager - Strategy & Ops at PepsiCo (2016-2018), and Co-Founder of FurnishQ (2015-2016) [13]. He also gained internship experience at Siemens Ltd. and PepsiCo [13]. Akshay's experience spans across business operations, strategy, new product development, and vendor management, providing a strong foundation for leading Kazam [12].

Vaibhav Tyagi is the Co-Founder and CTO of Kazam . He earned his B.Tech in IT from

USIT, Delhi . Vaibhav brings over 10 years of experience in the consumer technology sector, having worked with companies like Adobe and Hike Messenger . At Hike Messenger, he managed engineering teams and focused on creating social and multimedia experiences using Augmented Reality (AR) technologies . His technical expertise and experience in building scalable technology products are crucial to Kazam's product development and technology strategy .

Both Akshay and Vaibhav met while working at PepsiCo and shared a common vision for e-mobility, leading them to establish Kazam . Their initial venture into the EV space began with a YouTube channel exploring EV adoption in India, which garnered significant traction and provided valuable market insights .

- **B. Key Management:** Profiles of key executives and their expertise.

Paras Shah is the Co-Founder and COO of Kazam, also serving as the Chief Financial Officer . He has been with Kazam since 2021 and also works as a Management Consultant [15]. Paras holds a Chartered Accountant degree from The Institute of Chartered Accountants of India (2012) and a Bachelor of Commerce (B.Com) in Accounting and Finance from H.R. College of Commerce and Economics (2007-2011) [15]. He also obtained a Lean Six Sigma Green Belt certification in 2017 [15]. Prior to Kazam, Paras held various roles at Mswipe Technologies Pvt. Ltd. from 2014 to 2021, including Business Head - Banking Alliance, Assistant Vice President Finance, Senior General Manager, and General Manager - Finance [15]. He also worked as an Independent Consultant at Paras A Shah & Co. (2012-2014) and as an Articled Assistant at M N Sheth & Associates (2008-2012), gaining experience in accounting, audit, and taxation [15]. Paras's extensive experience in finance, operations, and business transformation is instrumental in scaling Kazam's operations and financial management .

The leadership team at Kazam also includes individuals in key roles such as Senior Lead Industrial Designer (Arjun T B) and Associate Vice President Sales (PAWAN SHAW) . The company has a total of 161 employees [2].

- **C. Team Assessment:** Evaluation of the team's ability to execute the business plan.

The Kazam founding team brings a diverse and complementary set of skills and experiences to the table . Akshay Shekhar's entrepreneurial background, combined with his experience in business operations and strategy at established companies like Godrej and PepsiCo, provides strong leadership and a clear vision for Kazam's growth

. Vaibhav Tyagi's technical expertise in software development and his understanding of emerging technologies like AR, gained from his tenure at Adobe and Hike Messenger, are crucial for driving Kazam's innovative product development . Paras Shah's extensive experience in finance, operations, and management consulting, particularly within the fintech sector at Mswipe, adds significant strength to Kazam's operational efficiency and financial strategy [15].

The team's ability to execute is further evidenced by Kazam's rapid growth and achievements in a short period. Founded in 2020, the company has quickly established a significant presence in the Indian EV charging market, deploying over 40,000 chargers and achieving a tenfold increase in sales within a year . They have also secured partnerships with major OEMs and fleet operators, demonstrating their ability to build strong industry relationships . The successful fundraising rounds, including the recent $8 million Series A3 funding, indicate investor confidence in the team's vision and execution capabilities .

Kazam's focus on in-house design and development, coupled with stringent quality assurance processes, highlights their commitment to delivering reliable and innovative products . Their in-house R&D center with advanced tooling and testing capabilities further supports their ability to execute on their technology roadmap . The company's participation in initiatives like the Unified Energy Interface (UEI) also demonstrates their proactive approach to shaping the future of the EV ecosystem .

While the team has shown strong execution capabilities, the EV charging market is competitive and faces challenges such as the need for continuous technological innovation and the complexities of scaling infrastructure across a vast and diverse country like India . The team's continued focus on customer needs, technological advancements, and strategic partnerships will be crucial for sustained success .

IV. Market Analysis

- **A. EV Market in India:** Market size and growth projections (sources: NITI Aayog, IEA, industry reports).

The electric vehicle (EV) market in India is experiencing exponential growth, driven by government initiatives, increasing environmental awareness, and rising fuel costs . In 2024, India's EV sales surpassed 2 million units, marking a 24% growth from 2023, with EVs accounting for approximately 8% of overall automobile sales . This represents a significant increase from less than 1% penetration in 2019, reaching

7.4% in 2024 . The market is projected to continue its rapid expansion, with estimates suggesting a value of US$7.09 billion by 2025 and a potential to reach 10 million annual sales by 2030 . Some projections even anticipate the Indian EV market to grow from $23.38 billion in 2024 to $117.78 billion by 2032, at a CAGR of 22.4% [16].

The International Energy Agency (IEA) reports a robust global surge in EV sales, with India emerging as the largest market for electric three-wheelers, surpassing China in 2023 with over 580,000 sales . The electric three-wheeler market in India saw a 65% surge in sales compared to 2022 [17]. The IEA also noted a 70% year-on-year growth in total electric car sales in India, with sales reaching almost 1 million vehicles .

Government policies and incentives play a crucial role in this growth. The Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) scheme, with an outlay of ₹10,000 crore in its second phase (FAME II), provides subsidies for EV purchases and the establishment of charging infrastructure . The government aims for EV adoption to reach 40% for buses, 30% for private cars, 70% for commercial vehicles, and 80% for two-wheelers by 2030 . State-level initiatives also complement these national efforts, with states like Delhi, Maharashtra, and Karnataka introducing their own EV policies and incentives . The Production Linked Incentive (PLI) scheme further supports domestic manufacturing of advanced automotive technology products and attracts investments in the sector .

Key drivers for EV adoption in India include increasing environmental concerns and a growing awareness of the impact of pollution , rising fuel costs making EVs economically attractive in the long run , and the government's strong push towards electrification through various policies and financial incentives . Challenges remain, such as the high upfront costs of EVs compared to traditional vehicles , the need for further development of charging infrastructure, especially in rural areas and along highways , and addressing range anxiety among consumers . Supply chain and manufacturing issues, particularly the reliance on imported batteries and components, also pose challenges .

Market penetration rates for EVs in India are increasing across all segments. Electric two-wheelers lead the market with nearly 60% of total EV sales in 2024, followed by electric three-wheelers . The penetration of EVs in the cargo three-wheeler category reached an impressive 24.2% in 2024 . While the electric car segment is smaller, it is showing steady progress . Overall EV penetration in the total vehicle market reached approximately 8% in 2024, up from 6.8% in the previous year . Projections indicate

that EVs could account for 30-35% of annual vehicle sales in India by FY30 .

- **B. EV Charging Infrastructure Market:** Market size and growth projections for charging solutions.

The Indian EV charging infrastructure market is a critical enabler for the widespread adoption of electric vehicles and is experiencing substantial growth . Valued at USD 588.6 million in 2023, the market is predicted to reach USD 5695.6 million by 2030, with a CAGR of 39.1% from 2024 to 2030 [9]. This growth is driven by the increasing sales of EVs across various segments, including two-wheelers, three-wheelers, and four-wheelers , and the necessity of a robust charging network to support this transition .

The competitive landscape of the EV charging infrastructure market in India includes several key players such as Ather Energy, BluSmart, Charge Zone, Jio-bp, Kazam EV Tech, Tata Power, and others . While specific market share data is not comprehensively available, Tata Power has been identified as a major player, accounting for over 50% of public charging points in the country [18]. Exicom Tele Systems also holds a significant market share in the EV charging segment, with 60% in residential and 25% in public EV charging as of March 2023 [16].

Technological trends in the EV charging infrastructure market include the development and deployment of fast charging solutions, smart charging capabilities, and advancements in wireless charging technologies . Fast charging, particularly DC fast chargers, are becoming increasingly important to address range anxiety and reduce charging times, especially for long-distance travel and commercial vehicle operations . Smart charging solutions, like those offered by Kazam, utilize IoT and data analytics to optimize charging schedules, manage load, and enhance energy efficiency .

Analysis of the competition reveals various strengths and weaknesses. Companies with a strong presence in the power sector, like Tata Power, leverage their existing infrastructure and expertise [18]. Startups like Kazam focus on innovation, particularly in software and hardware solutions tailored for the two- and three-wheeler market . Challenges for the market include high initial setup costs for fast charging infrastructure and the need for standardization across charging technologies and protocols . Government initiatives like the FAME scheme are crucial in providing financial support and setting targets for the development of charging infrastructure . The government has set a target to establish charging stations every 25 km on both

sides of highways and at least one charging station in a 3 km x 3 km grid in urban areas by FY 2030 .

- **C. Regulatory Landscape:** Overview of relevant regulations and standards.

The regulatory landscape for EV charging in India is evolving rapidly, with the government playing a proactive role in setting guidelines and standards to promote the safe, reliable, and accessible deployment of charging infrastructure . The Ministry of Power and the Ministry of Heavy Industries and Public Enterprises are the primary regulatory bodies overseeing the EV sector .

Key regulations and guidelines include the "Guidelines for Installation and Operation of Electric Vehicle Charging Infrastructure-2024," which aim to drive EV adoption by making charging stations safe, reliable, and accessible . These guidelines specify timelines for electricity connections to charging stations by distribution licensees (DISCOMs), ranging from 3 days in metropolitan areas to 15 days in rural areas . They also encourage local development authorities to allocate space for EV charging stations in new buildings and urban development plans .

The Bureau of Energy Efficiency (BEE) has been appointed as the Central Nodal Agency (CNA) to facilitate the installation of charging infrastructure . The guidelines also address the tariff for electricity supply to EV charging stations, stating that it should not exceed the average cost of supply (ACoS) until March 31, 2026 . State governments are responsible for fixing the ceiling for service charges at public charging stations .

Technical standards for EV chargers are primarily set by the Bureau of Indian Standards (BIS) and the Central Electricity Authority (CEA) . BIS standards, such as IS 17017, cover various aspects of AC and DC charging systems, including connector standards and communication protocols . CEA is responsible for standards related to the safety of the power grid . The guidelines mandate that public charging stations for electric two-, three-, and four-wheelers must have at least 7.4 kW capacity (AC or DC) and comply with BIS standards .

Potential regulatory risks include inconsistencies in policy implementation across different states , the uncertainty of long-term government incentives , and the need for continuous updates to regulations to keep pace with technological advancements . Opportunities arise from the government's strong commitment to promoting EV adoption and investing in charging infrastructure , as well as the increasing focus on

sustainability and reducing carbon emissions . The government's target of achieving 30% EV sales by 2030 provides a clear long-term vision for the industry [3].

- **V. Product and Technology**
- **A. Technical Specifications:** Detailed specifications of chargers and CMS platform.

Kazam offers a range of EV chargers with varying technical specifications to cater to different needs and vehicle types .

Kazam 3.3: This is a 3.3 kW AC smart charging station that is IoT-enabled and SIM-based . It requires a 3-pinpoint 16A socket for installation . The charger is weatherproof (IP65 certified) and has anti-theft features . It operates at an input voltage of 250V and a maximum current of 16A . Connectivity is through a 2G SIM-based network . Dimensions are 45cm (length) x 30cm (width) .

Kazam Mini: This is also a 3.3 kW AC smart charging station but uses Wi-Fi and BLE for IoT connectivity . It features a premium design and smart app control . It is weatherproof (IP65 certified) and has surge protection with MCB and full charge auto cut-off . It operates at an output voltage of 250V and a maximum current of 16A . Dimensions are 19.5cm x 17.5cm x 9cm .

Kazam LEVAC PRO: This is a 3.3 kW AC charging station certified to IS 17017 standards . It can be connected via BLE/GSM and operated remotely through a mobile app . Its dimensions are 272 x 183 x 190mm, and it weighs 1.87 kg . It has an IP65 certification and an electrical emergency stop button .

Kazam 7.4 kW: This AC charging station offers a higher power output for faster charging of electric cars, bikes, and scooters . It has internet connectivity (via SIM card) and can be operated remotely via the Kazam mobile app . It has an IP65 body for all-weather conditions .

Kazam LEVDC: This is a DC fast charger designed for two- and three-wheelers with a customizable output of 6-12 kW . It can charge a two-wheeler from 20% to 80% in 20 minutes and a three-wheeler in one hour .

Kazam Charging Management System (CMS): This is an OCPP-compliant platform that supports over 100 charger brands and models . It provides real-time monitoring of chargers, allows for setting tariffs, running campaigns, and managing revenue . Features include remote maintenance, load management, and driver/vehicle

management . It supports OCPP 1.6 and 2.0, and offers interoperability via OCPI . The CMS also provides a dashboard for real-time usage, uptime, power, and voltage values .

- **B. Innovation and Differentiation:** Unique selling propositions (USPs) and competitive advantages.

Kazam distinguishes itself in the EV charging market through several unique selling propositions (USPs) and competitive advantages .

Focus on the underserved two- and three-wheeler EV market: Unlike many competitors that primarily focus on operating charging services for four-wheelers, Kazam provides interoperable hardware solutions specifically designed for light electric vehicles (LEVs) . This early focus on the high-volume two- and three-wheeler segment in India gives them a unique position in the market [16].

Proprietary technology: Kazam develops its own EV charging hardware and software, including the Charging Management System (CMS), Fleet Management System (FMS), and Battery Swapping Management System (BSMS) . This in-house design and development allow for greater control over product quality and innovation .

Interoperable hardware solutions: Kazam's charging stations are compatible with major vehicle manufacturers in India, such as Bajaj, Hero, Mahindra, and TVS . Their CMS is also hardware-agnostic, supporting over 100 charger brands and models through OCPP compliance .

Stringent quality assurance: Kazam produces the first 100 units of any new product internally for thorough testing before mass production, ensuring high reliability and quality . Their in-house innovation center has advanced tooling and extensive testing capabilities, including waveform analyzers and load banks .

Comprehensive software platform: Kazam offers a suite of software solutions beyond just charging management, including fleet management, battery swapping management, and a user-friendly mobile app . This full-stack approach provides a comprehensive ecosystem for EV charging needs .

Intellectual Property (IP): Kazam has secured multiple patents covering the design and functionality of its charging stations, including innovations in component placement, efficient harnessing, and communication protocols . They also have a

patent standardizing vehicle-charger interactions using a CAN communication protocol for optimized energy output .

IoT and Data Analysis Differentiation: Kazam's chargers are IoT-enabled with connectivity through GSM, Bluetooth, and Wi-Fi, allowing for real-time monitoring and control . They leverage data analytics for predictive maintenance, load optimization, and enhanced user experience through their CMS platform and mobile app . Their CMS provides insights through analytics and offers features like dynamic tariff adjustments .

- **C. Technology Roadmap:** Future product development plans and timelines.

Kazam has demonstrated a commitment to continuous innovation and has several plans for future product development . Their technology roadmap includes expanding their presence in new cities within India and venturing into Southeast Asian markets like Malaysia, Thailand, and Indonesia, leveraging their existing clientele . They are also exploring expansion into Sri Lanka, Nepal, and African countries like Kenya and Uganda .

A key focus of their future development is on fast chargers tailored for electric two- and three-wheelers, the dominant EV segment in India . They recently launched their LEVDC fast charger with a customizable output of 6-12 kW, significantly reducing charging times for these vehicles . They plan to deploy 2000 LEVDC chargers in the next 12 months through partnerships with OEMs .

Kazam is also working on enhancing its Energy Management System (EMS) for e-bus hubs, offering digitized, end-to-end managed charging solutions to optimize energy usage and automate hub operations .

Further advancements in their Charging Management System (CMS) are expected, with a focus on features like dynamic tariff management, remote diagnostics, and integration with renewable energy sources . They are also contributing to the Unified Energy Interface (UEI), aiming to improve digital economic transactions between energy platforms .

Kazam is investing in research and development to improve battery technology and charging infrastructure . They are also exploring innovative materials and manufacturing techniques to reduce the cost of charging stations and make them more accessible . The integration of artificial intelligence (AI) into their charging networks is another area of focus, with the potential to enhance user experience,

optimize network efficiency, and enable features like predictive charging and battery health management .

VI. Key Metrics and Performance

- **A. Charger Deployment:** Number of chargers deployed, geographic distribution.

Kazam has achieved significant traction in terms of charger deployment. As of early 2025, the company has onboarded over 50,000 chargers across more than 5,000 pincodes in India . This includes over 40,000 chargers deployed, with a majority at homes followed by e-commerce fleets . They have a presence in over 75 cities across India [9]. Their network extends internationally to 16 countries, including North America, Southeast Asia, and the MENA region . In Malaysia, through a partnership with QuickCharge, over 100 chargers have been deployed . Kazam has also deployed 150 units of their new LEVDC fast charger as part of their network . They aim to install 10,000 charging stations in the fiscal year 2021-22 .

- **B. Charging Transactions:** Number of charging sessions, electricity consumption.

Kazam's platform facilitates a high volume of charging transactions. They currently fuel over 15 million EV kilometers per month . The platform supports over 1.2 million charging sessions annually . In the past year, Kazam has facilitated 1 million transactions . They handle approximately 300,000 transactions per month just with BigBasket [9]. The energy output through Kazam's platform is projected to reach 45 GWh by FY25 .

- **C. User Growth:** Number of registered users on the CMS platform, app downloads.

Kazam has a growing user base. Their platform has onboarded over 65,000 users . The Kazam EV charging app has seen significant adoption, with app users surpassing 50,000 in Malaysia within six months of adopting Kazam's solutions .

- **D. Financial Metrics:** Revenue figures, gross margins, operating expenses.

For the fiscal year 2022-23, Kazam reported a revenue of ₹3.88 Cr and expenses of ₹12.97 Cr, resulting in a net loss of ₹9.09 Cr [4]. The net cash flow from operations was -₹7.62 Cr [2]. Kazam has shown strong revenue growth, with a fourfold increase in the last fiscal year and a projected 300% revenue growth from FY23 to FY24 . They are

trending towards $4.5 million in annual recurring revenue (ARR) and expect around $6 million ARR by year-end . The company anticipates becoming profitable in the next 8-10 months .

- **Measurements:**
  - **CAC (Customer Acquisition Cost):** Data not explicitly available in the provided material.
  - **CLTV (Customer Lifetime Value):** Customer Lifetime Value (CLTV) is a key metric for subscription-based businesses like Kazam's CMS [19]. It represents the total revenue a customer is expected to generate over their lifetime with the company [20]. CLTV is calculated using factors like average revenue per user, gross margin, and customer lifetime [20]. A high CLTV indicates strong customer loyalty and long-term profitability .
  - **Churn Rate:** Churn rate is the percentage of customers who stop using the service over a specific period [20]. Low churn rates are crucial for sustainable growth and high CLTV .
  - **Gross Margin:** Gross margin is the profit margin after deducting the cost of goods sold [22]. Specific gross margin figures for Kazam are not available in the provided material.
  - **Burn Rate:** Burn rate is the rate at which a company is spending its cash reserves [22]. Specific burn rate figures for Kazam are not available in the provided material.
  - **Revenue Growth Rate:** Kazam has demonstrated a strong revenue growth rate, with a fourfold increase in the last fiscal year and a projected 300% growth from FY23 to FY24 . They also reported a 126% revenue growth between December 2023 and December 2024 .
  - **Unit Economics:** Unit economics refers to the revenue and costs associated with each individual unit or customer [22]. Specific unit economics data for Kazam are not available in the provided material.
  - **Uptime:** Uptime is the percentage of time the charging stations are operational . Kazam aims for high charger uptime to ensure reliability . In a pilot program in NYC, EV chargers achieved an uptime of 99.9% .
  - **Utilization Rate:** Utilization rate is how often the charging stations are being used . In the same NYC pilot, the utilization rate more than doubled over the evaluation period, reaching 34% in December 2022 .
- **E. Key Performance Indicators (KPIs):** Customer satisfaction scores, NPS (Net Promoter Score).

Data on specific customer satisfaction scores or Net Promoter Score (NPS) for Kazam are not explicitly available in the provided research material . However, the partnership with QuickCharge in Malaysia highlights positive feedback on user experience, with a doubling of energy demand and a significant increase in app users, suggesting high customer satisfaction . The user-friendly interface and features of the Kazam EV charging app, including accurate charger location, real-time availability, and smooth payments, also contribute to a positive user experience . Reliability of chargers and efficient charging speeds are also important factors for customer satisfaction in the EV charging market .

Charger reliability and maintenance costs are important operational KPIs. Kazam emphasizes the reliability of its chargers, with features like weatherproof design and anti-theft measures . Predictive maintenance through their CMS also helps to minimize downtime and maintenance costs . Average annual maintenance costs for EV chargers can be up to $400 per charger .

VII. Future Projections and Growth Strategy

- **A. Expansion Plans:** Geographic expansion, new market entry strategies.

Kazam has ambitious expansion plans both within India and internationally . Domestically, they aim to increase their presence in existing cities and expand into new ones to build India's largest smart and affordable EV charging network . Internationally, Kazam has already established a presence in 16 countries across North America, Southeast Asia, and the MENA region . Their immediate focus is on expanding further into Southeast Asia, with planned launches in Malaysia, Thailand, and Indonesia, leveraging their existing customer base . They are also in discussions to enter markets like Sri Lanka, Nepal, and African countries such as Kenya and Uganda . Their partnership with QuickCharge in Malaysia serves as a key example of their market entry strategy in Southeast Asia .

- **B. Growth Projections:** Revenue forecasts, market share targets.

Kazam has demonstrated strong historical growth and has optimistic future projections . They achieved 4x growth in the last fiscal year (FY23) and are on track to replicate 100% of that growth in the current year (FY24) . The company is trending towards $4.5 million in annual recurring revenue (ARR) and expects to reach around $6 million ARR by the end of the year . They anticipate tripling their revenue over the next two years . Kazam aims to become profitable within the next 8-10 months . While specific market share targets are not provided, their goal is to be a leader in EV

charging in India and beyond .

- **C. Scalability and Sustainability:** Plans for scaling operations and infrastructure.

Kazam's business model is designed for scalability. Their agnostic software platform can connect with over 100 charger brands, allowing for easy expansion of their network without being tied to specific hardware . Their focus on partnerships with various stakeholders, including OEMs, fleet operators, and CPOs, enables them to leverage existing infrastructure and reach a wider customer base . The modular design of their chargers also contributes to cost-effective and rapid deployment . Kazam is also focused on localizing their supply chain by seeking partnerships with microprocessor and PCB manufacturers in India .

Sustainability is a core aspect of Kazam's vision. Their mission is to reduce emissions by promoting the adoption of electric vehicles [11]. By providing efficient and reliable charging infrastructure, they are directly contributing to a greener transportation ecosystem . Their platform has already contributed to a significant reduction in CO2 emissions . Integration with renewable energy sources is also part of their long-term strategy .

VIII. Valuation and Investment Opportunity

- **A. Market Valuation:** Comparable company analysis, industry valuation multiples.

As a privately held company, Kazam's specific valuation details are not publicly available beyond their funding rounds. Their latest valuation was reported as $23.8 million as of July 24, 2024 . Comparable company analysis in the EV charging space would include companies like ev.energy, Monta, SWTCH, and AmpUp, which have raised significant funding [23]. Industry valuation multiples for EV charging companies can vary widely depending on factors such as revenue growth, market share, technology differentiation, and geographic focus. The overall Indian EV market is projected for substantial growth, which positively impacts the valuation potential of companies in the EV charging infrastructure segment .

- **B. Investment Highlights:** Key reasons to invest in Kazam.

Key reasons to invest in Kazam include:

- **Strong position in a high-growth market:** Kazam operates in the rapidly

expanding Indian EV market, which is supported by strong government initiatives and increasing consumer adoption .

- **Focus on the underserved two- and three-wheeler segment:** This provides a unique competitive advantage in a high-volume market .
- **Comprehensive full-stack solution:** Kazam offers both hardware and software solutions, including charging stations, CMS, FMS, and BSMS, providing a holistic ecosystem for EV charging needs .
- **Proprietary technology and IP:** Multiple patents and in-house design and development capabilities demonstrate innovation and protect their market position .
- **Strong traction and growth:** Significant charger deployment, high transaction volumes, and impressive revenue growth indicate strong market acceptance and execution capabilities .
- **Experienced management team:** The founders and key executives bring diverse and relevant experience in technology, business operations, finance, and the EV sector .
- **Successful fundraising:** Recent $8 million Series A3 funding demonstrates investor confidence and provides capital for further expansion .
- **Scalable business model:** Their hardware-agnostic software platform and partnership-driven approach allow for efficient scaling of operations .

Potential ROI and exit strategies would depend on Kazam's continued growth, market leadership, and overall trends in the EV and technology sectors. Potential exit strategies could include acquisition by a larger energy or automotive company, or an initial public offering (IPO) as the company matures.

- **C. Funding Requirements:** Amount of funding being sought, use of funds.

Kazam recently raised $8 million in a Series A3 funding round . The company plans to use these proceeds to strengthen its technology and product teams, increase its offerings, and expand its market presence both within India and in international markets like Southeast Asia . Prior to this round, Kazam had raised about $11 million, bringing their total funding to $14.3 million across 9 rounds . The specific amount of future funding requirements would depend on their expansion plans and growth trajectory.

IX. Risks and Challenges

- **A. Competitive Risks:** Analysis of competitive threats and mitigation strategies.

The EV charging market in India is becoming increasingly competitive, with several players vying for market share . Competitors range from established companies like Tata Power and Charge Zone to other startups like Ather Energy, BluSmart, Bolt.Earth, Statiq, and Exponent Energy . Global players like ABB and Delta also have a presence in the Indian market [22].

Kazam's mitigation strategies include focusing on a specific niche (two- and three-wheeler charging), offering a comprehensive suite of hardware and software solutions, emphasizing technological innovation and securing intellectual property, building strong partnerships with OEMs and fleet operators, and providing a user-friendly and reliable charging experience . Their agnostic software platform also reduces the risk of being locked into a particular hardware vendor . Continuous innovation and adaptation to market needs will be crucial for maintaining a competitive edge .

- **B. Regulatory Risks:** Potential regulatory changes and their impact.

The regulatory landscape for EV charging in India is still evolving, and potential changes could impact the industry . These risks include changes in government subsidies and incentives, revisions to technical standards and safety regulations, and potential delays in policy implementation . Kazam needs to stay informed about these regulatory developments and ensure compliance with all applicable norms . Building strong relationships with regulatory bodies and participating in industry forums can help mitigate these risks [18].

- **C. Technological Risks:** Technological obsolescence and innovation challenges.

The EV charging technology is rapidly advancing, with new developments in charging speeds, battery technologies, and smart grid integration . Kazam faces the risk of technological obsolescence if they fail to keep pace with these advancements . Their focus on in-house R&D and continuous innovation is crucial for mitigating this risk . They need to invest in exploring new technologies like wireless charging and bidirectional charging to remain competitive in the long term .

- **D. Execution Risks:** Potential challenges in scaling operations and executing the business plan.

Scaling operations across a large and diverse country like India presents significant execution challenges . These include managing supply chains, ensuring consistent

quality and reliability of charging infrastructure, providing adequate customer support, and navigating logistical complexities . Kazam's strategy of partnering with various stakeholders and focusing on building a robust technology platform will be key to successful scaling .

- **E. Financial Risks:** Analysis of financial stability.

As an early-stage company, Kazam reported a net loss in FY23, which is typical for businesses focused on growth and market expansion [4]. Financial risks include managing cash flow, securing further funding for expansion, and achieving profitability within the projected timeframe . Their recent successful funding round provides a strong financial runway . The projected revenue growth and path to profitability indicate improving financial stability .

X. Appendix

- Supporting documents (market research reports, financial statements, patents) - Not available in the provided material.
- Team biographies - Included in Section III.
- Detailed financial models - Not available in the provided material.

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