

Shorooq Partners Ushers a New Era of Innovation: Investing in Pearl Semiconductor

The Vision: A Thriving Hub of Innovation and Talent Unleashed

In the fast-paced world of venture capital, strategic decisions shape the future of technology and fuel the rise of groundbreaking innovations. [Shorooq Partners](#), renowned for its unwavering focus on technology, has consistently led the charge in driving transformative change in the Middle East. Today, we are thrilled to unveil a new chapter in our journey – a venture into the world of semiconductor innovation with our investment in [Pearl Semiconductor](#), a fabless semiconductor company specializing in Timing Integrated Circuits (ICs) and Reference Clocks.

Pearl Semiconductor successfully secured \$4.5 million in the recent funding round from Shorooq Partners, QBN Capital, Sawari Ventures and semiconductor industry veterans. Pearl Semiconductor has earned our confidence for compelling reasons. Emerging as a spin-off from [Si-Ware Systems](#) in 2020, the company brings forth a legacy spanning over 19 years in the reference clock industry. This impressive history is reinforced by a substantial collection of patents and a wealth of intellectual property, particularly in the realm of reference clock generators and Sigma-Delta Fractional-N phase-locked loops (PLLs) – systems dedicated to finely tuning frequencies.

Guided by industry experts with decades of experience and propelled by the passion of adept engineers, Pearl has established itself as a vital player in serving the timing requirements of diverse industries, spanning from industrial and automotive sectors to networking and telecom. Pearl's vision of becoming the world's leading supplier of top-tier reference clocks and Timing ICs is founded on solid technology that encompasses innovation and differentiation, while ensuring a blend of performance, reliability, and cost-effectiveness.

As we explore the core of our investment rationale, let's delve into the strategic elements that make Pearl Semiconductor a pivotal addition to our portfolio at Shorooq Partners.

1) A Global Innovator with Technological Advancements

Operating from both Malaysia and Egypt, Pearl Semiconductor is a technology powerhouse that's reshaping the industry. What sets Pearl apart is its patent-protected cutting-edge technology, allowing the company to introduce highly competitive products that only a handful of companies worldwide can deliver. Competitors would require considerable investment in R&D and talent to replicate Pearl's unique clock chiplet technology and unmatched ultra-low noise solutions. This strategic advantage positions Pearl Semiconductor not just for international recognition but for market leadership as a leading international contender. The Company serves a diverse customer base ranging from timing companies and distributors to diverse tech companies across Europe, Asia, and the US.

2) Embracing Geopolitical Significance and B2G Dynamics

Pearl Semiconductor's strategic significance extends beyond business considerations. Anchored by a well-defined national plan supported by a substantial \$1 billion investment from the Egyptian government, the company seamlessly aligns with government initiatives to develop a technology hub in the country. Geographically, its position between Africa, Asia, and Europe takes on a newfound importance. The recent geopolitical tension between the

US and China has spurred supply shortages across Asia and Europe, further elevating Pearl's value proposition.

3) A Synergistic Portfolio Enriching Shorooq Partners' Investment Focus

Pearl Semiconductor's product offerings stand as a testament to innovation and relevance in today's tech landscape. Their end products cater to a diverse range of applications, spanning cloud computing, 4G-6G technology, and the burgeoning automotive sector. Shorooq Partners has been searching for the right opportunity to enter the semiconductor industry and its adjacent sectors since its establishment, and we believe Pearl Semiconductor is the correct entry. By bolstering this dynamic portfolio, we solidify our commitment to backing disruptive innovation, positioning ourselves as advocates of change within the industry.

4) Catalyzing Engagement in the Semiconductor Ecosystem

As a lead investor in Pearl Semiconductor, Shorooq Partners is well-positioned to catalyze engagement within the local and global semiconductor community. With the company's immense potential resonating on regional and international scales, our role extends beyond capital infusion. By leveraging our established relationships across Asia, Europe, and the US, we're poised to facilitate connections with new clients and potential investors. This deeper involvement fortifies our commitment to delivering tangible value and reaffirms our position as the go-to deep tech investor in the region.

Most importantly, Shorooq Partners is well aligned with Pearl Semiconductor's grand vision – one that sees Egypt as a vibrant hub teeming with highly skilled design engineers. Our ambition for the Company reaches beyond technology; it's about unlocking the untapped potential of the vast, yet underutilized talent pool, capable of innovating differentiated products. There are approximately 50,000 engineering graduates each year in Egypt. This pool, in high demand globally, embodies Egypt's potential to become a vital player in the semiconductor landscape.

[Ayman Ahmed](#), the CEO of Pearl Semiconductor, passionately underscores the recipe for success - a blend of education and thriving companies. "Shorooq Partners' investment momentum is a vital catalyst in realizing this potential, creating a virtuous cycle of growth. Over the past three decades, I have witnessed firsthand our local industry's transformation from a barren landscape to an evolving one, which showcases the feasibility and scalability of this endeavor. The aspiration is nothing short of establishing Egypt's own Silicon Valley—a hub teeming with a multitude of companies contributing not only to economic growth but also positively impacting individuals, families, and the nation at large. This is a journey that not only echoes international successes but also elevates Egypt's global standing, fostering a legacy of quality, excellence, and innovation."

Ayman also sheds light on a prevailing trend, which is that local and regional investors are predominantly leaning towards fintech and e-commerce, driven by familiarity and resources. The intricacies of the semiconductor field often pose a barrier to investment, making it a less obvious investment choice. However, at Shorooq Partners, we are proud to defy convention by supporting a fabless semiconductor company like Pearl Semiconductor. Should the Company continue its trajectory of success, we believe this achievement could catalyze a shift in regional investor perspectives.

Today, Pearl Semiconductor brims with global aspirations, boasting offices in both Malaysia and Egypt. Their unyielding commitment to empowering Egypt's semiconductor industry has transformed a once barren landscape into a flourishing ecosystem, now housing over 30-40 companies, including Egyptian startups and multinational giants, all contributing to the expansion of the nation's technology landscape.

Though this may be our first venture into the semiconductor domain, our investment echoes our dedication to innovation, progress, and lasting impact in the technology sector.

A Brief Chronicle of the Evolution into a Comprehensive Ecosystem

Semiconductors form the very backbone of modern technology, enabling the devices and solutions that have become integral to our daily lives.

As we delve deeper into this pioneering collaboration, it is also essential to understand the profound impact that [Ayman Ahmed](#), a long-term semiconductor expert and CEO of Pearl Semiconductor, along with his esteemed college professor and industry veteran, Dr. [Hisham Haddara](#), Chairman of the company, have had on Egypt's semiconductor landscape for over three decades culminating in the recent founding of Pearl Semiconductor. Their pioneering efforts, which began in the early 1990s, have laid the foundation for a burgeoning semiconductor ecosystem in Egypt, empowering the country to bring new innovations to the global market today.

In the early days, the semiconductor ecosystem was nearly nonexistent in Egypt, but Dr. Hisham, having completed his education in France, was undeterred as he set his sights on an ambitious goal – to attract foreign companies and lay the groundwork for the industry's development in the country. This pursuit led to the establishment of ANACAD, a small French company, to launch Egypt's first development center of its kind.

Ayman, one of the first engineers to join Dr. Hisham's journey, brought his talents and passion to the endeavor. Together, they worked towards a common goal of not just building a company but an entire industry.

The inception of ANACAD Egypt in 1994 was just the beginning of a remarkable journey, as ANACAD was swiftly acquired by Mentor Graphics, a prominent Electronics Design Automation (EDA) company, merely a week after its launch. This turn of events further united Dr. Hisham and Ayman, fueling the desire to propel shifts in the semiconductor landscape.

Building upon their six-year experience at Mentor Graphics, Dr. Hisham and Ayman left to launch MEMSCAP Egypt, a subsidiary of another French company. However, their true breakthrough came with the inception of [Si-Ware Systems](#) in 2004, Egypt's very first fabless semiconductor company dedicated to IC Design services.

The fabless semiconductor model, wherein companies develop products without owning a

fabrication facility, gained global popularity in the 1980s, with current manufacturing predominantly concentrated in countries like Taiwan, Singapore, Malaysia, Korea, and China. This fabless approach allowed Si-Ware Systems to focus on design and creativity, tapping into Egypt's vast pool of engineering talent and skilled workforce, while leveraging overseas facilities for manufacturing.

Si-Ware and Pearl's Journey: Nurturing a New Generation of Talent

At the outset, the concept of an Egyptian semiconductor company competing on the global stage faced much skepticism. As Ayman recalls, "Just 20 years ago, engaging in IC design in Egypt was dismissed as *stupid*. Egypt's semiconductor landscape still resembled a desert, barren and unexplored." As a result, it was highly improbable for Si-Ware to secure design services contracts from any US or European customers at that time.

However, against all odds, Si-Ware Systems forged ahead and paved the way for a thriving semiconductor industry in Egypt. Beyond securing contracts with prominent industry players, the company began to earn praise from major semiconductor companies in the US.

With a growing design team in place, Si-Ware Systems thrived as a formidable player in the design service domain, but Si-Ware Systems had grander ambitions for its team: developing its own semiconductor products - an endeavor that seemed even more audacious at the time.

Si-Ware Systems thus embarked on a strategic shift from design services to in-house product development. Envisioning a future where Egypt would gain greater recognition in the global semiconductor industry, the company continued its evolution. In 2019, it underwent a significant restructuring and sold its design service business to [Goodix](#), one of China's leading semiconductor companies. This move allowed them to concentrate entirely on product development, reaffirming their commitment to innovation and independence.

In a transformative juncture, Pearl Semiconductor emerged as an independent entity spun-off from Si-Ware Systems in December 2020. Ayman, who, alongside Dr. Hisham, had relentlessly worked to pioneer groundbreaking new technology, assumed a leadership role at the forefront of Pearl Semiconductor. With their combined expertise and decades of industry knowledge, the company solidified its dedication to creating its own semiconductor products. This dynamic synergy of experience, expertise, and visionary insight propelled Pearl Semiconductor and Si-Ware Systems to challenge the boundaries of innovation, steering Egypt's semiconductor industry towards an exciting, promising future.

Ayman articulates, "Service business is good. It gives you experience and exposure, but it is not scalable. A product company, on the other hand, must possess the right products, technology, and market opportunity. The pivotal difference lies in value creation. Product companies can grow much larger and make more impact than design services... which is what we're aiming for at both Si-Ware and Pearl."

As Shorooq Partners observes this pivotal moment, we recognize the potential and significance of this paradigm shift. We believe this collaboration signifies more than a promising investment in a semiconductor player with the capacity to become a global leader. We are supporting Egypt's ongoing revolutionary movement – one that seeks to unlock the untapped engineering potential of the country.

Join us in this journey of inspiration and transformation today.