

Edgewater Wireless Systems Inc. (YFI-V) – Watchlist Report

Traffic Warning: Get Off the Road and Onto the Highway

Company Background – Edgewater Wireless is an innovation-driven, fabless semiconductor company developing Wi-Fi silicon solutions based on its patented Spectrum Slicing technology, for residential and enterprise applications. The company has over 26 granted patents focused on the advancement of Wi-Fi silicon solutions, Access Points, and IP licensing. In a groundbreaking move, Edgewater partnered with Arm Holdings (ARM-Q, Not Rated) to tap Arm's energy-efficient processor core and powerful validated sub-systems in their next-generation AI-enabled chipsets – creating a paradigm shift in Wi-Fi architecture.

What is Spectrum Slicing? – Think of Spectrum Slicing like moving from a single-lane road to a multi-lane highway. Edgewater's physical layer Spectrum Slicing allows a frequency band to be divided/sliced, to enable more radios to operate in a given area. YFI's patented technology delivers the highest channel density in the market today and allows devices to utilize the available spectrum fully. More channels mean more available lanes for traffic, allowing more devices to pass through traffic more efficiently — resulting in higher throughput and lower latency, which is the #1 consumer complaint for cable companies.

Robust Patent Portfolio – Edgewater has generated a significant patent portfolio (26 patents and growing) for a company its size and this has been a strategic focus of the company. Edgewater believes that some of the techniques taught in the patents are important and may become more widely used in the semiconductor industry. It is possible that a licensing campaign for all or part of the patent portfolio might generate a new revenue stream. Similarly, a sale of some or all of the patent portfolio could generate additional capital. Jim Skippen recently joined YFI's Board of Directors. The addition is likely related to YFI's robust patent portfolio. Mr. Skippen has a strong track record of maximizing the value of a patent portfolio, most recently through his tenure with WiLAN (QTRH-T, Not Rated).

Significant Milestones Achieved with Tier-1 Client – YFI completed its Proof of Concept and Pilot program with Liberty Global (LBTYA-Q, Not Rated) through an extensive program encompassing 750k households using 6M devices on Wi-Fi. **The results of the program demonstrated 7-18x throughput performance gains, increased Wi-Fi capacity in 75% of homes, and a 50% reduction in latency.**

Recent Partnerships to Help Foster Next Stage of Growth – \$60M+ of R&D has been spent growing YFI's product suite which led to significant advancements through partnerships in 2024. YFI was the first publicly traded company to join the **Silicon Catalyst incubator + accelerator program** which has helped companies receive \$600M+ in venture investments and \$100M+ in grants. Silicon Catalyst is the only incubator + accelerator focused on the Global Semiconductor Industry. YFI will participate in a 24-month program which includes a semiconductor focused curriculum and over 40 events worldwide each year. Silicon Catalyst's ecosystem provides the essentials for YFI to design, fabricate, and market semiconductor solutions. This partnership has the potential to dramatically reduce the cost of bringing next-generation chips to market. **Through Silicon Catalyst, YFI recently partnered with Arm Holdings**, the leader in energy-efficient microprocessor IP. 70% of the global population use Arm-based products with 99% of smart phones and 50% of all chips using Arm processors. ARM has shipped 300B+ chips since inception and 29B in FY24 (>2x compared to FY16). The partnership allows YFI to leverage ARM's industry leading platform and flexibility to explore multiple IP options to optimize its Spectrum Slicing technology. The partnership with ARM has the potential to significantly strengthen the offering of YFI's MLX 488 platform and to dramatically change the economics of Wi-Fi.

Accelerating Growth with High-Impact Initiatives - Over the next 6 months, YFI is focused on executing three initiatives that will accelerate growth of its next-generation wireless technology. First, the company will advance silicon production, completing the packaging of RF Front Ends for its Spectrum Slicing technology, paving the way for scalability. Engineering samples are anticipated to be received in the first half of this year. Second, Edgewater will launch and commercialize its IIoT Spectrum Slicing powered access point solution to tap the growing enterprise Wi-Fi market opportunity. Third, YFI will expand its IP portfolio which can unlock new revenue streams. Additional near-term catalysts include new partnerships fostered through the Silicon Catalyst program, technological advancements to its product offering driven through the ARM partnership, meeting production milestones out of the North American-based foundry and revenue generation following commercial advancements in late 2025.

Watchlist Report

Recent/Closing Price	C\$0.08
52 Week Price Range	C\$0.03 - C\$0.10

Stock Data

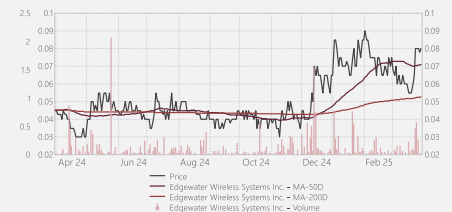
Shares Outstanding (As Converted, M)		
Basic	235	
Fully Diluted	311	
Market Cap (\$M)		
Basic	\$19	
Fully Diluted	\$25	
Cash/Securities (\$M)		
	\$1.6	
Debt / Leases (\$M)		
	\$0.7	(Incl convertible debt)
Fully Diluted EV (\$M)		
	\$24	

About the Company

Edgewater Wireless is an innovation-driven, fabless semiconductor company developing Wi-Fi silicon solutions based on its proprietary Spectrum Slicing technology, for residential and enterprise applications.

All prices in US\$ unless otherwise stated

Stock Performance



Market Opportunity – The International Telecommunication Union (ITU) estimates that 5.5B people (68% of population) use the internet, up from 53% of population in 2023. ARM estimates that the semiconductor industry is forecasted to grow at a CAGR of 8%. Not only are more people using the internet, but there are more devices being connected as well. Research conducted by Parks Associates indicates that the average household has 17 connected devices paired to Wi-Fi, more than double the 8 connected devices in 2015. YFI is positioning itself with a differentiated product offering in a fast-growing industry and believes that it has the opportunity to disrupt various markets. First, the company plans to supply silicon chips to the \$13B consumer market following progress made with LBTYA and aims to have chips ready for production in H2/26 with capabilities of developing 100k+ units per month out of GlobalFoundries (GFS-Q, Not Rated) Vermont-based fabrication plant. YFI intends to then further penetrate the \$14B enterprise market, with a target of \$1B of market share through its MLX 488 platform.

Potential For Additional Funding Through Government Grants – East Asia is currently responsible for 75% of global chip production. However, with reshoring becoming a growing theme, there is opportunity for additional grants for YFI which operates in Canada and plans to use USA-based production facilities. In the United States, The CHIPS and Science Act provides \$53B for American semiconductor research, development, manufacturing, and workforce development. In Canada, the Accelerated Growth Service (AGS) and FABrIC programs have been identified as potential funding opportunities, and the company indicates that \$5-\$7M of potential funding partnerships (50-75% grant-back for R&D and commercialization) have been identified. The company believes it could be eligible for such programs, which could materially lower its operating costs.

Key Partnerships – Silicon Catalyst brings USD \$3M of in-kind chip development products and services such as EDA, tools, IP, PDK's, prototypes, design, software, packaging and manufacturing expertise. Additionally, Silicon Catalyst was instrumental in the introduction of Edgewater to ARM and its selection to participate in ARM's Flexible Access program, created to support the innovation and advancement of early-stage silicon companies. ARM brings Edgewater access to the most advanced CPUs in the market, with the ability to bolt-on additional advanced software capability such as AI and security. The ARM relationship could enable Edgewater to create one of the fastest, most advanced Wi-Fi 7 access chips in the market – an Edgewater Wireless Spectrum Splicing Chip, powered by ARM CPU and AI. Additionally, the partnership with ARM supports Edgewater's prospects and innovation, as ARM's Flex program assists with deferring all up-front licensing costs for repayment when the product is commercialized.

Wi-Fi 7 Refresh Cycle Underway – Wi-Fi 7 refers to the seventh generation of wireless technology, coming on the heels of Wi-Fi 6 (launched in 2019) and Wi-Fi 6E (2020). Wi-Fi 7 doubles the channel size of the 6-GHz band, going from 160MHz to 320MHz. Think of it like a highway increasing the speed limit, the amount of burst-rate data that can be transmitted at once will be drastically increased. According to Intel, a typical Wi-Fi 7 laptop could reach a “potential maximum” of 5.8Gbps -- 2.4 times faster than the 2.4Gbps possible with Wi-Fi 6/6E. The marquee feature of Wi-Fi 7 is Multi-Link Operation (MLO). Wi-Fi 6 and 6E provided access to multiple bands, but devices could only connect to one band at a time. MLO allows Wi-Fi 7 devices to simultaneously connect on two bands and builds on the [Dual-Channel Wi-Fi](#) standard, co-innovated by CableLabs and Edgewater. That results in faster speeds, but it also means improved reliability and ultra-low latency. The Wi-Fi Alliance predicts that 233M Wi-Fi 7 devices will have entered the market in 2024 and grow to 2.1B devices by 2028.

Onshore Supply Line Ecosystem Built – US Chip Act (US) and CMC (Canada) are key initiatives in North America as geopolitical pressure is causing a shift in the manufacturing environment of strategic chip assets to return to North America. Onshoring of its supply line has been a key focus for YFI over the last 5 years. The company is 100% domiciled in Ottawa and has developed a supply line ecosystem by establishing a relationship with chip manufacturer Global Foundries, one of the world's largest semiconductor foundries with locations in Burlington, VT. Meanwhile on the back end of production, Edgewater has selected IBM's (IBM-NYSE, Not Rated) Bromont, Quebec based sister plant for chip

packaging. YFI's selection of a North American-based fabrication facility puts the company in a strong position to avoid the brunt of tariffs on next-generation chips.

Recent Acquisitions - Renesas Electronics Corporation (TSE:6723, Not Rated), a premier supplier of advanced semiconductor solutions acquired Celeno Communications for USD \$315M in an all-cash transaction in October 2021. **Celeno generated revenue of USD \$37M in 2020, implying 8.5x sales on acquisition.** Headquartered in Israel, Celeno offered a wide range of wireless communication solutions, including advanced Wi-Fi chipsets and software solutions, for high-performance home networks, smart buildings, enterprise and industrial markets and key customers included Liberty Global and Comcast (CMCSA-Q, Not Rated). Celeno's Wi-Fi Doppler Imaging technology was a Wi-Fi based high-resolution imaging technology ideal for home care and assisted living, home security, safe driving and digital and connected factories. It depicts, tracks and analyzes the motion, behavior and location of people and objects using standard Wi-Fi, eliminating the need for multiple cameras or sensors in home environments and commercial buildings.

ON Semiconductor Corp (ON-Q, Not Rated), an intelligent power and sensing solutions company with a focus on automotive and industrial markets acquired Quantenna for USD \$1.07B in January 2019. **Quantenna generated USD \$220M in 2018, implying 5.0x sales on acquisition.** Quantenna was a leader in the design, development, and marketing of advanced high-speed wireless communication solutions enabling wireless local area networking. Quantenna delivered leading-edge Wi-Fi performance to support an increasing number of connected devices. Wireless systems were utilized with high-performance radio frequency, mixed-signal and digital semiconductor design skills to provide highly integrated Wi-Fi solutions customers. Quantenna provided solutions to communications service providers, including home gateways, repeaters, mesh nodes and video clients such as set-top boxes, or STBs. Key customers included Comcast, AT&T (T-NYSE, Not Rated) and Verizon (VZ-NYSE, Not Rated) plus device manufactures like NETGEAR (NTGR-Q, Not Rated) and Plume.

Scenario Analysis

With a current market cap of \$19M, it could be argued that any commencement of its potentially industry changing Wi-Fi chip has yet to be built in the stock price. While it is difficult to pinpoint an exact valuation target upon industry acceptance of its new chip. Consider the following scenario:

- Liberty Global has commenced an RFP process for its next generation home-based Wi-Fi system. Such an RFP would likely be for 15M+ households.
- YFI has undergone significant testing with Liberty Global with the results being faster speed and materially lower latency.
- Edgewater believes they could potentially sell its technology for USD \$30 per chip or USD \$30M (assuming a 7% share of the aforementioned potential contract).
- If successful in winning part of this RFP, it would represent a change in the industry dynamics in terms of the cablecos adopting a "multi-lane" approach to Wi-Fi as opposed to the current "single-lane", a technology that is protected by YFI's patent portfolio.
- If one cableco were to adopt this new technology, it is likely that the others will follow suit, leading to a potential new standard in the industry.
- If this happens, Edgewater could be acquired by one of the incumbents in this space such as Broadcom (AVGO-Q, Not Rated), Intel (INTC-Q, Not Rated), Qualcomm (QCOM-Q, Not Rated) or any number of other companies through the relationship with Silicon Catalyst.

Disclosure Requirements

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