

December 28, 2020



# Resonant Issues Shareholder Letter and Provides Corporate Update

## 2020 Marks Highest Revenue Year in Company History, Customers Surpass Shipment Milestone of 50 Million RF Filters

AUSTIN, Texas, Dec. 28, 2020 (GLOBE NEWSWIRE) -- Resonant Inc. (NASDAQ: RESN), a leader in transforming the way radio frequency, or RF, front-ends are being designed and delivered for mobile handset and wireless devices, today issued a letter to shareholders from its Chairman & CEO, George Holmes.

Dear Shareholders,

2020 was an important operational and financial year for Resonant, even in light of the widespread effects of the COVID-19 pandemic. We hope all of you have stayed healthy and safe during these difficult times.

Now more than ever, we have seen the trend towards a more connected world, bringing the need for effective RF filtering technologies front and center for many industry players. This trend is driven by the insatiable demand for data on mobile devices for streaming, as well as the need for speed by other emerging applications, such as autonomous vehicles that rely on incredibly fast communication to sense other objects and avoid collisions. With this appetite for data and speed has come the need for wide bandwidth, high frequency RF filters, which is the fundamental benefit of what our ISN® technology can provide for not only 4G RF filters, but also for next-generation 5G, Wi-Fi and Wi-Fi 6E RF filters.

To our knowledge, Resonant remains the only company in the world that can provide RF filter solutions that, by design, natively meet the increasingly complex RF performance requirements for mobile and non-mobile applications, without the need for doping or ancillary components. In most cases, we can also shorten design time and help our customers benefit from the use of more cost-effective manufacturing processes. Put simply, our ISN technology platform and XBAR® solutions have positioned us to benefit greatly from the rapidly growing \$9 billion RF filter market. To date, our customers have cumulatively shipped over 50 million RF filters designed using our technology, several of which continue to make their way into Tier-1 smartphones, as well as the Wi-Fi and automotive markets.

2020 will mark the highest revenue generating year in the company's history, and one in which we achieved a number of other significant milestones. As we entered 2020, we had recently signed a partnership with the largest RF filter manufacturer in the world, which consisted of a strategic investment and a licensing agreement to design 5G RF filters with our XBAR® technology.

Filter Market		Duplexer Market	
<b>Murata</b>	<b>38%</b>	<b>Murata</b>	<b>35%</b>
Qualcomm	25%	Broadcom	20%
Wisol	11%	Qualcomm	12%
Broadcom	7%	Skyworks	11%
Qorvo	6%	Taiyo Yuden	10%
Skyworks	6%	Qorvo	6%
Taiyo Yuden	6%	Wisol	5%
Other	1%	Other	1%

*Leading RF Filter and Duplexer Manufacturers (Source: Navian, 2019)*

Work with this partner started quickly, and by October 2020 we successfully delivered against our second milestone ahead of schedule, which required us to achieve previously determined target performance, packaging and initial reliability. In conjunction with this milestone achievement, we received a \$2.5 million payment and, more importantly, moved towards the next phase of the agreement which focuses on building a commercial platform and high-volume manufacturing of our XBAR® 5G RF filters. Our strategic partner has exclusivity to our XBAR® technology for mobile applications until March 2022, and with two of four milestones already achieved, we remain extremely optimistic about our strategic partnership.

We also continue to make significant progress with our 4G RF filter solutions as a result of our standard product library that we are leveraging with customers around the world. Leveraging this solution, we signed a multi-year licensing agreement with a dominant Asian filter foundry partner, which includes both prepaid revenues and royalties. As we enter 2021, we will have completed the designs for a total of seven 4G RF Filter designs covering multiple bands, which collectively represent a worldwide total addressable market of approximately \$1.6 billion.

Through internal work and conversations with current and potential partners, we've become increasingly aware that our XBAR® technology is also ideally suited for high-frequency 5 and 6 GHz Wi-Fi applications, such as Wi-Fi 6E, a rapidly emerging segment of the market that represents a massive opportunity. To give you an idea of scale, according to CISCO, Wi-Fi 6 hotspots will grow 13-fold from 2020 to 2023. Wi-Fi 6E has 1,200MHz of spectrum available now, roughly 4x the size of the C-block spectrum, which is currently being auctioned off and exceeding expectations by nearing over \$70 billion in proceeds. Clearly, this market is exploding and will require efficient RF Filter solutions in the Wi-Fi market for mobile, CPE and infrastructure applications. Where we stand today, we have the potential to ship our first Wi-Fi 6E samples in the first half of 2021.

Our progress has enabled Resonant to recruit what we believe to be the industry's leading advisory board, consisting of Jeff Ball, Clint Brown, Brian Crutcher, Rubén Caballero, Peter Gammel, Josh Jacobs, Luis Pineda and Glen Riley. Collectively, they bring significant industry experience which spans over 150 years with companies such as, Apple, Broadcom, JP Morgan, Microsoft, Skyworks, Qorvo, Qualcomm, Texas Instruments and Yahoo!. Their tremendous experiences have contributed to our winning strategy.

As we move through 2021:

- We expect unit volumes to grow significantly, providing ongoing validation of our ISN®

and IP platforms

- We will expand our relationship with the world's largest RF filter manufacturer, as we work with them to build a high-volume manufacturing platform for XBAR® filters that will meet the exacting demands of the largest mobile handset OEMs in the world
- We expect to secure a contract in the first half of the year focused on XBAR for non-mobile applications, which could include autonomous and electric vehicles, other IoT , CPE or infrastructure applications

To our stakeholders, thank you for your continued support. While we accomplished much this year, there is plenty of work ahead to address the urgent challenges facing our industry. Looking to 2021 and beyond, our momentum will continue to build. Our proprietary ISN® EDA software tool has enabled us to build a strong IP portfolio of over 300 patents filed or issued, with over 150 focused on 5G technology. Backed by a strong cash position, we expect our revenues to continue to grow and annual volumes to accelerate over the pace we saw in 2020, all while securing new customers and contracts focused on mobile and non-mobile opportunities. Together, we are in a stronger position than ever to drive long-term value for our shareholders.

Sincerely,

George Holmes  
Chairman & Chief Executive Officer

#### **About Resonant Inc.**

Resonant (NASDAQ: RESN) is transforming the market for RF front-ends (RFFE) by disrupting the RFFE supply chain through the delivery of solutions that leverage our Infinite Synthesized Network (ISN) software tools platform, capitalize on the breadth of our IP portfolio, and are delivered through our services offerings. In a market that is critically constrained by limited designers, tools and capacity, Resonant addresses these critical problems by providing customers with ever increasing design efficiency, reduced time to market and lower unit costs. Customers leverage Resonant's disruptive capabilities to design cutting edge filters and modules, while capitalizing on the added stability of a diverse supply chain through Resonant's fabless ecosystem-the first of its kind. Working with Resonant, customers enhance the connectivity of current mobile devices, while preparing for the demands of emerging 5G applications. To learn more about Resonant, view the series of videos published on its website that explain Resonant's technologies and market positioning:

- [Resonant Corporate Video](#)
- [ISN and XBAR: Speeding the Transition to 5G](#)
- [Expert Insights on Unlocking the Potential of 5G](#)
- [The Technology Enabling the Transition to 5G](#)

For more information, please visit [www.resonant.com](http://www.resonant.com). Resonant uses its [website](#) and [LinkedIn page](#) as channels of distribution of information about its products, its planned financial and other announcements, its attendance at upcoming investor and industry conferences, and other matters. Such information may be deemed material information, and Resonant may use these channels to comply with its disclosure obligations under Regulation FD. Therefore, investors should monitor the company's website and its social media accounts in addition to following the company's press releases, SEC filings, public conference calls, and webcasts.

## **About Resonant's ISN<sup>®</sup> Technology**

Resonant can create designs for difficult bands, modules and other complex RF Front End requirements that we believe have the potential to be manufactured for less cost and less time than traditional approaches. ISN is a suite of proprietary mathematical methods, software design tools and network synthesis techniques that enable us to explore a much larger set of possible design solutions that regularly incorporate our proprietary technology. We then quickly deliver design simulations to our customers, which they manufacture or have manufactured by one of our foundry partners. These improved solutions still use Surface Acoustic Wave (SAW) or Temperature Compensated Surface Acoustic Wave (TC-SAW) manufacturing methods and perform as well as those using higher cost manufacturing methods such as Bulk Acoustic Wave (BAW). Resonant's method delivers excellent predictability, enabling achievement of the desired product performance in roughly half as many turns through the fab. In addition, because Resonant's models are fundamental, integration with its foundry and fab customers is seamless because its models speak the "fab language" of basic material properties and dimensions.

## **Safe Harbor / Forward-Looking Statements**

This press release contains forward-looking statements, which include the following subjects, among others: future shipments of RF filters designed using our technologies, the capabilities of our filter designs and software tools, the expanding use of RF filters in emerging markets, and our customers' target applications for our technology. Forward-looking statements are made as of the date of this document and are inherently subject to risks and uncertainties which could cause actual results to differ materially from those in the forward-looking statements, including, without limitation, the following: our limited operating history; our ability to complete designs that meet customer specifications; the ability of our customers (or their manufacturers) to fabricate our designs in commercial quantities; our customers' ability to sell products incorporating our designs to their OEM customers; changes in our expenditures and other uses of cash; the ability of our designs to significantly lower costs compared to other designs and solutions; the risk that the intense competition and rapid technological change in our industry renders our designs less useful or obsolete; our ability to find, recruit and retain the highly skilled personnel required for our design process in sufficient numbers to support our growth; our ability to manage growth; and general market, economic and business conditions. Additional factors that could cause actual results to differ materially from those anticipated by our forward-looking statements are under the captions "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" in our most recent Annual Report (Form 10-K) or Quarterly Report (Form 10-Q) filed with the Securities and Exchange Commission. Forward-looking statements are made as of the date of this release, and we expressly disclaim any obligation or undertaking to update forward-looking statements.

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