

# Automotive Viewpoint

Barry Koch

Microtune RF Technology for Automotive Entertainment



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## ▶ Interview with Barry Koch, Managing Director of Microtune GmbH & Co., KG

Barry Koch, Managing Director of Microtune GmbH & Co., KG, discusses the Company's opportunities and plans for the automotive entertainment markets.

**Q:** *Microtune is a recognized leader in RF technology for the broadband market, yet the Company has a long history and stable business in the automotive industry. Can you provide some background on the company's automotive business?*

**A:** Microtune's automotive products division began with our merger with Temic Telefunken Hochfrequenztechnik in January of 2000. At that time, Temic was an established and successful manufacturer of car-radio tuners and car TV tuners.

Since then, our automotive products have evolved into a comprehensive portfolio of tuner and amplifier products for automotive audio and video reception. The success of our automotive products is impressive. Today you will find Microtune technology in wide use at more than fifteen car manufacturers across multiple models, ranging from compact cars to high-end luxury vehicles. Currently, we are a leading RF supplier in the automotive TV market in Europe. Our Tier 1 and aftermarket RF solutions are enabling in-car entertainment systems from world-class OEM suppliers whose customers include Mercedes Benz, BMW, Audi, Volkswagen, Land Rover, Porsche, and Peugeot. The automotive business has grown to be an important part of Microtune's overall success as well.

**Q:** *Do you solicit input from any key customers?*

**A:** Our customers are our most important source of information on the direction of the market. They have very specific requirements for our products, so that they can, in turn, meet the stringent requirements of the automotive OEMs. In the automotive market, design cycles are very long, so if you miss an opportunity, you can have a very long wait for the next one.

In fact, automotive OEMs often ask us for our input, because we are recognized as the leader in the silicon tuner market. For instance, OEMs want to know what new tuner technologies will be coming in the future, and how this technology could help them to realize new functionality and improved performance in the automotive environment.

**Q:** *Digital transmission standards are being implemented in communications markets all over the world....how have they impacted the automotive industry?*

**A:** Digital standards enable improved mobile reception for in-car entertainment, and they have been a driver in migrating consumer-class applications to the automobile. For example, the DVB-T and ISDB-T digital TV standards will be important factors in



Microtune is developing automotive-grade versions of its radio frequency (RF) silicon technology as part of an aggressive strategy to drive its innovative tuner chips into automotive entertainment markets worldwide. Recently, the Company announced that its new highly integrated antenna amplifier IC, the MT1119, is automotive qualified and in production. This amplifier is a key component for enabling superior AM/FM car radio reception into on-glass, roof and bumper antennas. Before year end, Microtune formally plans to introduce a state-of-the-art TV tuner chip targeted for in-car TV systems that enables rear-seat digital entertainment at very high speeds.

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increasing customer demand for in-car digital television. For audio applications, the increase in the number of standards is propelling future developments towards a software-defined radio approach. We are actively positioning to be a key player as a tuner supplier for these new types of applications.

**Q:** *What current market trends are you seeing in automotive today in terms of the driver/passenger experiences in the vehicle?*

**A:** This is an exciting time for entertainment packages in automobiles, which have come a long way from a simple AM/FM radio. For instance, now we see Internet access, high-speed TV, rear-seat entertainment, and parallel services—where front-seat passengers might be listening to DAB reception, rear-seat passengers are listening to a separate FM or playback, and another DAB tuner is operating in the background to find alternate frequencies and receive data services—all making their way into the automobile. Each of these services, by the way, requires a separate silicon tuner. In addition, consumer electronics technology is now being incorporated into automobile designs, including MP3 and memory card support, USB interfaces, and an ability to link with devices such as iPods.

**Q:** *What about technology trends?*

**A:** The growth in electrical content in automotive designs is placing a burden on available space and requiring more compact solutions. There are increasing demands for higher levels of integration in order to improve functionality and simultaneously decrease size and power dissipation. All this must occur, of course, without compromising performance. When these trends are combined with the growing number of global standards for audio and video, we definitely see great demand in the future for software-defined systems.

**Q:** *What are the differences in tuners for consumer electronics versus automotive customers?*

**A:** The automotive market has rigorous performance and reliability standards, specific qualification processes, and challenges of temperature, vibration and longer product life times as compared to consumer products. There are also unique technical challenges with mobile reception in a fast-moving vehicle, including multi-path, signal fading, and shadowing of signals. In terms of qualifications, we meet the rigorous standards for silicon products according to AEC-Q100, with manufacturing certified according to TS-16949, ISO-9001, and ISO-14001.

**Q:** *Microtune is considered the pioneer and leader in silicon tuner technology...how does Microtune plan to bring silicon tuners to the automotive entertainment market?*

**A:** The cornerstone of our strategy is to listen to our customers. Moving forward, we are committed to design solutions that fulfill the requirements of mobile reception for our customers. We will continue to leverage our expertise in silicon RF solutions, automotive experience, and systems knowledge to achieve this goal.

*“We understand the automotive market and are able to focus on high-quality, flexible, multi-standard solutions. That will be the secret to our continued success in automotive.”*

*Barry Koch*

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**Q:** *How is Microtune positioned to succeed in the future in the automotive market?*

**A:** The uptake of automotive entertainment systems has encouraged many new vendors to try and enter this market space. However, the performance and reliability requirements are very high, making it challenging for these new players to design successful parts.

Microtune is the leader in silicon tuner technology, and it is backed by a solid reputation as a supplier of tuners and RF components to key Tier-1 automotive customers. We continue to develop new, specialized products for this market, such as our recently announced MT1119 antenna amplifier. We understand the automotive market and are able to focus on high-quality, flexible, multi-standard solutions. That will be the secret to our continued success in automotive.