

GaAs Industry Overview and Forecast: 2010 – 2015 Abstract

Eric Higham¹ and Asif Anwar²

¹Strategy Analytics Inc, 199 Wells Avenue Suite 108, Newton, MA 02459

ehigham@strategyanalytics.com, 617-614-0721

²Strategy Analytics Ltd., Bank House 171 Midsummer Boulevard, Milton Keynes, MK9 1EB, United Kingdom

aanwar@strategyanalytics.com, +44 1908 423635

Abstract

The GaAs device industry experienced strong growth in 2010. The paper will focus on 2010 market performance and the factors that drove this growth, along with our estimate of the leading manufacturing companies. It will also discuss our insights into trends and forecasts for the GaAs industry through 2015.

INTRODUCTION

Strategy Analytics estimates the GaAs device market closed 2010 with revenues of almost \$5 billion, a growth of nearly 35%. This was the largest yearly growth rate in a decade, only surpassed by the growth just before the “telecom bubble” burst. This paper will provide some insight into the present state of the GaAs industry with snapshots of company and application market shares. We will also discuss our 5-year market forecast and some of the drivers and threats shaping that forecast.

HISTORY

While GaAs-based devices continue to enable a wide variety of commercial and military applications, wireless communications and mobile handsets dominate GaAs device market revenues. Figure 1 shows the historical performance of the GaAs industry from 1999 to 2010. The only year where growth topped what we saw to close 2010 was at the beginning of the decade, from 1999 to 2000. However, after that growth, the GaAs market declined sharply over the next several years before reaching equilibrium through the middle part of the decade. With an unstable global economy, are we destined to repeat the growth profile of the early part of the 2000's? The paper will offer some insight into the forces at work in the 2000's versus the trends we see going forward.

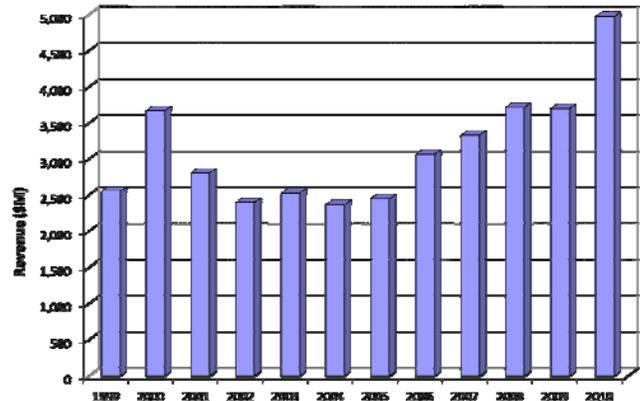


Figure 1. GaAs Industry Revenue from 1999-2010

TRENDS AND THE FUTURE

The inescapable conclusion is consumers are in love with data-intensive services and applications. Some forecasts indicate IP data of all types will increase by a factor of nearly four over the next 5 years, while mobile data will be up by a factor of 26 over that period. The growth of mobile data is both enabling and benefitting from the increasing penetration of smartphones.

To meet the increasing data demand, operators are acquiring spectrum and deploying next generation infrastructure networks. The result is a new generation of mobile handsets, not just smartphones that are designed with multi-band and multi-standard capabilities. This added sophistication is increasing the GaAs content in mobile handsets and driving the GaAs device market. The paper and presentation will address the implications of handset trends, like converged and multi-mode GaAs PAs and higher order switches, new infrastructure architectures like “small cells” and hetnets and how increasing bandwidth demand is influencing developments in wired infrastructure networks.

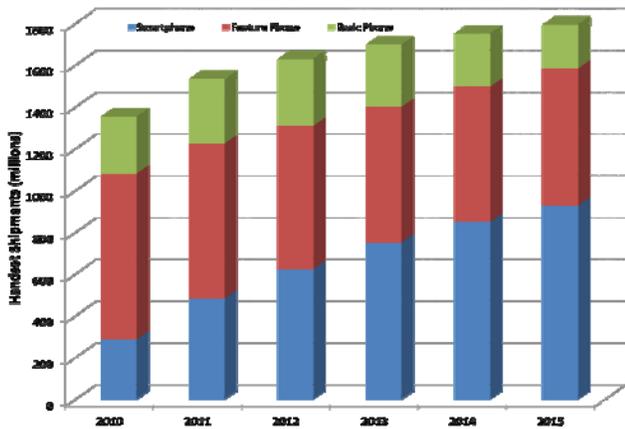


Figure 2. Handset Estimates

Figure 2 shows our estimate of the yearly growth rate of mobile handsets and the rapidly increasing penetration of smartphones. In addition to the multi-band, multi-mode capabilities, smartphones and “feature phones” are more likely to include features like GPS, Bluetooth and Wi-Fi, further adding to the sophistication and number of GaAs devices per mobile handset.

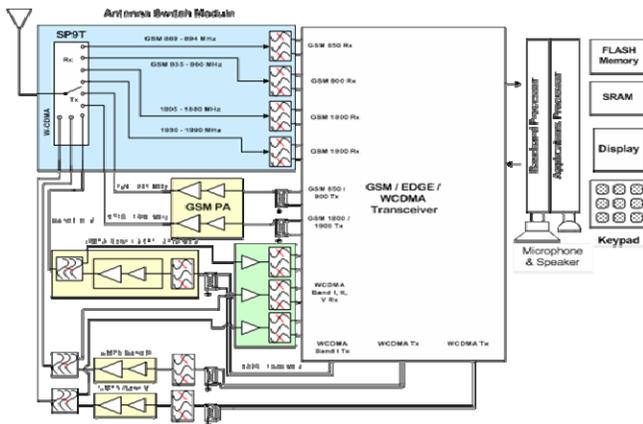


Figure 3. Representative Handset Front-End

Figure 3 shows a representative block diagram of a handset front-end and indicates the potential GaAs opportunity. This block diagram does not include CDMA or any of the features mentioned above, indicating the potential for switches with higher numbers of throws and more amplifiers. Even with the intense cost pressure on handset components, the sheer size of the market and the number of GaAs devices included in each handset drive the overall GaAs market.

With the dependence on mobile handsets, it is no surprise that the market leaders in GaAs revenue are the companies most closely associated with GaAs handset products. Figure 4 shows our estimate of the 2010 market share of revenue for GaAs devices.

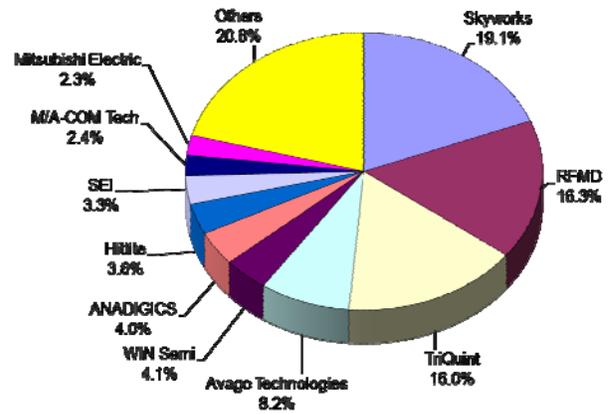


Figure 4. 2010 GaAs Manufacturer Market Share

The paper and presentation will discuss some of the trends we are seeing with the GaAs device suppliers and who is gaining and losing share.

Figure 5 shows our forecast, segmented by market applications for GaAs MMIC revenue out to 2015. The chart shows the tremendous dependence of the entire GaAs MMIC market on the handset segment. The paper and presentation will touch on trends for all the market segments included in Figure 5.

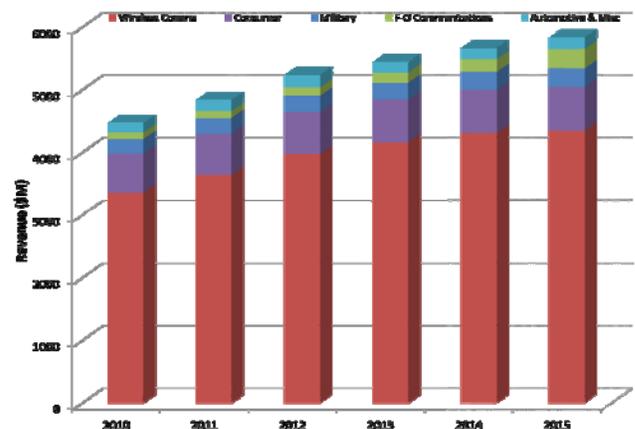


Figure 5. GaAs MMIC Market Forecast and Segmentation

CONCLUSION

The GaAs industry had a banner year in 2010. A sharper than expected recovery from the global economic crisis of 2008/2009 fueled much of the growth, but increasing sophistication in mobile handsets and more GaAs content will be the driver going forward. This paper and presentation will address trends and our estimates for the overall GaAs device market and its major segments out to 2015.