

Market Research

in two High Performance Data Converter Disciplines

MicroNetworks Division of Unitrode Corp



Table of Contents

Chapter	Page
LIST OF ILLUSTRATIONS	
OVERVIEW OF STUDY	
Research Methods	
Customers Surveyed	
ANALYSIS OF WIDE TEMPERATURE INPUT	
The Oil Well Logging Industry	
Engine Monitoring	
ANALYSIS OF HIGH SPEED INPUTS	
Speed versus Resolution	
HIGH TEMPERATURE AID CONCLUSION	
HIGH SPEED AID CONCLUSION	
RECOMMENDATIONS	
BIBLIOGRAPHY	
APPENDICES	

Executive Summary

This report summarizes results from primary research into the potential for high temperature and high performance Analog to Digital (A/D) converters. The research revealed that Digital Signal Processing (DSP) applications in Medical Imaging and military electronics drive demand for High Speed Data Converters. The market for High Speed Data Converters is expanding rapidly. However, the value of this growth to Micro Networks is diminished by our lack of resources. The Oil Well Logging industry controls demand for Wide Temperature A/D Converters. Demand for Wide Temperature devices fluctuates with the price of oil but offers excellent profit margins and is relatively free of competitors.

Developing an Ultra High Speed Data Converter will require a major investment of engineering resources. Our larger competitors are in a much better position to address their high growth market because of their greater manufacturing and engineering resources. I do not recommend developing a 100 MHz A/D because I believe we are hopelessly outmatched.

Burr-Brown has announced that they will not ship the ADC10HT after this year. Burr-Brown also wants to have a closer working relationship with Micro Networks. These developments suggest a win/win/win scenario. By transferring the ADC10HT BOM and manufacturing information to Micro Networks, both parties gain incremental business and the customer also benefits

OVERVIEW

This report presents the results of primary market research in two high performance Data Converters disciplines. The first area of investigation is High Temperature Data Converters. For High Temperature Data Converters, the scope was intentional narrowed to A/D converters. The second area of investigation is an Ultra High Speed, 100 MHZ, A/D Converter with 12 bits of resolution.

There is very little synergy between these two disciplines Oil well loggers are the major users of very high temperature devices. Manufactures of medical electronic systems and military contractors are the primary users of High Speed Data Converters. Because of this lack of synergy, research for this report focused on two totally separate cross sections.

Research Methods

Information for this report was obtained by direct contact with prospective users of the proposed devices. Assistance from company representatives was solicited for this task (See Appendix A). Representatives provided contacts and phone numbers. In some cases, they conducted the survey and reported the requested information. Where representative involvement was impractical, the author of this document conducted the survey and reported the requested information. Summaries of these discussions are contained in the bibliography.

The goals of the surveys were 1) determine critical specifications that drive prospects' applications; 2) quantify potential as much as possible; 3) obtain technical suggestions and competitive information. A questionnaire was used during the interviews to ensure that survey goals were kept in mind (See Appendix A).

Table 1 **Survey Goals**

1 – Determine critical Specifications
2 – Determine Potential
3 - Obtain technical and competitive inputs

Customers Surveyed

Research was conducted on a sample selected from customers known to participate in Wade Temperature and High Speed Data Converters. Table I lists customers selected from the four target markets.

This is an abbreviated version of the actual report. The Actual report is available upon request.