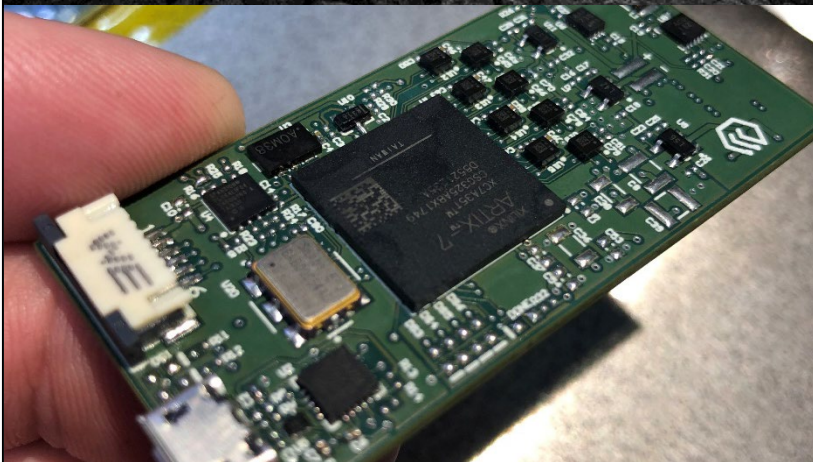




ENGENIUSMICRO



ENGENIUSMICRO MICRO-FPGA

MULTI-SENSING FUSION SYSTEM

A POWERFUL, COMPACT, AND EXTENSIBLE SYSTEM FOR COLLECTING MULTIPLE SENSOR INPUTS AND GENERATING INTELLIGENT INFERRED DECISION-MAKING INFORMATION. THE SYSTEM IS MODULAR AND CUSTOMIZABLE TO SUIT THE NEEDS OF THE USER.

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MULTI-SENSING FUSION SYSTEM

SUMMARY

Initially developed as part of an ARMY Phase II SBIR effort for a Multi-Sensing Target Discrimination System for use in small-format missile systems, the Micro-FPGA and associated sensors provide a flexible and powerful high-speed solution for applications requiring intelligent decisions to be made based on the input of multiple sensor inputs.

Utilizing a Bayesian inference network, the Micro-FPGA takes in multiple inputs at high sample rates and rapidly generates intelligent decision outputs needed. As the system was designed for missile systems it can collect sensor data and provide an answer within micro-seconds.

TECHNICAL INNOVATION

- Use of modular design allows application to many areas of development
- Extremely low SWAP means ideal for use on UAVs or other similar platforms
- FPGAs are used for real-time processing and with the digital front end, will maintain a low SWAP-C

TECHNICAL SPECIFICATIONS

- Compact format
 - FPGA CPM only 60mm x 28mm
 - Additional sensors maintain 28mm width format
 - High-Capacity SD Data Storage and USB Data Transfer
- Multiple sensor currently available
 - High-Speed Magnetometer Sensor
 - Colpitts Oscillator-based Inductance Sensor
 - Acoustic Transducer Impact Sensor
 - Wide-Band FMCW Radar Sensor
- Custom firmware solutions available
- Custom sensor solutions available

TARGET MARKETS

Applications using multiple sensor inputs benefit from the Micro-FPGA's sensor fusion approach with anticipated interest from the following commercial markets.

Aerospace

Defense

Law Enforcement

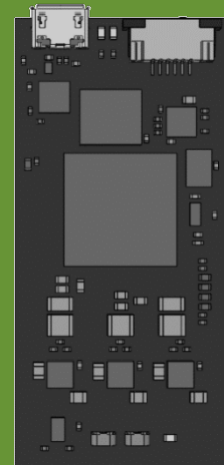
Manufacturing

Transportation

Automotive

Entertainment

*Instrumentation & Data
Collection*



Shown Actual Size 60mm x 28mm
Similar Devices Avg 74mm x 65mm