

Embedded ARM Cortex Multi-core Controller Design Note #107

Embedded NXP LPC43xx Multi-core Processor



Embedded Multicore ARM Cortex Processors are a sure bet. Orchid has many years of ARM Cortex design experience.



“Upgrading from an older 80188 design gave us cause for concern. Orchid’s expert guidance was essential to the success of our new controller.”

- President

- Embedded Controller Systems

Embedded Multi-core ARM Cortex

ARM Cortex-M class processors have taken the world by storm. 32 bit controllers now routinely take the place of former 4 and 8 bit low cost applications. Multi-core and asymmetrical multi-core processors extend the performance of embedded ARM Cortex-M controllers. Orchid’s latest high end controller is based on NXP’s LPC435x class multi-core processors.

Feature-packed Controller Implementation

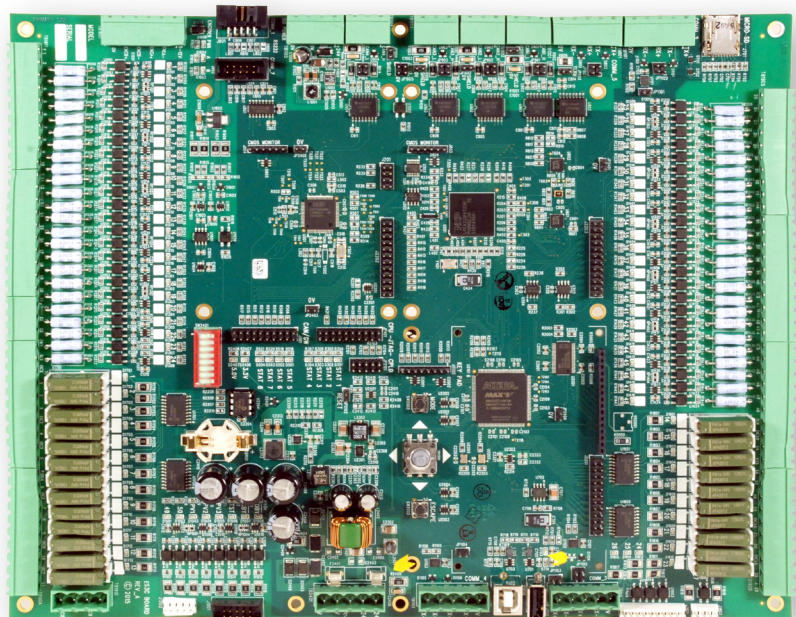
- 200 MHz Cortex-M4 CPU
- 48 High Voltage GP Inputs
- Four CAN Bus Channels
- Four UART RS485 Channels
- SD Card Boot Memory
- LCD Display System
- Isolated CAN Communications
- Battery Backed Real Time Clock
- 200MHz Cortex-M0 Core
- 23 High Voltage GP Outputs
- Four UART RS232 Channels
- One USB Host Ports and Device Port
- Robust Input Power Supplies
- Expansion Daughter Board Slots
- Isolated RS485 Communications
- Quadrature Motion Encoder

CAN Bus Communications

Multi-channel CAN Bus Communications offer a robust and flexible general purpose control solution. Typically operated in a multi-master, distributed system CAN bus communications can greatly streamline data transfer and collection applications. CAN Bus controllers operate autonomously from the main CPU performing data flow, data collision, data retransmission and data message accuracy checking without CPU intervention. Complete messages are received and transmitted at the CPU level. Communications over CAN are computationally efficient leaving the multi-core processor free for application specific routines.

Orchid Technologies: Embedded ARM Cortex

The development of custom electronic products for our OEM clients is Orchid’s entire business. The design of custom multi-core embedded ARM Cortex-M controllers with rapid design cycles, demanding technical requirements, and unforgiving schedules sets us apart. Call Orchid Technologies today!



ORCHID TECHNOLOGIES
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Custom Engineering From Concept to Production

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