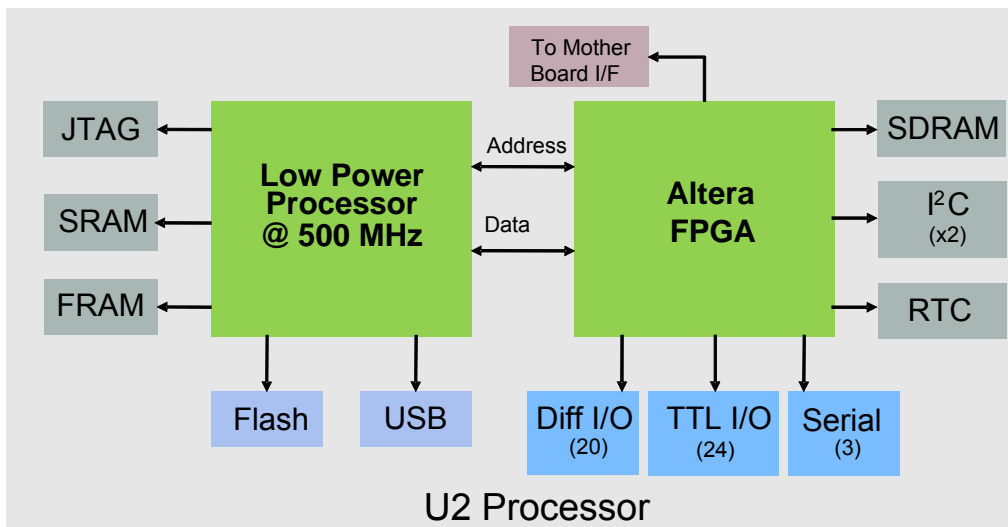


## Processor (Module U2)    **Blackfin® Processor and General Purpose I/O Resource for User Operational Programs and Control**

Processor:	The BF533, from the ADI Blackfin family, offers support for overall system processing. The U2 is an extension of the multifunction board architecture which uses Blackfin processors to implement the motherboard, module and signal processing functions. The Blackfin is an ideal choice for this use due to its wide application and availability of third party software and design services.
FPGA:	A moderate scale FPGA (Altera Cyclone II family) is added to provide additional flexibility for system functions.
Processor clock rate	500 MHz
Flash Memory:	8 MB for program and data storage
Ferro-Electric RAM:	8 KB for non volatile data storage
SDRAM:	16 MB for program execution
SRAM:	512KB for real time cache
Power:	5V @ 1150 mA (Est. / Typ. Duty cycle)
Weight :	2 oz. (57g)



U2 Processor Module Block Diagram

### **U2 Processor Description**

Based on the Analog Devices Blackfin® BF-533 DSP processor, users can confidently take advantage of the powerful Analog Devices, Inc. (ADI) Visual DSP++ Development Environment. Boards fitted with the U2 Processor allow users to develop application code in support of their I/O and communication intensive application without the need for a separate Single Board Computer. The U2 coupled with NAI's extensive I/O function capabilities and software library support offers developers a real time embedded system environment. Additionally, this low power high performance solution can interface directly to the I/O, perform embedded algorithms and communicate directly to system and sub-system computers. Operating system run-time and overhead are reduced due to direct DSP control. Additional core interfaces added to the FPGA allow for a flexible communication interface selection for controlling I/O specific modules. Reference U2 Programmer's guide for detailed operation documentation.

### **User Requirements/Utility Library**

- Analog Devices Visual DSP++ 4.5 (or later version)
- Blackfin Emulator
- NAI I/O and Communications Library support