A Low Cost, High Speed Portable Communications Device
A Case Study Using IDT RV4640 Microprocessor & IDT77903 ATM Card

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Abstract

We will present a design for a low cost but powerful and high speed communications device powered by IDT's RV4640 as its processing engine. The device can achieve very high speed, thanks to the PCI bus compatible IDT's ATM NIC. The device could be used as a two-way pager, a set-top box, an internet terminal, a personal digital assistant or as a video phone.

The RV4640 is a very affordable 64 bit RISC processor that executes 175 dhrystone MIPS at 133 MHz. The RV4640 can be connected to a System Interface Chip which will provide I/O and memory control.

The IDT77903 ATM card is a full-duplexed 25Mbps NIC with a PCI bus interface and it costs less than $100. Integrating this card into our device as a network interface will make high-speed videoconferencing and multimedia applications easily implementable.