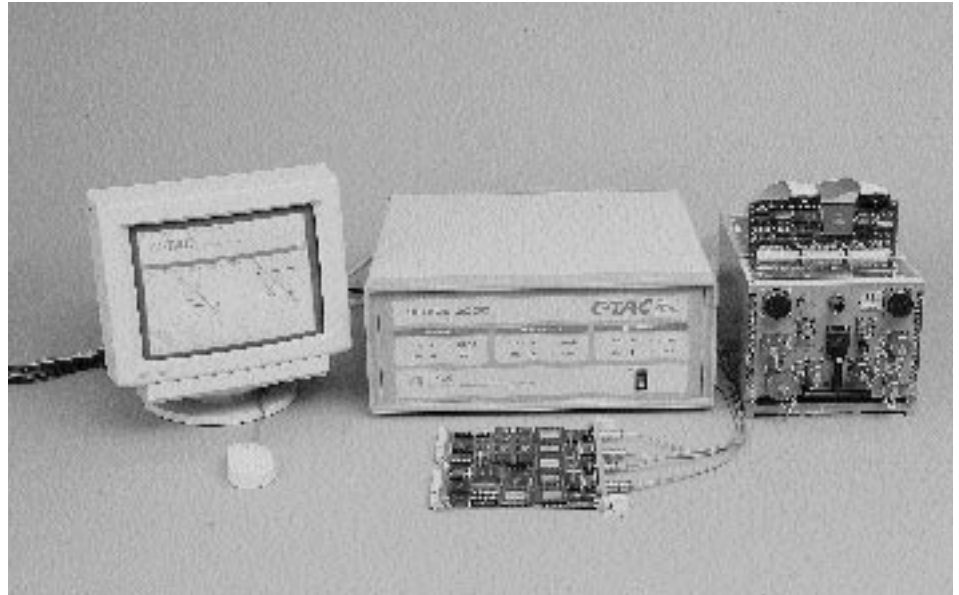# C-TAC* MC/MX Software Development Tool

- Real-Time, Non-Intrusive Operation Up to 50 MHz
- Full Speed Snapshot Buffer Records Up to 16,382 Events
- Support of All Three i960® Processor Buses: ICEbus, Backside Bus, and (nLBus)
- Monitor Instruction Flow, Profile Code Execution
- Monitor All System I/O and Inter-Agent Communications
- Monitor All Writes to Secondary Cache, Private Memory, and High Speed I/O
- Symbolic Debugging and Monitoring via Links to Ada Tool Sets
- Intrusive Debugging Support
- Read/Write i960 Processor Registers (File, FP, Special Function, Internal Control)
- Read/Write i960 Processor Memory
- Dynamic Breakpoints (Bkpt-External Routine-Return to Program)

C-TAC* is a system-level integration tool for embedded computer systems. It provides simultaneous real-time, non-intrusive (RTNI) monitoring of all key points in the system. The i960 processor channel provides RTNI monitoring for embedded i960 MX processors. The monitoring is done on a completely non-intrusive basis without the injection of wait states or cycle stealing. Software timing and sequencing are not affected by the monitoring function. Multiple channels can be placed in a single C-TAC unit to simultaneously monitor additional processors or buses.

The i960 processor channel monitors and records updates to program variable and program flow. Up to 250 variables can be displayed while the data is being recorded. A snapshot buffer allows the capture of up to 16,382 contiguous event records. For longer recording, a disk is provided that supports a sustained acquisition rate of over 40,000 events/second. Extensive filtering (up to 250 unique events) and triggering (64 levels) are provided to allow the user to pre-qualify acquired data for long-term recording. Time stamps recorded with the i960 processor data can be synchronized with other channel recording to provide system data flow analysis.

A post run analysis package is included that presents data in both tabular and graphical forms. The tabular format includes the time stamp, address, operation type, value, and symbolic name. Graphically, data can be presented with variable amplitude plotted against time and program execution flow at the procedure level showing procedure duration and sequencing.

AVAILABILITY:
Now

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