# Project Overview

## Summary

The Fast Pins System will be used in two ways:

* As an add-on adapter card for the LMO 500 IC Test System. This is the primary customer target.
* As a stand-alone system with the same configuration as the LMO 500 IC Test System with an additional PMU card. This is the secondary customer target.

The initial add-on Fast Pins System supplies advanced AC functional test capabilities well beyond those of the host LMO System. It supports high-speed functional pattern execution (100 Mhz+), deep vector patterns (128Meg), and fast pattern load times. It also features extremely adaptable I/O pins that support all the current high-speed digital logic standards including HSTL, SSTL, and LVDS. The Fast Pins System provides all these capabilities at a low cost when compared to conventional mainframe ATE systems.

The Fast Pins System consists of a multi-card assembly that is mounted on the LMO 500 as an LMO DUT Adaptor Board (DAB). In turn, the Fast Pins assembly provides a new DAB card interface for which custom high-speed DAB cards are designed. Figure 1 shows how the two systems and DUT are arranged.

Although Fast Pins is mounted on top of the LMO 500 in this configuration, it is otherwise an autonomous system. It contains its own computer subsystem, with an operating system and a complete set of command and control software. This autonomous capability is leveraged for the standalone Fast Pins System.

The Fast Pins System provides for its own power needs. It has an Ethernet LAN connection for access to test program and vector pattern files stored on remote file servers. It receives real-time user commands from a remote control software application executing on any LAN- connected PC. Likewise, it returns test results and log files to the remote application.

The first phase of the Fast Pins System utilizes some of the LMO 500 test resources and capabilities. In particular, it relies on the LMO 500 DUT power supplies to provide power to the test device. The LMO System is also used for DC and AC parametric measurements as required. The LMO 500 host PC is controlled—and the behavior of its test head is coordinated—by the Fast Pins remote application software over the LAN. Together, the two systems function in a complementary fashion.