

TECHNOLOGY TODAY

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ATL Applies Tomorrow's Technology Today

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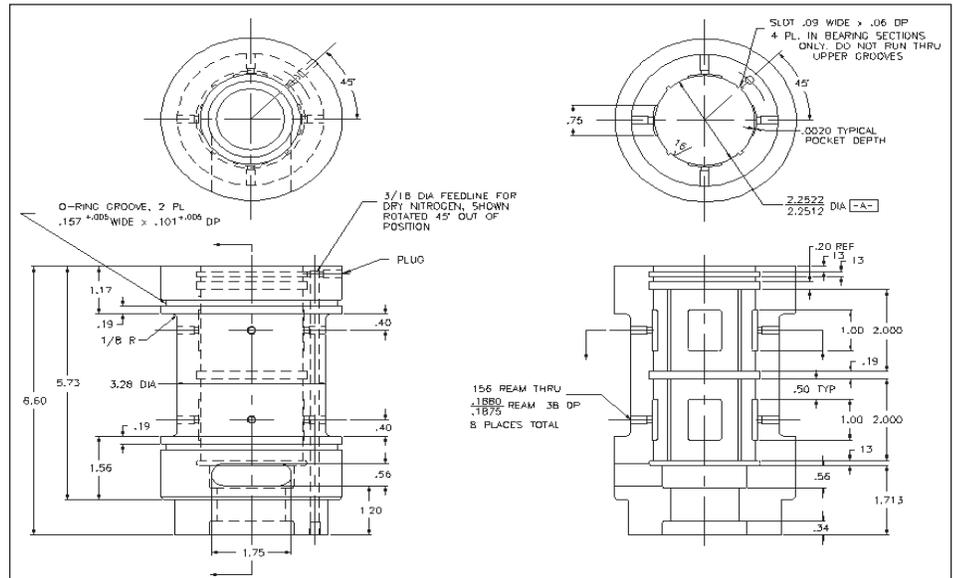
Welcome

This issue is one in a series of periodic publications produced by Advanced Technology Laboratories to keep you informed of new developments here at ATL. It serves to better introduce our company to our newer customers, and generate a greater awareness of our capabilities for our older ones. We will, from time to time, supply articles on current projects, new ideas and novel ways in which our company can serve you. These timely articles will hopefully allow you to see how ATL can fit into your corporate life, improve your bottom line and more effectively make use of your human resources.

A Thank You

We are proud to announce that ATL again witnessed a significant increase in our "Strategic Partner" business last year. The majority of that increase was again due to the production of "turnkey" products for our customers. More and more, we see the need for integrated services that allow a customer to concentrate on cost containment and marketing, leaving the details of manufacturing to us. Our responsibility increases, yours decreases and we both gain from the relationship. Check with us about our production of warranted equipment in our Strategic Partnering Program.

When we talk of turnkey systems, we mean total turnkey, from design inception to testing and packaging of your product in your packaging (if you want). We routinely use our customers' logos (with their permission) to produce a complete product that can be shipped as delivered from ATL.



Detail of a gas bearing used in a computer-automated test system

All is Not Electronic

ATL has become known to most of our customers as an electronic system engineering and manufacturing facility; however, we are much more than that to some of our clients. Specialized machinery design for factory automation and testing has always been an integral part of our company's System Integration Group. Automatic test systems include fully integrated mechanical systems, electronic controls and a full range of user documentation. End uses vary from inline production test, to quality assurance functions. Integrating such systems into a company's corporate computing database is accomplished in a variety of ways. In all cases, the most cost-effective mixture of off-the-shelf hardware, specially-designed mechanics and standard computer system components is selected. PC-based computing platforms are routinely used as system controllers, as well as PLC's. Communications systems range from network gateways to simple serial interfaces.

Mechanical system design and fabrication are provided in cooperation with you, so that there are no surprises in the final product. Again, as in the case of our electronic products, a single point of responsibility (ATL) is maintained to reduce your risks and minimize your human resource requirements.

Reverse Engineering

At one time an ugly word, often considered the intellectual equivalent of stealing, reverse engineering is becoming commonplace with companies that have their own mature products that were designed by in-house groups dispensed with long ago in the name of cost reduction. The product is now in need of an upgrade and the old documentation is of little help. Industry has developed many tools that ease the burden of reconstructing and documenting a company's product so that current technology can be infused into the design. This is usually less expensive

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than redesigning the product from the ground up. Combinations of scanners, digitizers and file transfer software provide an easy path to PCB documentation. Bare boards that may be available also help in the reconstruction process. If all else fails, a single example of the product is sufficient in many cases to develop the technical background to modify and manufacture it in an efficient manner.

More difficult procedures involve the replacement of hard-wired logic with microprocessors or the substitution of contemporary hybrid integrated circuits for older discrete components. However, it is the rule that the finished product is less costly when redesigned to fit today's components and production systems. Up-to-date documentation also insures many additional years of useful lifespan for the product, as well as more convenient support.

SMT Technology

Moving to our current facility allowed us to install another automated SMT production line. We have accommodated an annual production of over 100,000 board-level assemblies. We have recently integrated our computer aided design (CAD) systems with our manufacturing facility. This means shorter turn-around times and lower tooling costs to you. With 2 SMT lines and 3 machines in operation, we can now produce anything from a single prototype to relatively

high-volume assembly of your systems. Single contract production volumes have ranged from a single prototype to 43,000 board-level systems. Our designs have ranged from single-sided consumer boards to 16-layer high-density systems with SMT components on 2 sides.

Applications include the medical, commercial, industrial and automotive markets. We also service the civilian federal government and the military, both as a prime contractor and as a subcontractor.

Government Activity

ATL is active in the federal governments Small Business Innovative Research (SBIR) program. SBIR contracts have been awarded to ATL through the Army, Navy, National Institutes of Health and the Department of Education. ATL also has a 3 year rolling contract with the Department of Energy (DOE) for the design, development and manufacturing of instrumentation modules for fusion experiments. ATL manufactures a line of instrumentation modules for DOE under our own name. We also have a joint research and development contract with the Department of the Navy for the joint development of anti-submarine warfare systems. ATL is currently working on a second Cooperative Research and Development Agreement (CRADA) with the Navy to jointly develop a commercial version of a military system that we

supply to the military.

Computer Aided Design Systems

We have recently upgraded our Computer Aided Design (CAD) systems. Each of our workstations is equipped with dual 20.1 inch flat panel displays and is connected to our servers through a gigabit network. In fact, the entire updated section of our network is running at gigabit speeds in full duplex mode. Our mechanical and electrical CAD system software packages are all the latest versions and under maintenance contracts, so we are always up to date. We also use mathematical and electronic modeling software packages to perform system and circuit simulation to accelerate your development programs.

For More Information

We are always willing to share with you our experiences and expertise. We would also like to air common interests within this publication, whether the source is within ATL, our current customers or potential clients. Please call us with your questions and any information you would like to discuss. You can check with Ken Fertner on ext. 1107 to obtain further information. We can also communicate via FAX MODEM or the internet. FAX is 215-355-1388 and our URL is www.atllabs.com. Ken's email is fertner@atllabs.com It can't hurt!



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