

of up to 24 terminals on 2 partylines, to the Network Control Unit, capable of managing a network of up to 1536 terminals on 16 partylines.

Epic's expertise lies in adapting microprocessor technology to the broad field of data collection. This includes support of both standard and custom hardware and software products, and covers a range of responsibilities from terminal OEM sales to the installation and maintenance of turnkey systems – including the host computer the customer prefers. The capabilities of the assembly group include – PCB component insertion, wave soldering and board cleaning, terminal assembly, cable fabrication, and metallized foil label making. The Manufacturing Test Group performs board and terminal burn-in and test. Self Test Program (STP) proms are utilized during the terminal burn-in process to check out and monitor terminal functions. Customer orders are fully configured in-house and go through a full systems test prior to shipping. Multi-stage quality monitoring is provided by an independent QA/QC Group. Epic Data's manufacturing facility is augmented by its parent company, Ebco Industries Ltd. Ebco provides capabilities in the areas of metal fabrication, painting, and tool & die making.

In addition to the manufacture of data collection hardware and operating software, Epic Data is able to offer complementary application software products. A division of Epic Data, the Epic Systems Group, was formed specially to design application software to meet customers unique requirements.

AVERAGE WORK FORCE: Total – 150

GROSS SALES: 1986 – \$16.0M
1987 – \$23.0M

PLANT SIZE: 14,500 Sq Ft

EQUIPMENT: Epic Data's equipment includes – Wave solder machine; aqueous PCB washer and contaminant monitor; PCB bake chamber and PCBA dry chamber; component prep machines; semi-automatic DIP inserter; metallized foil processing equipment; automatic shorts tester; cable tester; PCB burn-in rack; walk-in terminal burn-in chamber; drill presses; flat cable press; crimp terminal machines; STP dedicated testers for PCBAs; and miscellaneous meters, scopes, analyzers, and debugging testers.

EXPERIENCE: Epic Data is a pioneer and leader in the design and manufacture of data collection equipment and software. Epic has major clients throughout the world and their equipment is frequently recommended for use by such major computer companies as Xerox, Tandem, DEC, and Sperry. Epic's base of over 500 customers include – General Electric, Hughes Aircraft, LTV Aerospace, DEC, General Dynamics, Litton, Lockheed, Martin Marietta, Monsanto, Northrop, Mexican Government, Canadian Government, and Motorola.

KEYWORDS: Component/System Testing; Controllers; Custom Hardware; Custom Software; Data Acquisition; Microprocessors; Modular Design; Portable Terminals; Software Services; Solid State Devices; Standard Products; Terminals; Testing/Test Equipment; Turnkey Data Collection Systems.

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HISTORY: Leitz Canada was established in Midland, Ontario in 1952 as a subsidiary of Ernst Leitz Wetzlar GmbH, West Germany. At that time, the company commenced operations with twelve personnel and since then, the company has expanded through internal growth in three major business areas:

- Photography
- Custom commercial optical assemblies and systems
- Military electro-optical instruments and systems

In 1987, the Wild and Leitz companies combined to form the Wild Leitz Group, and Leitz Canada was assigned to the Special Products Division to take advantage of the full range of capabilities within the group for defense electro-optical systems in the Canadian marketplace.

CAPABILITY: Ernst Leitz Canada is a well integrated firm specializing in the design and manufacture of complex precision opto-mechanical and electro-optical assemblies and systems for the commercial and government markets built under the Leitz, ELCAN and Wild Leitz trade-names. From a comprehensive suite of computerized optical design and CAD programs in the engineering departments, to complete opto-mechanical testing capabilities, Leitz is equipped with the most modern equipment to undertake both large volume production and prototype quantities for conventional, state-of-the-art and research programs. Full machining capabilities, surface treatment, optical grinding and polishing of spherical, aspherical and plano optics, in glass, metal and infrared materials, microprocessor controlled thin film coating facilities, and optical measurement and testing apparatus enable Leitz to undertake the fabrication, assembly and test of this complex optical equipment. New developments are underway in optical data storage equipment for harsh environments and military systems, infrared coating, and weight reduction techniques using plastics.

In addition, the resources and technology of Wild and Leitz are available to be applied or transferred as necessary. Special capabilities exist in the fields of glass and optical materials, optical lenses, seekers, night vision, helicopter sighting systems, target acquisition equipment, and gun alignment and control systems.

AVERAGE WORK FORCE: Professionals – 50
Total – 475

GROSS SALES: 1986 – \$28.0M
1987 – \$30.0M

PLANT SIZE: 130,000 Sq Ft

EQUIPMENT: Ernst Leitz' equipment include – In-house IBM and HP computing hardware, Eros MTF measuring benches, environmental test facilities, CNC machining centers, full set of optical measuring equipment including Tropel digital measuring interferometer, microprocessor controlled coating chambers, and Leitz 3-axis coordinate measuring machine.

EXPERIENCE: Ernst Leitz' experience is outlined in four different areas:

- Photography/Reconnaissance – design and manufacture of the Leica M camera and a family of photographic lenses for the Leica M and R cameras; production of cameras for instrumentation and event recording; design and manufacture of lenses used in underwater applications for military and commercial applications; and design and fabrication of lenses used in aerial reconnaissance, earth resources and space application with focal lengths from 18mm to 900mm.
- Custom Commercial Assemblies and Systems – optics for optical data storage, x-ray equipment, image intensifiers and microfilm systems; complex periscope viewing systems for use in high radiation nuclear environments; and industrial electro-optical equipment including laser scanners, non-contact inspection devices and quality control instruments.
- Other Military Applications – design and manufacture of visual and infrared systems for guidance and fire control applications including tank fire control and muzzle reference systems, binoculars, rifle sights, weapon sights, rangefinders (optical and laser), HUD and HDD optics, and night vision products, both image intensification and far infrared equipment.
- Research and Development – optical countermeasures, optical data storage for harsh environments, thermal imaging, image intensification, and optics for space.

KEYWORDS: Electro-Optics; Fire Control Optics; Image Processing; Laser Optics; Lenses (Reconnaissance); Lenses (Underwater); Optical