RUGGEDIZED LEX 90™ GRAPHICS DISPLAY SYSTEM

For over a decade, Lexidata™ has been helping both OEMs and end-users satisfy their computer graphics requirements by designing and manufacturing high-speed, high-performance raster graphics display processors. By listening to and working with our customers, we have been able to provide them with unique solutions to their particular needs.

Enhancing Lexidata's reputation as an industry leader is the availability of a ruggedized version of our popular LEX 90 display system that can be easily tailored to your specific program requirements. The Ruggedized LEX 90 provides high-resolution (1280×1024) color graphics, alphanumerics, and imagery data capabilities to meet the demanding fidelity and responsiveness needs of defense, military, government, and C³I applications.

QUALITY AND RELIABILITY A blend of skilled, highly-trained manufacturing professionals and an extensive automated manufacturing process ensures the production of a reliable, Ruggedized LEX 90 system. Every integrated circuit is certified by an in-house test group and is accepted for use only after being subjected to complete functional and DC and AC parametric testing at 70°C. Every printed circuit board is subjected to a ''bed of nails'' test by approved vendors. All board interconnections are made using gold-plated, pin-and-socket VME connectors. Every sub-assembly used in the Ruggedized LEX 90 system is pre-tested *before* assembly.

All components are loaded onto the printed circuit boards using the latest in automatic insertion equipment. The boards are wave-soldered and tested by a universal bare board tester for solder shorts, and then receive additional testing by an in-circuit tester. Each of these steps help to ''build-in'' a manufacturing consistency that is vital to producing a quality product.

Once a Ruggedized LEX 90 system is fully assembled, it is burned-in for 48 hours of error-free operation. After burn-in, each unit is then 100% functionally tested. A Ruggedized LEX 90 system is ready for shipment only after it passes each of these checkpoints in our manufacturing process.

Lexidata's Ruggedized LEX 90 graphics system allows high-resolution color graphics to be used under a variety of demanding conditions. The display processor (left) features a ruggedized chassis that is designed to withstand severe rack-mount environments. The monitor (right) features integral shock mounts and can survive a wide range of mechanical and temperature fluctuations.

RUGGEDIZED LEX 90 SPECIFICATIONS

RELIABILITY AND MAINTAINABILITY

MTBF - Display Processor: 7,000 hours for a typical system. (Calculated based on RAC MDR-12 and MIL-HDB-217D)
12,000 + hours demonstrated

MTBF — Monitor: 5,000 hours calculated
10,000 hours demonstrated

Built-In Test (BIT): Dedicated microprocessor for internal testing of display processor

MTTR: Less than 20 minutes

Regulatory Compliance: FCC Docket 20780 Class A
UL 478
CSA Document C22.2 #154
VDE 0806

EMISSIONS

Conducted: 48 db μVolts 450 KHz to 30 MHz, 50μH

Radiated (from 3 meters): 40 db μVolts at 30 - 88 MHz
44 db μVolts at 88 - 216 MHz
46 db μVolts at 216 - 1000 MHz

TEMPEST: TEMPEST requirements per NACSIM 5100A will be addressed according to the user application.

EMI SUSCEPTIBILITY

Transient Spike (10 msec): 6K volts peak at 120 VAC input
6K volts peak at 240 VAC input

RFI Susceptibility: 50 KHz to 50 MHz at 10 volts rms

Radiated Susceptibility: 10 KHz to 50 MHz at 10 volts/meter

Static Discharge: –15 KV discharge through a 500 ohm resistor from a charged 300 pf cap.

COOLING

Display Processor: Forced air
Filter: 30 - 60 PPI (Pores Per Inch)

Monitor: Convection

ACOUSTIC NOISE LEVEL

The acoustic noise level shall not exceed the NC-55 noise criteria curve.

DIMENSIONS

Display Processor: 19″ EIA and RETMA STD Mounting (MIL-STD-108E); 5.25″ High × 17″ Wide × 28″ Deep; 45 lbs. (average system)

Monitor: 19″ EIA and RETMA STD Mounting (MIL-STD-108E); 16.4″ High × 18.5″ Wide × 18.3″ Deep; 75 lbs.

TEMPERATURE AND HUMIDITY

Operating Temperature: –15°C to 55°C

Non-Operating Temperature: –40°C to 75°C

Operating Relative Humidity: 10% to 95% (non-condensing)

Non-Operating Relative Humidity: 10% to 95% (non-condensing)

ALTITUDE

Operating: 10,000 feet (2.4 km) maximum

Non-Operating: 30,000 feet (9.1 km) maximum

SHOCK

Operating: 10 Gpk, 3 axis for 7-13 msec

Non-Operating (unpacked): 40 Gpk, 3 axis for 20-40 msec

Non-Operating (packed for shipment): Flat freefall from 24″ to concrete floor (NSTA procedure)

VIBRATION

Operating: 5-55 Hz, .02 displacement, 3 Gpk
55 Hz - 10 KHz, .25 Gpk

Non-Operating (unpacked): Sine vibration, 5-120 Hz, 1.5 Gpk

Non-Operating (packed for shipment): Vertical axis excitation - 1.40 Grms, 10-300 Hz
Longitudinal and lateral excitation - .68 Grms, 10-200 Hz

POWER

AC Line Input: 90-132 Volts, 47-403 Hz
180-264 Volts, 47-403 Hz

AC Line Distortion: Less than 6% of fundamental frequency amplitude distortion required.

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