

LEXIDA

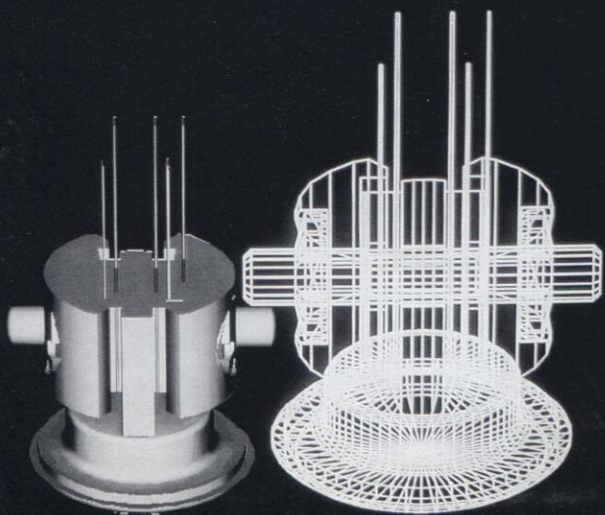
LEX 90/35 Model 2 Dual Resolution Graphics System

The LEX 90/35 Model 2 graphics system features two software-selectable resolutions. This versatile capability satisfies both medium resolution shaded imaging requirements that need up to 24 bit planes, and high resolution Computer-Aided-Design (CAD) applications which typically demand fewer planes. The Model 2's exclusive SimulRes™ functionality allows simultaneous display of both a 640x512x8 image (with two contiguous buffers on a 640x1024x8 bit map) and a 1280x1024x4 overlay on one screen.

True Color A true color configuration is available offering two buffers of 640x512x24 with an 8-bit Color Lookup Table (CLUT) for each color. For applications needing higher resolutions, the same system offers 1280x1024x12 pseudo-color with 4-bit Lookup Tables (LUTs) providing 4096 colors from a palette of 16.7 million.

Upward Compatibility As with all members of the LEX 90 family, the Model 2 is software compatible with Lexidata's popular Series 3000 products. The LEX 90 software architecture is based upon Lexidata's Extended Graphics Operating System (EGOS™). EGOS provides all the graphics primitives such as circles, arcs, vectors, fills, and text, as well as

LEX 90
LEX 90/35 Model 2 SimulRes Display



Features	Benefits
Software Selectable Resolution	Offers Medium and High Resolutions In One System
SimulRes	Allows Medium Resolution Images and High Resolution Overlays, Simultaneously On One Screen
Field Upgradeable	Provides Easy Product Expansion Path
Certified Integrated Circuit Components and DIN Connectors	High Quality and Reliability
Plug Compatible With Lexidata's Series 3000	Protects Previous Software Investments
On-Board Diagnostics	Assures Quick System Diagnosis and Repair

other fundamental graphics tools. This operating system thus enables the user to work with an upwardly compatible command set, protect previous software investments, and provide room for growth as application demands become more complex.

Family Architecture Every LEX 90 model features the System Control Module (SCM) as its basic display controller. Based on a 56-bit word microprocessor, the SCM uses the latest bit-slice technology to achieve vector writing speeds of 600ns per pixel in any direction. This 56-bit horizontal microcode, designed with an advanced high-speed LSI microsequencer, yields increased speed and efficiency by processing multiple read/write and arithmetic instructions concurrently. As a result, complex calculations and set-up times are executed rapidly during each of the 12MHz processor's cycles.

On-Board Diagnostics A 6801 microprocessor is dedicated to system diagnostics. After power-up, diagnostics quickly check registers, memory boards, and LUTs. Another test can be selected to perform an extensive diagnosis of the processor, all video Random Access Memory (RAM), and LUT locations. This test provides information on clipping, pan and zoom, blink, and monitor alignment.

Overlay Capabilities An optional four-plane overlay capability is also available. Using its own dedicated LUT, the bit plane can be used to control blink functions (and produce eight colors at 110% brightness) for medium resolution, high resolution, and SimulRes overlays.

Plane Display and Write Masks To facilitate blink-by-plane, double buffering, and special applications, the Model 2 includes both a display plane mask and a write plane mask that can be set by the host computer.

LEX 90/35 Model 2 Specifications

Performance

Vectors: 2 μ s Set-Up + 600ns (average) in any direction
Fills: 37.5ns per pixel
Random Pixels: 375ns per pixel

Viewable Resolution

640x512 or 1280x1024 (selectable)

Refresh Rates

512-Line Component: 60Hz non-interlaced
1024-Line Component: 30Hz interlaced

Pan/Scroll/Zoom/Blink

Horizontal Pan Step: 40 pixels @ 1280, 20 pixels @ 640
Vertical Scroll Step: 1 pixel
Zoom: Integer 1-16X plus movie mode
Blink: By area, plane, color, or LUT value

Graphics Processor

2900 Family
12 MHz Bipolar Processor
16-Bit Data Path
56-Bit Internal Word

Diagnostic Processor

6800 Family with 8K PROM
Dip Switch Reconfigurable
Signature Analysis
Standard Power-Up Diagnostics
Extended Full System Check

Lookup Tables

Standard: 8 bits in/24 bits out
True Color: 3 @ 8 bits in/8 bits out
Overlay: 4 bits in/3 bits out @ 110% intensity

Video Output

RS343 Compatible
32 KHz Scan Rate
53.76 MHz Data Rate @ 1280
26.88 MHz Data Rate @ 640
Composite Sync on RGB

Chassis Dimensions

5.25" high x 17" wide x 28" deep
Average Weight: 45 lbs.

Power

Voltage: Selectable between 90-132VAC and 180-264VAC
Frequency: 47-63Hz
Consumption: 250-400W (DC)
Universal Power Supply (line frequency independent)

Environmental Requirements

Operating Temperature: 10 to 40 degrees C
Storage Temperature: -35 to 70 degrees C
Operating Relative Humidity: 10% to 90% (non-condensing)
Storage Relative Humidity: 10% to 90% (non-condensing)
Acoustic Noise Level: NC-55 (noise criteria curve)
Regulatory Compliance: LEX 90/35 Model 2 meets FCC and UL regulations and is designed to conform with CSA and VDE regulations.

Input/Output Processor (Option)

MC68000 16/32-bit (8MHz)
4 RS232 Serial Ports (up to 19.2K baud)
128KB RAM
128KB PROM
Peripheral Multiplexing
Cursor Tracking

Peripherals

Data Tablet
Joystick
Mouse*

Host Interfaces

Parallel DMA or Serial

Data Transfer Rate

DMA: Up to one megaword (16 bits/word) per second
Serial: 19.2K baud

Firmware Expansion*

SOLIDVIEW™
640x512x8x2 Images
640x512x16 Z-buffer
60Hz non-interlaced

LEX 90/35 Model 2 Ordering Guide

Order No.	Description
903502.001	1280x1024x4 or 640x1024x8
903502.002	1280x1024x8 or 640x1024x8x2 or 640x1024x8 with a 1280x1024x4 overlay
903502.003	1280x1024x(8+4) or 640x1024x(8+4)x2 or 640x1024x(8+4) with a 1280x1024 overlay
903502.004	640x1024x24 True Color or 1280x1024x12 Pseudo-color

Bit map resolutions, software selectable

LEXIDATA™

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Product specifications subject to change without notice.

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*NOTE: Contact sales representative regarding availability.

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