Semiconductor Equipment Testing
SEMI® E84 PI/O Communications

GCI E84 DLD with GCI Data Recorder Application Program

GCI E84 DLD Connects Between Transceiver and Tool

GCI E84 DLD

GCI06001

Factory automation is used extensively in 300mm semiconductor fabrication facilities. 300mm process equipment utilizes standard load ports with integrated E84 electrical interfaces to transfer material to and from Automated Material Handling Systems (AMHS). GCI's E84 DLD (Data Logging Device) provides a compact solution to non-intrusively monitor and log the E84 handshake associated with 300mm material handoff operations. Coupled with GCI's Data Recorder Application program, the GCI E84 DLD is an indispensable tool to capture, analyze and resolve E84 handoff problems without interrupting the work stream.

GCI E84 DLD FEATURES

\# Connects directly between the tool and optical transceiver
\# No external power source is required
\# Non-intrusively senses E84 interface signals
\# Logs the last 50 handoff operations to non-volatile memory
\# Time and date stamps all logged data
\# Uploads logged data to PC and GCI E84 Handheld Tester
\# Wrap-around recording or stop on full log memory
\# Real-time graphing on GCI E84 Handheld Tester and PC
\# Compatible with GCI E84 Data Analysis Software
\# Optional diagnostic filtering to log only failed handoffs
\# Optionally log first valid load/unload, only failures thereafter
\# Statistically log the number of successful and failed handoffs

Installation of the GCI E84 DLD is simple. Disconnect the optical transceiver's DB-25 from its interface location on the top of the tool. Plug the DLD's DB-25 labeled Load Port into the tool's DB-25. Plug the optical transceiver's DB-25 into the DLD's DB-25 labeled Optical Transceiver. Connect a serial cable between the DLD and a PC or GCI E84 Handheld Tester and configure the DLD. After configuration, disconnect the PC or Handheld Tester from the DLD.

The DLD instantly starts logging all E84 transactions. Logged transactions can be uploaded at any time by connecting a PC or Handheld Tester to the DLD's serial port. Additionally, you can monitor the signals in real-time using a PC or Handheld Tester without interrupting the handoff operation.
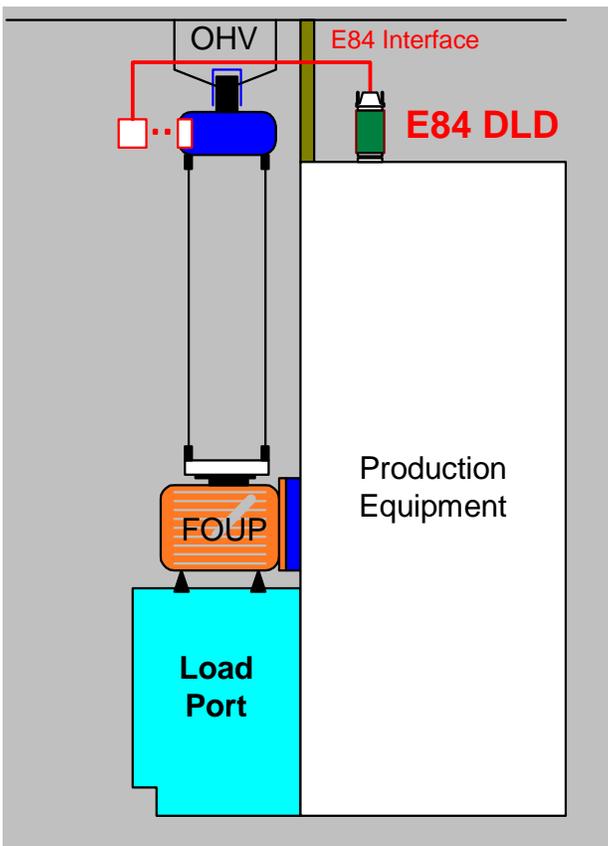
Get Control, Inc.
Embedded Solutions

www.getcontrol.com

July 2001
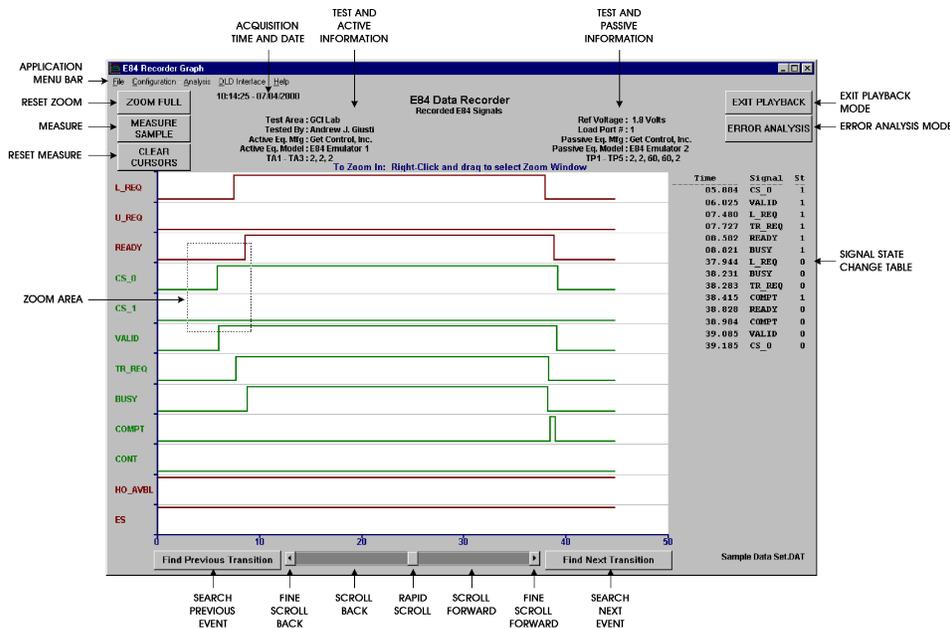
DLD CONFIGURATION

The DLD Interface menu provides configuration for DLD options, specifying the current time and date, and resetting the DLD's non-volatile memory.

E84 DATA RECORDER APPLICATION

The Playback Analysis Mode is powerful, yet easy to use. Initially, the entire recorded data set is displayed on a timing diagram in the Playback Analysis Mode Graph Window. Using the interactive diagnostics, zooming, scrolling, and search features, you can quickly locate and view even the smallest details of your recorded data. A time-stamped signal state change table is also provided for reference.

ERROR ANALYSIS

Use the Error Analysis feature to jump to failed handoff operations in a data set. The E84 Data Recorder Application displays a detailed error message describing the error detected. It also provides a tabular timing detail describing the acquired signal state versus the expected signal state.

PAN

Pan forward and back through your recorded data using the Playback Scroll Feature. A single scroll bar provides three scrolling methods for rapid, fine and extra fine scrolling.

SEARCH

Search for an event on a specific signal with the Transition Search Tool. Use this tool to locate the next or previous signal transition of a specific signal from the current location in the Playback Analysis Mode Graph Window.

ZOOM

Focus in on a specific area of your timing diagram with the Graph Zoom Tool. Simply draw a rectangle around a specified area on the timing diagram to expand the area of interest in the Playback Analysis Graph Window. Select the Zoom Full button to re-display the entire recorded data set.

MEASURE

Measure the time between any two signal transitions using the Delta Signal Measurement Tool. This tool can measure the time between two transitions on the same signal or between transitions on different signals.

SAVE AND EXPORT DATA

Save data for analysis at a later time. Four options are also provided for exporting data for printing or sharing with other applications such as wordprocessors and spreadsheets. Create a formatted ASCII text file of your recorded data using the Export Data to Text File feature. Export a graph in standard or enhanced Windows metafile formats with the Export Graph as Metafile option. The Export Graph as Bitmap option creates a bitmap file of the currently displayed graph.

PACKAGE CONTENTS

- # GCI E84 DLD (Data Logging Device)
- # E84 Data Recorder Application CD ROM
- # 6' male-female DB-9 cable
- # GCI DLD User's guide

SYSTEM REQUIREMENTS

- # Laptop or Desktop PC
- # Windows 98, NT 4.0, 2000, or XP
- # Serial port or USB-to-Serial converter
- # 40 MB hard disk space

SPECIFICATIONS

- # Power +24V @ 10mA obtained from E84 +24V supply
- # RS-232 Serial Communications Interface
- # 19 input channels
- # 1 KHz Sample Rate
- # 3.8" x 2.1" x 0.8" (96.5mm x 53.3mm x 20.3mm)
- # DB-25 male (active) and DB-25 female (passive) terminations

Get Control, Inc.
Embedded Solutions

www.getcontrol.com