



LCM ATS Model 2915

KEY FEATURES

- LCM signal and power source test systems
- Easy for Timing/Pattern/Program editing
- Suitable for Full HD measurement
- The Resolution up to 2560x1600
- LVDS 4 channel output
- MPEG/AVI Playback
- High accurate programmable DC source
- Power source for LED backlight (OPT)
- Output voltage and current measurement
- Power protection OVP/OCP/UVP/UCP
- EDID read/write/compare
- Cross coordinate defect positioning function
- Network management function (OPT)
- In-line process control and data collection
- Operator authority control
- GO/NOGO fast measurement
- High efficient GUI for easy operation

The technology development of liquid display has been moving toward the features of large scale, high quality, high contrast and fast dynamic response recently that made the Full HD (1920X1080) high resolution specification become a new mainstream in the market. In order to meet the test requirements of today's industries, Chroma 2915 LCM ATS is structured in modularized with integrated signals and power source. The powerful on-line network function and easy-to-use interface are equipped to fulfill the test requirements such as all kinds of standard signal sources, test patterns and voltage/current measurements for various sizes of LCM.

This ATS provides LVDS signals and users can set the settings through mouse and Remote Keypad in accordance with the LCM features to give the production line a most complete and convenient test mode to expedite the productivity. The test functions Chroma 2915 LCM ATS have are:

(1). Modularized Design: To cope with the test requirements of various sizes panels, the design concept of modularization is applied to fit in the specifications of different signals and power modules for application.

(2). Test Program Editor: It contains the parameters settings of power Turn On/ Turn Off, scanning timing, pattern, over and under voltage/current protection (OCP/OVP/UCP/UVP), and real-time voltage Ramp Up/Ramp Down based on the LCM electricity specifications for accurate and comprehensive tests.



(3). Screen Quality Test: Besides the built-in standard patterns, users can define the geometry patterns that composed of various ICONs; moreover, the natural picture file with BMP/JPG filename extension can be imported. In addition the animation function is available for the LCD Response time test. All patterns can be scaled automatically according to the LCM resolution to facilitate the pattern editing preview function.



Pattern Edit Screen

- More than 23 types of ICON for patterns creation
- Various ICON composition for logic computing
- Support BMP / JPG file format
- Various resolution auto scaling
- Support animation
- Real time preview function

(4). Timing Setting and Pattern Editing: The ATS allows users to define the test timings and patterns for application as need and provides LVDS signals for comprehensive LCM tests by setting the signal/power supply activation time. Other signals like TMDS/TTL/ ANALOG (option) can also be applied for testing.

(5). Output voltage, current measurement and judgment: This system has multiple modularized external power supplies that can be used for different sizes of panels / LED backlight constant current sources (option) and to provide the power source required by LCM control chip, driver chip and backlight module through the USB interface. Also Provide the optional of multi-channel metering system for readback applications.



Timing Edit Screen

- H / V Display, Sync, Back-Porch, Front-Porch, setting
- H / V Sync Polarity ± setting
- LVDS / TMDS / TTL / ANALOG output setting
- Pixel rate setting
- Clock Mode, 6 / 8 / 10 bit link setting
- Bit Rotate setting

(6). Test Methods: Mouse and keypad are used to control the cross mark for cell checking and log during test, also the LCM defect types can be built by the test patterns that minimize the test time intensely. Thus the test can be done rapidly no matter it is applied in R&D or production line.

(7). Network Management Control: The system administrator is able to perform the test program maintenance and management, hardware configuration, data upload/download, computing and EDID read/write/compare network on-line function via the network interface for production status control at the first time as well as analysis of production, efficiency and yield rate.

Chroma 2915 LCM ATS integrates the signal source/power source for LCM patterns and electricity specification tests. The user-friendly interface along with simple system programs can be used to edit the Timing/Pattern/Power/Program while the mouse or keypad can be used to log the LCM defects. Moreover, the PC based platform can fully utilize the network function for data collection and analysis that makes it most applicable for production line management.

LCM Master II Software



Main Test Screen

- Model and Test Program Mapping Setting
- System Layout and on-line status for factory production line
- Visualization management in factory to show real time information
- Real time production line fail rate display, warning appears when the failure rate is too high
- VDD/VBL voltage/current setting, high speed auto voltage/ current maxi
- Display all of the information required including model, test date and time, detected date, production area, fail status, and etc.



Power Edit Screen

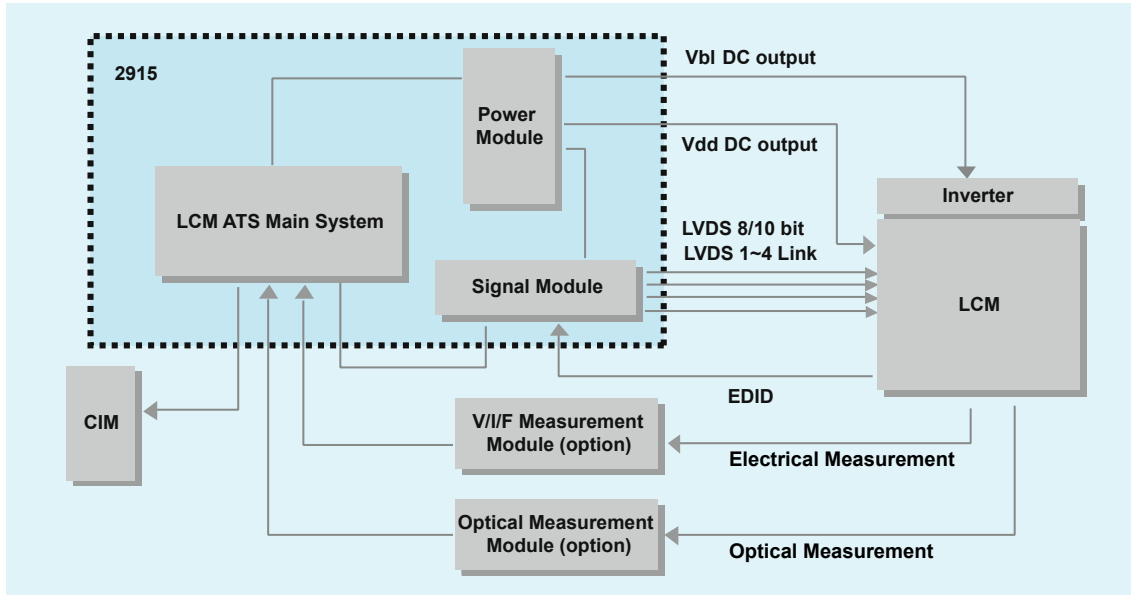
- 8 channel DC source setting
- OVP / OCP / UVP / UCP setting
- Vdd / Signal / Vbl On/Off sequence setting
- Vdd / Vbl / ldd / lbi spec judgment
- Power Sweep setting



Test Program Edit Screen

- Provide TIMING / PATTERN / POWER for LCM test
- Provide Loop function
- Provide Pre-test function

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2915 System Application Block Diagram

SPECIFICATIONS

Model	2915
LVDS Interface	
Resolution	640x480; 800x600; 1024x768; 1152x864; 1280x768; 1280x960; 1280x1024; 1400x1050; 1600x900; 1600x1024; 1600x1200; 1920x1080; 1920x1200; 1280x800; 1366x768; 1280x854; 2560x1600
Pixel Rate	1 Link up to 135MHz 2 Link up to 270MHz (135MHzx2) 4 Link up to 297MHz (74.25MHzx4)
Signal	6/8/10 Bit and support bit rotate (10 Bit for Gray Scale)
H,V Sync Polarity	+ or -
Video signal output can turn ON OFF by software	

General specifications	
AC Input Voltage	110V~220V ± 10% (Auto Range)
AC Input Frequency	54Hz~66Hz
Operation Temperature	10~30°C
Operation Humidity	Max 70%

Dimension & Weight	
2915 Main System	
H x W x D	150 x 320 x 422.6 mm / 5.91 x 12.6 x 16.64 inch
Weight	8 kg / 17.62 lbs

A291500 Signal module	
H x W x D	47 x 320 x 200.2 mm / 1.85 x 12.6 x 7.88 inch
Weight	2.2 kg / 4.85 lbs

A291510 Ext. Power module	
H x W x D	200 x 100 x 421.4 mm / 7.87 x 3.94 x 16.59 inch
Weight	4.6 kg / 10.13 lbs

2915 LCM ATS System (Main Unit+signal module+power module)	
H x W x D	200 x 420 x 422.6 mm / 7.87 x 16.54 x 16.64 inch
Weight	14.8 kg / 32.6 lbs

Power Source			
Channel	Channel 1	Channel 2	Channel 3-8
Output Voltage	2-20V	5-30V	0-5V
Output Current	0-4A	0-15A	0-1A
Programmable Resolution			
Output Voltage	20mV	20mV	-
Current Protect	5mA	20mA	-
Meter Ratings			
Read back Voltage	0-25V	0-35V	-
Read back Current	0-5A	0-20A	-
Meter Resolution			
Voltage	20mV	20mV	-
Current	5mA	20mV	-
On / Off Sequence Resolution			
Turn-On/Off	1 ms	1 ms	1 ms
I²C BUS Function			
SDA	3.3/5V/device select		
SCL	50~100KHz		
V-dim function			
Analog	Analog function 0~8/0.1V step		
V-pwm function			
Vpwm	Selectable 3.3/5V/FV		
Fout	100~15KHz		
Dout	0~100% 1% Step		
SMBUS Function			
SDA	3.3/5V/device select		
SCL	10~100KHz		

ORDERING INFORMATION

- 2915** : LCM Automatic Test System
 - A291500** : Signal Module LVDS 135/270/297MHz
 - A291510** : Power Module 450W
 - A291511** : LED Backlight Tester
 - A291512** : Power Module 780W
- Network Management Function of Software**



A291500



A291511



A291510 / A291512