

# SHV 8K



## FPD TESTER MODEL 2918

The Chroma 2918 is a high-performance and high stability FPD tester that can be used in LCM ATS. It is in modular design and capable of combining different signals and power modules to set the testing criteria as required. The tester is highly adaptable and extendable with various test functions listed as follows :

### Support 8K Super Hi-Vision

It provides 8 K SHV for ultrahigh resolution testing (7680x4320/8192x4320) by supporting 8K@60/120 Hz resolution spec (32/64 lane V-By-One).

### High Speed Signal Module Design

The modular designed interface supports LVDS and V-by-One which are the mainstreams of LCM interfaces for inspection. The tester uses dual-core graphics processing architecture to significantly increase the drawing and data transmission speed. The data rate of V-by-One interface is up to 3.75GHz per lane, and the 8K SHV images switch is less than 200ms. It is a high-speed, high-specification, and flexible new generation of signal equipment.

### Programmable power module

The tester has built in VDD and VBL programmable power modules to supply voltage for TCON (Timing Controller) and backlight module based on the UUT spec. The parameters include current measurement, turn on/turn off, scan timing, power auto compensation, slew rate, voltage/current upper and lower limits, and OCP/OVP/UCP/ UVP protection are provided to user to conduct an accurate and complete test.

### Timing parameter, pattern and test program editing

The FPD tester supports standard JEIDA/ VESA timing formats that can be used directly or created as need. In addition, the user can create geometric patterns required for diversified tests by combining any of the icons or importing the natural pictures with BMP file extension. Maximum 300 of 8Kx4K (BMP) patterns can be saved.

### Network Management Control (Option)

For production test, the Chroma 2918 can apply to production line when integrated with PC and the optional customized GO/NOGO software that can preset the authority of operators and unify the system management mode to reduce human error. The friendly, easy-to-use graphical user interface uses cross coordinates to check and record the defect position during testing. The data of LCM defect types and classifications can be created to generate test reports for analysis. It can finish testing rapidly to greatly reduce the total testing hours. For complete test application and management of production line, it can also be configured with client's system to maintain and manage the test programs, upload/download the data, compile statistics, and write in EDID network online function. This allows the system administrator remote monitoring the factory production status firsthand at its onset for capacity, efficiency, and yield rate review.

## MODEL 2918

### KEY FEATURES

- Support 8K SHV  
(Super Hi-Vision 7680x4320 / 8192x4320)
- Support full 8K scrolling function
- Independent signal and power module design
- Dual-core graphics processing architecture
  - Increase graphics and data transmission performance
  - 8K Super Hi-Vision images switch in less than 200ms
- Support 6/8/10/12 bits color depth  
(12 bit only in LUT mode)
- Support user edited test patterns
  - BMP pattern format
  - Maxi. 300 of 8Kx4K bmp patterns
- Support VDIM and PWM dimming function
- Support cross coordinates defect positioning function
- Support auto flicker adjustment  
(with A712306)
- Support gigabit Ethernet control interface
- Support USB port for data update



# Chroma



# Support 8K Super Hi-Vision

- The 2918 FPD tester provides 8K Super Hi-Vision (7680x4320/ 8192x4320) for testing. Full 8K@60/120 Hz resolution (32/64 lane V-By-One) is supported by one tester .



16 lane V-by-One x 2



64 lane V-by-One x 4



\* Based on module A291802

## Dual-Core Graphics Processing

- Significantly increase graphics and data transmission performance
- 8K SHV pattern switching time < 200ms



<200ms

## True 8K Motion Pattern

- True 8K scrolling function for 8K motion picture inspection
- Adjustable scrolling direction (up/down/left/right), motion speed to test dynamic response of panel



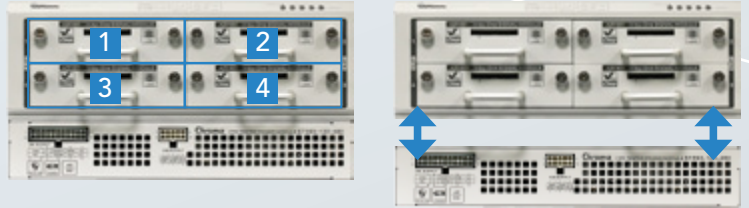
# Next Generation for 8K Super Hi-Vision

The Reference of Today and Tomorrow



## Independent Signal / Power Module

- Maximum 4 slots of signal module
- Support LVDS / V-By-One signals
- Independent power module design providing current measurement, turn on/turn off, and scan timing tests
- Voltage/current upper and lower limits for OCP/OVP/UCP



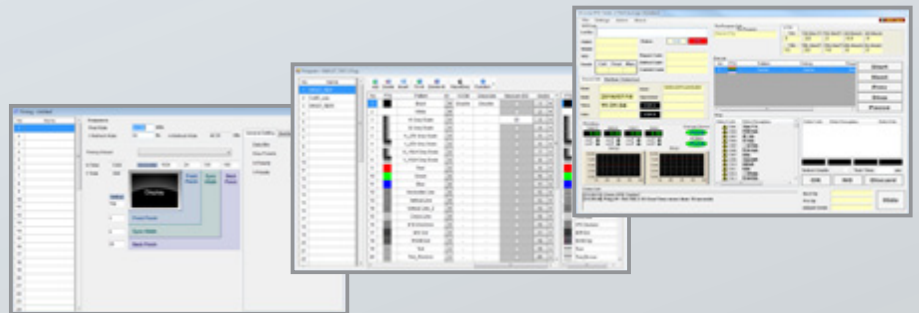
## Remote Control Box

- 20 words x 4 lines matrix LCD display
- Signal and power quick on/off bottom
- Quick menu switching and selection rotary knob
- Real-time voltage/current display
- VCOM adjustment/write-in function



## Graphic User Interface : FPD Master

- Graphical user interface for test program editing
- Unique GO/NO GO software (option) for quick inspection
- Support VCOM/Grayscale/EDID inspection



## Full Range of Test Patterns and Functions Support

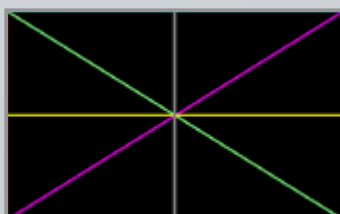
- Support patterns (color bar, grayscale, dot), 8K bitmap (BMP) figures, and various inspection functions required for industrial panel testing.
- Cross coordinate cursor positioning function to display coordinate and RGB values of any dot in real-time
- Foreground/background grayscale adjustment for CABC test



8K Resolution Test Pattern



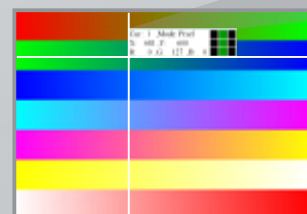
8K BMP Files



Outer Frame Function



CABC Test Function



Cursor Position

Cur : 1 ,Mode: Pixel  
X: 681 ,Y: 600  
R: 0 ,G: 127 ,B: 0

## SPECIFICATIONS

<b>Main Frame</b>	
<b>Signal</b>	
Signal interface	4 slot module
Resolution	Support up to 8K@60 resolution (1 Slot for 4K @ 60)
Pattern switch time	8K Logic pattern: < 200ms 8K BMP pattern: <2s (non-preload), < 100ms (Pre-load)
<b>Functions</b>	
Special Functions	EDID /Cursor / Scroll / BMP support
<b>Communication</b>	
LAN	RJ-45
Remote	D-Sub 15
<b>Others</b>	
System ready time (Output video)	< 10s
Fan noise	< 65dB
Operation Temperature	5°C ~ 40°C
Store Temperature	0°C ~ 80°C
Humidity	20% ~ 90% RH
Dimensions (HxWxD)	150mm(H) x 386mm(W) x 292mm(D) (≧67393-120-480)
Weight	11KG (≧67393-120-480)

<b>A291800 : 4CH LVDS Signal Module</b>	
Resolution	4096 x 2160 @ 60Hz max
LVDS Signal Channel	4 Channel Output 1 Link : 10-150 MHz 2 Link : 20- 300 MHz 4 Link : 40- 600 MHz
Color depth	6 / 8 / 10 bits Programmable
I <sup>2</sup> C	Level : Floating / 0V / 3.3V / 5 V Max frequency: 400KHz
Aging Mode Control x 1	Floating / 0 V / 3.3 V programmable
Inversion Control x 1	Floating / 0 V / 3.3 V programmable
GPIO x 8	0V / 3.3V @4mA max , programmable
Spare Power (VIF)	1.0V~ 5.0 V / 0.5A max
ESD Protection	Contact 8KV / Air15KV (Refer to IEC 61000-4-2 Level 4)

<b>A291802 :16 lane V-by-One Signal Module</b>	
Compliant	V-by-One HS v1.4 standard
Resolution	4096x2160 @ 120Hz max. (with 1 module)
Color depth	6 / 8 / 10 / 12 bits Programmable
Lane count	4 / 8 / 16 Lane (with 1 module)
Data rate	3.75 GHz / Lane
Packer type	4 / 5 Bytes
I <sup>2</sup> C	Level : Floating / 0V / 2.5V / 3.3 V (I <sup>2</sup> C and GPIO level must be the same) Max frequency: 400KHz
GPIO x 8	Floating/0V/2.5V/3.3 V@4mA max, programmable (I <sup>2</sup> C and GPIO level must be the same)
ESD Protection	Contact 8KV / Air15KV (Refer to IEC 61000-4-2 Level 4)

<b>67393-120-480 : 67393-120-480 Power Module</b>	
<b>AC Input</b>	
Voltage	1Ø 100~240V ±10% VLN ,47~63Hz
<b>VDD Output</b>	
VDD	VDD=2~25V / IDD=22A Max, P=264W Max IDD-1=11A Max, PIDD-1=132W Max IDD-2=11A Max, P IDD-2=132W Max
Resolution	0.1 V/step
Accuracy	1% F.S.
Protection	OVP 2V ~ 27.5V UVP 0V~25V OCP (VDD) : 0.5A ~ 22.5 A UCP (VDD) : 0A ~ 21.5 A
<b>VBL Output</b>	
VDD	VBL 3~30V / 20A, 480W Max
Resolution	0.1 V/step
Accuracy	1% F.S.
Protection	OVP 3 V~32.5V UVP 0V~30 V OCP: 0.5A ~ 20.5 A UCP: 0A ~ 19.5 A

\* All specifications are subject to change without notice. Please visit our website for the most up to date specifications.

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