The Chroma 2918 is a high performance stabilized FPD tester ideal for LCM ATS. It features a modular design that is capable of combining different signals and power modules for various test requirement. The FPD tester is highly adaptable and expandable to a variety of test functions.

**8K Super Hi-Vision**

The 2918 provides ultra high 8K resolution (7680x4320 / 8192x4320) for testing at 60/120 Hz (32/64 line V-By-One).

**High Speed Signal Module Design**

The modular design interface supports LVDS and V-by-One mainstream LCM interfaces for inspection. The tester uses a dual-core graphics processing architecture to significantly increase drawing and data transmission speed. The V-by-One interface data rate is up to 3.75GHz per lane, and requires less than 200 msec for 8K SHV image switch. This high-speed, flexible signal generator tester is ideal for high performance specification testing for the next generation FPD.

**Programmable Power Module**

The built-in VDD and VBL programmable power modules source TCON (Timing Controller) and backlight modules according to the UUT specification. Parameters include current measurement, power on/off, scan timing, power auto compensation, slew rate, voltage and current upper/lower limits for OCP/OVP/UCP/UVP protection during accurate and thorough test.

**Timing Parameter, Pattern and Test Program Editing**

The FPD tester supports standard JEIDA/VESA timing formats that can be used directly or geometric patterns may be created for various tests by either combining any of the provided icons or importing the natural pictures with BMP file extension. Up to 300 8Kx4K (BMP) patterns can be stored.

**Network Management Control (Option)**

When paired with PC control and customizable Go/No Go Software, the Chroma 2918 FPD tester can be extremely effective in production line when integrated with a PC and an optional customized GO/NOGO software that testing preset the operator authority levels and a unified system management mode to reduce human errors. The user-friendly graphical user interface uses cross coordinates to check and record the defect position during test. Data of LCM defect types and classifications are created to generate test reports for analysis. It can also be configured with client’s system to maintain and manage test programs, upload/download data, compile statistics, and write in EDID network online function. This allows system managers to remotely monitor production for throughput, efficiency and yield status.

---

**KEY FEATURES**

- Support 8K Super Hi-Vision (7680x4320 / 8192x4320)
- Full 8K scrolling
- Independent signal and power modules
- Dual-core graphics processing architecture
  - Increase graphics and data transmission performance
  - 8K Super Hi-Vision pattern with less than 200 ms switch time
- Support 6/8/10/12 bits color depth (12 bit in LUT mode)
- User edited test patterns
  - BMP pattern format
  - Up to 300 8Kx4K bmp patterns
- VDIM and PWM dimming
- Cross coordinates defect positioning
- Auto flicker adjustment (with A712306)
- Gigabit Ethernet control
- USB port for data update
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.

* Based on module A291802

Dual-Core Graphics Processing
- Significantly increases graphics and data transmission performance
- 8K SHV pattern switching time < 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
- 4 slots in a signal module
- Support LVDS / V-By-One signals
- Independent power module provides current measurement, power on/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 button
- 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 as required for industrial panel testing.
- Cross coordinate cursor positioning to display coordinate and RGB values of any dot in real-time
- Foreground/background grayscale adjustment for CABC test
**SPECIFICATIONS**

### Main Frame

**Signal**
- Signal interface: 4 slot module
- Resolution: Support up to 8K @ 120 resolution (1 Slot for 4K @ 120)
- Pattern switch time: 8K Logic pattern: < 200ms
  - 8K BMP pattern: < 2s (non-preload), < 100ms (Pre-load)

**Functions**
- Special Functions: EDID / Cursor / Scroll / BMP support
- Communication:
  - LAN: RJ-45
  - Remote: D-Sub 15

**Others**
- 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): 240mm(H) x 375.6(W) x 292.2mm(D) (include 67393-120-480)
- Weight: 13KG (include 67393-120-480)

### A291800: 4CH LVDS Signal Module

- 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
- I²C:
  - Level: Floating / 0V / 3.3V / 5V
  - Max frequency: 400KHz
- Aging Mode Control x 1:
  - Floating / 0V / 3.3V programmable
- Inversion Control x 1:
  - Floating / 0V / 3.3V programmable
- GPIO x 8:
  - 0V / 3.3V @4mA max, programmable
- Spare Power (VIF): 1.0V~5.0V / 0.5A max
- ESD Protection:
  - Contact 8KV / Air15KV (Refer to IEC 61000-4-2 Level 4)

### Ordering Information

**2918**: FPD Tester
- 67393-20-200: FPD Tester Power Module
- 7123: Display color analyzer main unit
- A040206: Remote Control Box
- A291800: 4CH LVDS Signal Module
- A291802: 16 lane V-by-One Signal Module
- A712306: Flicker measuring probe (for LCM ATS)

**A291802**: 16 lane V-by-One Signal Module
- 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
- I²C:
  - Level: Floating / 0V / 2.5V / 3.3V
  - (I²C and GPIO level must be the same)
  - Max frequency: 400KHz
- GPIO x 8:
  - Floating/0V/2.5V/3.3V
  - Programmable (I²C and GPIO level must be the same)
  - Floating/0V/3.3V programmable

**67393-120-480**: FPD Tester Power Module
- **AC Input**
  - Voltage: 1Ω 100~240V ±10% VLN, 47~63Hz
- **VDD Output**
  - VDD:
    - VDD=2~25V / IDD=22A Max., P=264W Max.
    - IDD-1=11A Max., PIDD-1=132W Max.
    - IDD-2=11A Max., PIDD-2=132W Max.
  - Resolution: 0.1V /step
  - Accuracy: 1% F.S.
- **VBL Output**
  - Channel: 20ch
  - Resolution: 1mA /step
  - String Current: 0~200mA
  - String Voltage: 12~150V

**67393-20-200**: FPD Tester Power Module
- **AC Input**
  - Voltage: 1Ω 100~240V ±10% VLN, 47~63Hz
- **VDD Output**
  - VDD:
    - VDD=2~25V / IDD=22A Max., P=264W Max.
    - IDD-1=11A Max., PIDD-1=132W Max.
    - IDD=2=11A Max., PIDD-2=132W Max.
  - Resolution: 0.1V /step
  - Accuracy: 1% F.S.
- **IBL Output**
  - Channel: 20ch
  - Resolution: 1mA /step
  - String Current: 0~200mA
  - String Voltage: 12~150V

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