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SJ/T 11546-2015

**Technical requirements and methods of measurement for
integration of display wall
(English Translation)**

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1 Scope

This Standard specifies the terms and definitions, technical requirements and methods of measurement for integration display walls.

This Standard is applicable to the integration display walls composed of M layers x N columns (at least one of M and N is greater than 1, M and N are natural numbers) of independent projection (front or rear projection) display units or flat panel display units (PDP flat panel displays and LCD flat panel displays). For integration display walls of other types of display units, this Standard can be used as a reference.

2 Normative References

The following documents are indispensable to the application of this document. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB 4943.1 Information Technology Equipment - Safety

GB/T 8898 Audio, Video and Similar Electronic Apparatus - Safety Requirements

GB/T 26270 Standard Test Signals for Digital Television Receiving Equipment

SJ/T 11324 Terminology of Digital Television Receiving Equipment

SJ/T 11338 General Specification for Digital Television LCD Rear Projection Display

SJ/T 11339 General Specification for Digital Television PDP Display

SJ/T 11340 General Specification for LCD Front Projectors

SJ/T 11343 General Specification for Digital Television LCD Displays

SJ/T 11344 Methods of Measurement for Digital Television LCD Rear Projection Displays

SJ/T 11346-2015 Methods of Measurement for Electronic Projectors

SJ/T 11348-2016 Display Performance Methods of Measurement for Flat Panel Television

3 Terms and Definitions

The terms and definitions defined in SJ/T 11324 and the following ones are applicable to this document.

3.1 Unit of Integration Display

The basic unit that can independently display various video display functions in the integration display wall.

NOTE: It can be a projection display unit or a flat panel display unit.

3.2 Integration Display Wall

A display composed of units of integration display physically integrated in M rows and N columns, which is the terminal of the integration display system.

NOTE: An integration display wall can display one image or multiple images.

3.3 Seamless Integration Display Wall

An integration display wall in which there is no physical gap between the images displayed by each unit of integration display in the integration display wall.

3.4 Edge Composite Technology

The technology of overlapping the edges of the images of adjacent units of integration display to make the displayed image seamless and the brightness of the entire image not enhanced.

3.5 Physical Gap

The physical clearance between the edges of two adjacent screens of a unit of integration display in an integration display wall.

3.6 Dark String

The distance from the edge of the displayed image to the outermost edge of the screen when a unit of integration display displays a full white field graphic signal.

3.7 Optical Gap

The two dark strings of two adjacent units of integration display plus a physical gap in the integration display wall.

The maximum thickness that can be inserted shall be used as the standard and counted as the value of the physical gap, expressed in millimeters (mm).

For an integration display wall integrated with a rear projection box, a thickness gauge is inserted into the gap between two adjacent screens. The maximum thickness that can be inserted shall be used as the standard and counted as the value of the physical gap, expressed in millimeters (mm).

For an integration display wall integrated with PDP or LCD displays, the value of the gap between two adjacent units of integration display is measured using a thickness gauge, expressed in millimeters (mm).

5.2.2 Methods of measurement for optical gaps

The integration display wall displays a full white field signal, and the optical gap of two adjacent integration screens is measured using a caliper or gauge, expressed in millimeters (mm).

5.3 Inspection of Functional Interface and Display Format

Inspect with visual inspection and corresponding signals.

5.4.1 Measurement conditions

Unless otherwise specified, the measurement is carried out under the following conditions.

- a) Ambient temperature. 15°C~35°C, preferably 25°C;
- b) Relative humidity. 25%~75%;
- c) Atmospheric pressure. 86 kPa~106 kPa;
- d) Supply voltage. AC 209 V~231 V;
- e) Supply frequency. 49 Hz~51 Hz;
- f) Harmonic component. $\pm 5\%$.

NOTE: There is no specific requirement for ambient light, but the value of ambient light must be indicated in the test report.

5.4.2 Test signal

According to the relevant test signals of GB/T 26270.

5.4.3 Measurement basis

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