



Sizing Display Screens for Meeting Spaces

Because of steady cost reductions for AV displays in recent years, they are becoming increasingly common in conference rooms, training facilities, and other meeting spaces. Perhaps the most common challenge in designing these rooms is determining the optimal type of display for a given space.

The three primary considerations are size, resolution, and brightness. Brightness is driven by the nature of meetings that are held, ambient light, and other factors. This topic deserves its own white paper and will not be addressed herein. Resolution is really not a factor in recent times, since "full high definition," or 1980x1024 is affordable and common. This leaves screen size as the topic of this document.

The two factors to consider when determining appropriate screen size are the type of content that will be displayed and the distance between viewers and the screen. Ideally, consider not only the furthest viewer, but also the nearest. This will also likely drive the type of display. The primary candidates are flat panel screens (most often LED TVs) and projectors with reflective screens. Assuming that the projector has good brightness and is full high definition, and the screen is a ceiling mounted motorized unit (a setup typical of board rooms and training facilities), a flat panel TV will be less costly. But TVs max out at about 90" diagonal, whereas projection systems can be substantially larger.

Content types can be lumped into two general categories. First is detailed textual information, such as a spreadsheet or word document. The second would be general graphical presentation material including videos, photos, PowerPoint slides, etc. This chart shows various screen heights, and the range within which viewing will be acceptable.

Note that while screens are typically referred to by their diagonal measurement, the calculation to determine the appropriate size is based on screen height. Since most screens today are around an aspect ratio of 16:9, the mathematic conversion is fairly simple. But, for your convenience, this chart handles that conversion.

Optimal viewing range based on screen size

Diagonal (inches)	Height (inches)	Graphical (feet)	Textual (feet)
50	25	4-12	4-8
60	29	5-15	5-10
70	34	6-17	6-11
80	39	7-20	7-13
90	44	8-22	8-15
120	59	10-30	10-20
150	74	12-37	12-25
200	98	16-50	16-33