

Technical Note

Vanguard® Matrix Size Worksheet

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1. To calculate the display size needed, first determine:

- font desired (for example, 12" high font, single interspacing could be a 9 x 6 pixel font)
- number of lines desired (for example, 4 lines)
- characters per line desired (for example, 20 characters per line)
- line spacing desired between rows of text (for example, 2 pixels of space between lines)

2. To calculate the display height:

(font character height x number of lines) + [(number of lines - 1) x (pixels of line space)] = pixels high

Example: (9 font pixels high x 4 lines) + [(4 lines - 1) x (2 pixels of line space)] =
 36 + (3 x 2) =
 36 + 6 =
 42 = number of pixels high

3. To calculate the display width:

(font character width + character spacing) x (number of characters per line) = pixels wide

Example: (6 font pixels wide + 1 character space) x (20 characters per line) =
 7 x 20 =
 140 = number of pixels wide

4. Matrix size:

Round up to available matrix size.

Example: 42 x 140 *minimum* to meet specifications desired.
 Round up to available matrix size 48 x 144.

Worksheet:

Where variables are:

- fh* = font height
- fw* = font width
- n* = number of lines
- ls* = line spacing
- s* = character spacing
- c* = characters per line

$$(fh \times n) + [(n - 1) \times ls] = \text{height}$$

$$(fw + s) \times c = \text{width}$$

$$\left(\frac{\quad}{fh} \times \frac{\quad}{n} \right) + \left[\left(\frac{\quad}{n} - 1 \right) \times \frac{\quad}{ls} \right] = \text{height}$$

$$\left(\frac{\quad}{fw} + \frac{\quad}{s} \right) \times \frac{\quad}{c} = \text{width}$$

Calculated result: $\frac{\quad}{\text{height}} \times \frac{\quad}{\text{width}}$

Available matrix size: Round up to next available matrix.

Font Name	<i>fh</i>	<i>fw</i>	<i>s</i>	Sample
7x4_1.fnt	7	4	1	Aa
7x5_1.fnt	7	5	1	Aa
FW7x5_1.fnt	7	5	1	Aa
7x6_2.fnt	7	6	2	Aa
8x4_1.fnt	8	4	1	Aa
8x6_2.fnt	8	6	2	Aa
9x6_1.fnt	9	6	1	Aa
9x6_2.fnt	9	6	2	Aa
FW11x7_2.fnt	11	7	2	Aa
FW14x8_2.fnt	14	8	2	Aa