4K AV over IP

Video Wall Control Command

KD-IP822, KD-IP922, KD-IP922-II, KD-IP1022, KD-IP1022-II

Key digital®

Important Note:
This document covers two different control commands. Please check the model # of the devices in your system.

KD-IP922-II and KD-IP1022-II units support a more convenient single string command to adjust the video wall layout, whereas the older models, KD-IP822, KD-IP922, and KD-IP1022 require multiple commands.

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Introduction

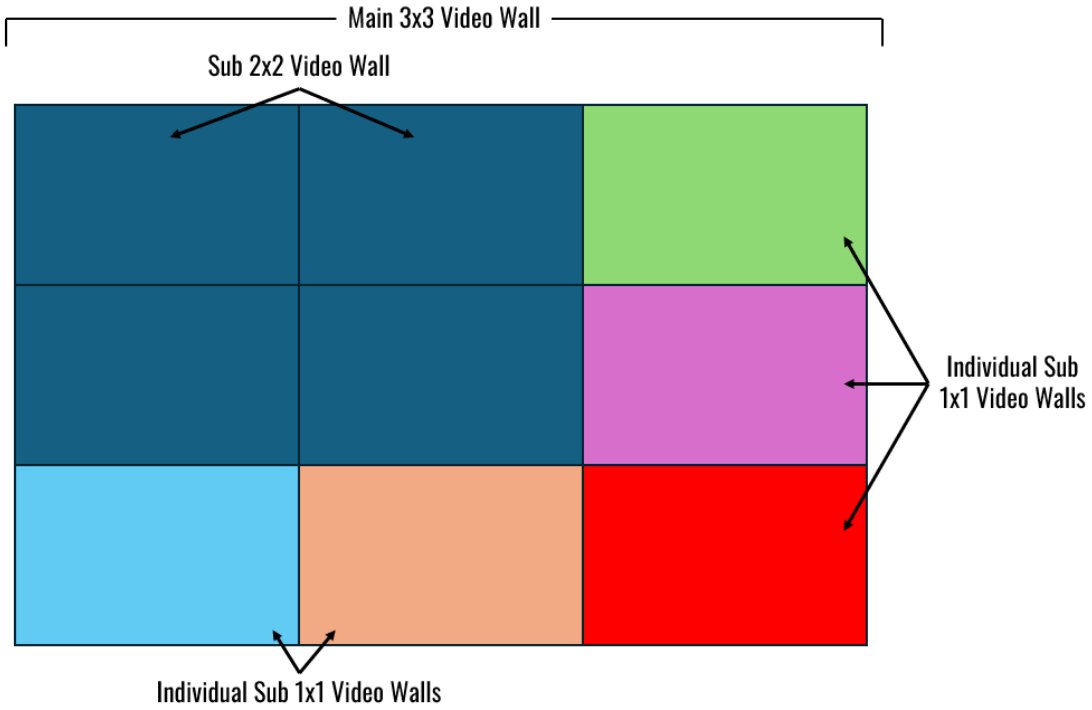
Video walls are initially added to your AV over IP system using KDMS Pro software.

If you wish to manage the layout of your video wall from a control system, you may use the "sub" video wall control command to manage the layout(s) within the video wall, and matrix routing command to select the desired source for each decoder within the video wall.

The commands are as follows:

1. SPOaWVSb,c,d
    a. = Decoder ID #
    b. = Vertical display count within desired sub video wall layout
    c. = Horizontal display count within desired sub video wall layout
    d. = Position of decoder within the video wall (just like reading a book, starts with 1 at top-left)
2. SPOxSIy
    a. Output/decoder x select input/encoder y

Protocol Notes: All commands are not case sensitive, and **require a carriage return** at the end of the command.



Control Interface

In Key Digital's 4K AV over IP system, any encoder or decoder may be the control interface.

Send commands to the Main IP address of the desired unit and it will forward commands to the needed decoder or encoder. This unit must be a KD-IP922-II or KD-IP1022-II.

Recommendations

- Do not use Encoder # 1 as your control interface. Encoder 1 is regularly parsed by KDMS software while open
- Choose an encoder / decoder that is not already used by your control system to control your AV over IP routing matrix.
- Use a unique encoder / decoder as the control interface per video wall.

For example, if your system has standard AV over IP matrixing plus 2 video walls; reserve Encoder 1 as the interface with KDMS Pro, use Encoder 2 as the control interface for the matrixing commands, use Encoder 3 as the control interface for video wall 1, and use Encoder 4 as the control interface for video wall 2.

Initial Setup

Your AV over IP System is typically received with the video wall already added to the system. However, adding or adjusting your video walls is possible at any time using KDMS Pro software. HERE is a short video demonstration of how to add a video wall to an existing Key Digital 4K AV over IP system.

Example: 3x3 Main Video Wall with Sub 2x2 and 5 Individual Displays
With a 3x3 video wall added to your system, send the Video Wall Layout command for each decoder to update the video wall layout. Then, send the matrixing command to select the desired source for each decoder.

1. SPOaWVSb,c,d
    a. = Decoder ID #
    b. = Vertical display count within desired sub video wall layout
    c. = Horizontal display count within desired sub video wall layout
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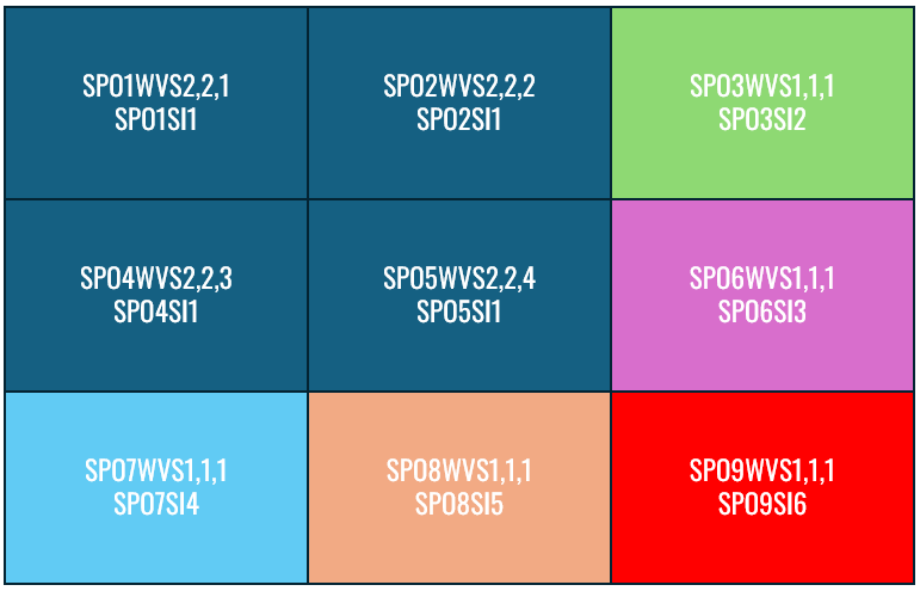


Example: 3x3 Full Video Wall

This is the end of the documentation for KD-IP922-II, KD-IP1022-II models.

Introduction: KD-IP822, KD-IP922, KD-IP1022 (Old Models)

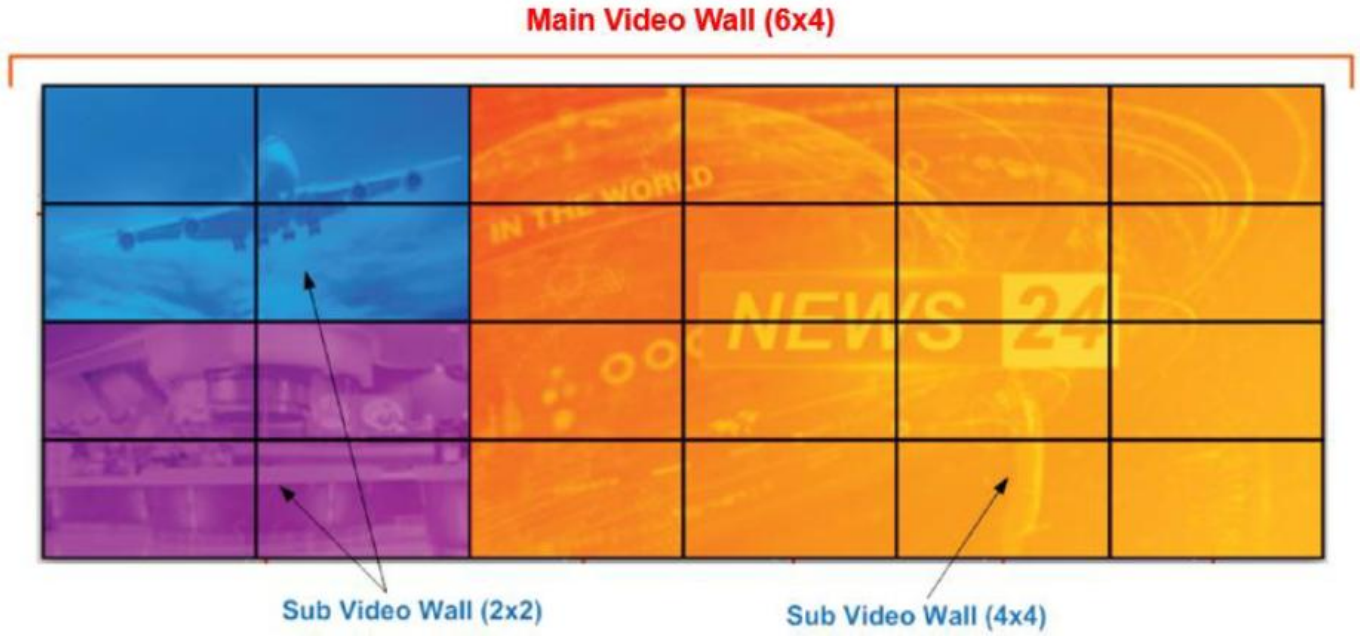
Video walls are initially added to your AV over IP system using KDMS Pro software.

Then, use the "sub" video wall control commands to manage the layout(s) within the video wall.

The sub video wall commands are as follows, and should be sent in the following sequence:

3. SPOxxSWVy
    a. Set number of sub video wall vertical displays (y) to output/decoder xx
4. SPOxxSWHy
    a. Set number of sub video wall horizontal displays (y) to output/decoder xx
5. SPOxxSWPy
    a. Set sub video all position (y) to output/ decoder xx
6. SPOxxSWPy
    a. Enable video wall with settings as applied in commands 1, 3, and 3
7. SPOxxSIyy
    a. Output/decoder xx select input/encoder yy

Example: 6Hx4V main video wall containing two 2Hx2V and one 4Hx4V sub video walls



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- Do not use Encoder # 1 as your control interface. Encoder 1 is regularly parsed by KDMS software while open

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- Use a unique encoder / decoder as the control interface per video wall.

For example, if your system has standard AV over IP matrixing plus 2 video walls; reserve Encoder 1 as the interface with KDMS Pro, use Encoder 2 as the control interface for the matrixing commands, use Encoder 3 as the control interface for video wall 1, and use Encoder 4 as the control interface for video wall 2.

Initial Setup

The followig commands are sent from KDMS Pro when the video wall is added and the configuration file is loaded to the system. These commands establish the dimensions of the Main video wall.

There is no need to send this command again.

SPO01VWE SPO01VID1 SPO01MWH4 SPO01MWV4 SPO01MWP1 1	SPO02VWE SPO02VID1 SPO02MWH4 SPO02MWV4 SPO02MWP2 2	SPO03VWE SPO03VID1 SPO03MWH4 SPO03MWV4 SPO03MWP3 3	SPO04VWE SPO04VID1 SPO04MWH4 SPO04MWV4 SPO04MWP4 4
SPO05VWE SPO05VID1 SPO05MWH4 SPO05MWV4 SPO05MWP5 5	SPO06VWE SPO06VID1 SPO06MWH4 SPO06MWV4 SPO06MWP6 6	SPO07VWE SPO07VID1 SPO07MWH4 SPO07MWV4 SPO07MWP7 7	SPO08VWE SPO08VID1 SPO08MWH4 SPO08MWV4 SPO08MWP8 8
SPO09VWE SPO09VID1 SPO09MWH4 SPO09MWV4 SPO09MWP9 9	SPO10VWE SPO10VID1 SPO10MWH4 SPO10MWV4 SPO10MWP10 10	SPO11VWE SPO11VID1 SPO11MWH4 SPO11MWV4 SPO11MWP11 11	SPO12VWE SPO12VID1 SPO12MWH4 SPO12MWV4 SPO12MWP12 12
SPO13VWE SPO13VID1 SPO13MWH4 SPO13MWV4 SPO13MWP13 13	SPO14VWE SPO14VID1 SPO14MWH4 SPO14MWV4 SPO14MWP14 14	SPO15VWE SPO15VID1 SPO15MWH4 SPO15MWV4 SPO15MWP15 15	SPO16VWE SPO16VID1 SPO16MWH4 SPO16MWV4 SPO16MWP16 16

Example: Four 2x2 Sub Video Walls

The following commands must be received for each decoder each time the video wall layout changes.

Top Left has selected Input 01. Top Right has selected input 02. Bottom Left has selected input 03. Bottom right has selected input 04.

SPO01SWV2 SPO01SWH2 SPO01SWP1 SPO01VWE SPO01SI01 1	SPO02SWV2 SPO02SWH2 SPO02SWP2 SPO02VWE SPO02SI01 2	SPO03SWV2 SPO03SWH2 SPO03SWP1 SPO03VWE SPO03SI02 3	SPO04SWV2 SPO04SWH2 SPO04SWP2 SPO04VWE SPO04SI02 4
SPO05SWV2 SPO05SWH2 SPO05SWP3 SPO05VWE SPO05SI01 5	SPO06SWV2 SPO06SWH2 SPO06SWP4 SPO06VWE SPO04SI01 6	SPO07SWV2 SPO07SWH2 SPO07SWP3 SPO07VWE SPO07SI02 7	SPO08SWV2 SPO08SWH2 SPO08SWP4 SPO08VWE SPO08SI02 8
SPO09SWV2 SPO09SWH2 SPO09SWP1 SPO09VWE SPO09SI03 9	SPO10SWV2 SPO10SWH2 SPO10SWP2 SPO10VWE SPO10SI03 10	SPO11SWV2 SPO11SWH2 SPO11SWP1 SPO11VWE SPO11SI04 11	SPO12SWV2 SPO12SWH2 SPO12SWP2 SPO12VWE SPO12SI04 12
SPO13SWV2 SPO13SWH2 SPO13SWP3 SPO13VWE SPO13SI03 13	SPO14SWV2 SPO14SWH2 SPO14SWP4 SPO14VWE SPO14SI03 14	SPO15SWV2 SPO15SWH2 SPO15SWP3 SPO15VWE SPO15SI04 15	SPO16SWV2 SPO16SWH2 SPO16SWP4 SPO16VWE SPO16SI04 16

Example: Sub 4x4 Video Wall

The following sets of commands need to be received for each decoder each time the video wall layout changes.

The video wall has selected input 01.

SPO01SWV4 SPO01SWH4 SPO01SWP1 SPO01VWE SPO01SI01 1	SPO02SWV4 SPO02SWH4 SPO02SWP2 SPO02VWE SPO02SI01 2	SPO03SWV4 SPO03SWH4 SPO03SWP3 SPO031VWE SPO03SI01 3	SPO04SWV4 SPO04SWH4 SPO04SWP4 SPO04VWE SPO04SI01 4
SPO05SWV4 SPO05SWH4 SPO05SWP5 SPO05VWE SPO05SI01 5	SPO06SWV4 SPO06SWH4 SPO06SWP6 SPO06VWE SPO06SI01 6	SPO07SWV4 SPO07SWH4 SPO07SWP7 SPO07VWE SPO07SI01 7	SPO08SWV4 SPO08SWH4 SPO08SWP8 SPO08VWE SPO08SI01 8
SPO09SWV4 SPO09SWH4 SPO09SWP9 SPO09VWE SPO09SI01 9	SPO10SWV4 SPO10SWH4 SPO10SWP10 SPO10VWE SPO10SI01 10	SPO11SWV4 SPO11SWH4 SPO11SWP11 SPO11VWE SPO11SI01 11	SPO12SWV4 SPO12SWH4 SPO12SWP12 SPO12VWE SPO12SI01 12
SPO13SWV4 SPO13SWH4 SPO13SWP13 SPO13VWE SPO13SI01 13	SPO14SWV4 SPO14SWH4 SPO14SWP14 SPO14VWE SPO14SI01 14	SPO15SWV4 SPO15SWH4 SPO15SWP15 SPO15VWE SPO15SI01 15	SPO16SWV4 SPO16SWH4 SPO16SWP16 SPO16VWE SPO16SI01 16

Example: 3x3 sub video wall with 7 individual displays

The following sets of commands need to be received for each decoder each time the video wall layout changes.

The 3x3 video wall has selected input 01. The other displays have been configured as a 1x1 video wall and select inputs 02 through 08.

SPO01SWV3 SPO01SWH3 SPO01SWP1 SPO01VWE SPO01SI01 1	SPO02SWV3 SPO02SWH3 SPO02SWP2 SPO02VWE SPO02SI01 2	SPO03SWV3 SPO03SWH3 SPO03SWP3 SPO03VWE SPO03SI01 3	SPO04SWV1 SPO04SWH1 SPO04SWP1 SPO04VWE SPO04SI02 4
SPO05SWV3 SPO05SWH3 SPO05SWP4 SPO05VWE SPO05SI01 5	SPO06SWV3 SPO06SWH3 SPO06SWP5 SPO06VWE SPO06SI01 6	SPO07SWV3 SPO07SWH3 SPO07SWP6 SPO06VWE SPO07SI01 7	SPO08SWV1 SPO08SWH1 SPO08SWP1 SPO08VWE SPO08SI03 8
SPO09SWV3 SPO09SWH3 SPO09SWP7 SPO09VWE SPO09SI01 9	SPO10SWV3 SPO10SWH3 SPO10SWP8 SPO10VWE SPO10SI01 10	SPO11SWV3 SPO11SWH3 SPO11SWP9 SPO11VWE SPO11SI01 11	SPO12SWV1 SPO12SWH1 SPO12SWP1 SPO12VWE SPO12SI04 12
SPO13SWV1 SPO13SWH1 SPO13SWP1 SPO13VWE SPO13SI05 13	SPO14SWV1 SPO14SWH1 SPO14SWP1 SPO14VWE SPO14SI06 14	SPO15SWV1 SPO15SWH1 SPO15SWP1 SPO15VWE SPO15SI07 15	SPO16SWV1 SPO16SWH1 SPO16SWP1 SPO16VWE SPO16SI08 16