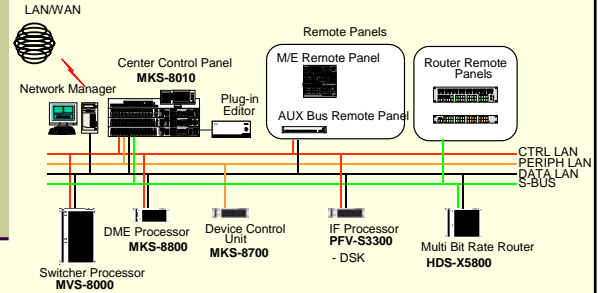


3

## MVS-8000 System Overview

## MVS-8000

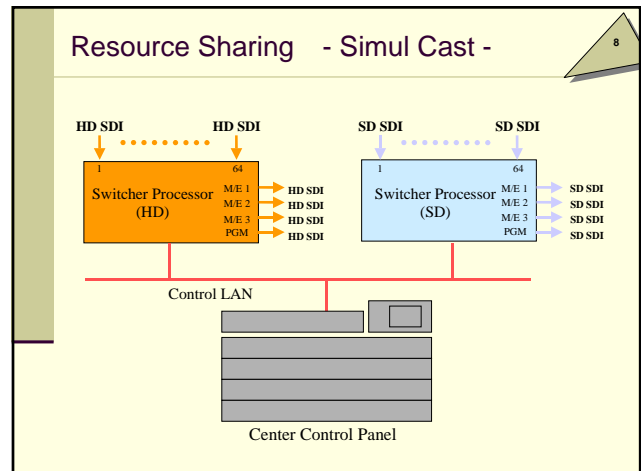
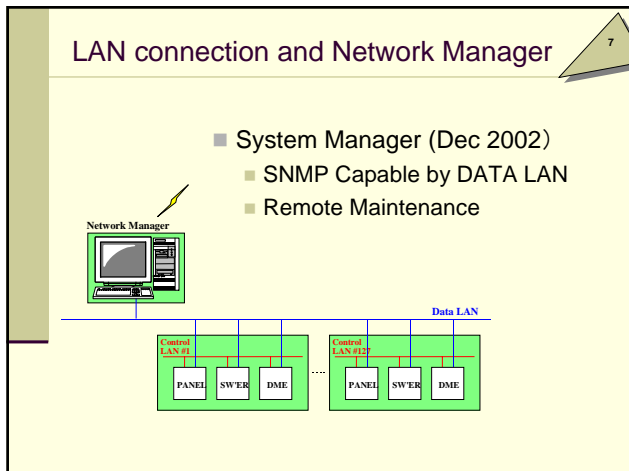
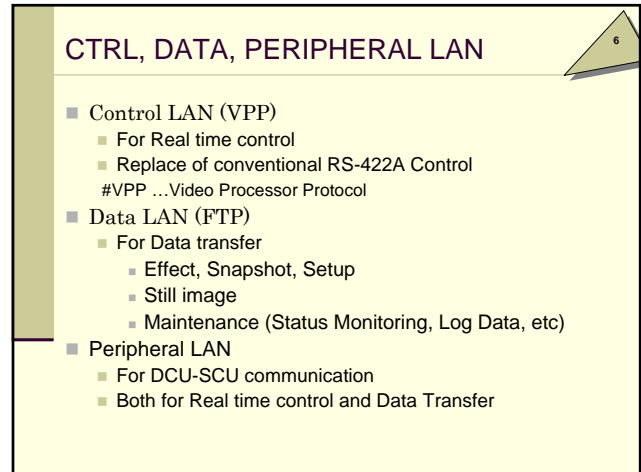
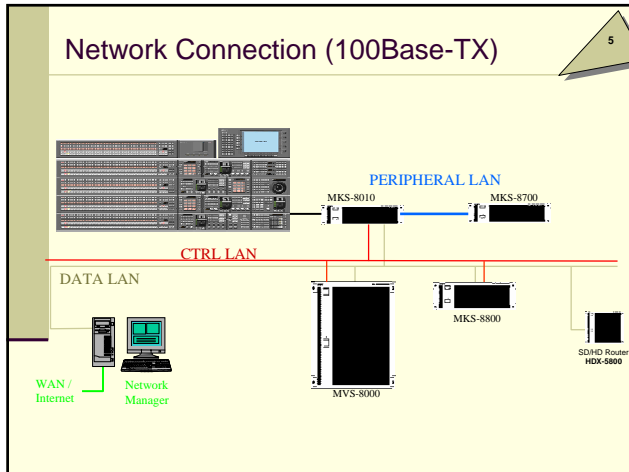


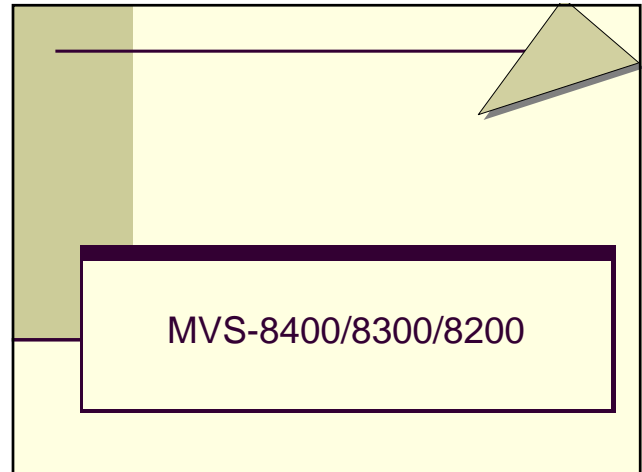
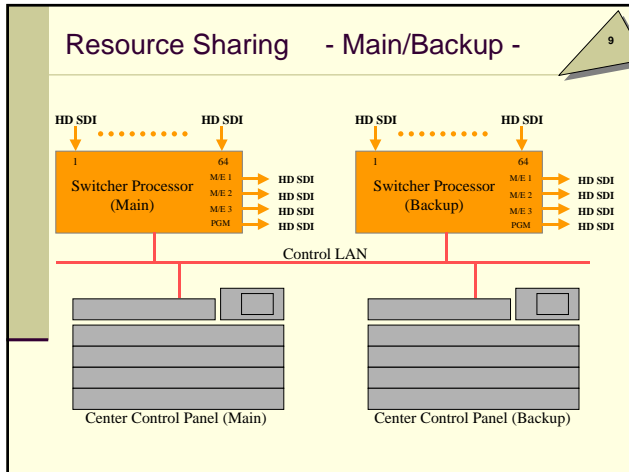
## MVS-8000 System

■ Switcher Processor Pack	<b>MVS-8400/8300/8200</b>
■ Switcher Processor	MVS-8000
■ DME Processor Pack	<b>MVE-8000</b>
■ DME Processor	MKS-8800
■ Center Control Panel Pack	<b>CCP-8000</b>
■ System Control Unit	MKS-8010
■ Device Control Unit Pack	<b>DCU-8000</b>
■ Device Control Unit	MKS-8700

## Main Feature

- Multi Format
  - SDTV:
    - 480i / 59.94, 576i / 50
  - HDTV:
    - 1080i/50, /59.94, /60
    - 1080p/23.976, /24, /25, /29.97, /30 \*2001.12
    - 720p / 59.94 \*2002.06





**MVS-8000 Features**

- Scalability
  - Up to 80 Input (Up to 68 Input in HD)
    - Max: 4 of 17 input board and 1 of 12 input board
  - Up to 56 Output (including 8 Monitor Output)
    - Max: 7 of 8 output board (Each output has 2 connectors)
  - Selectable from 2, 3, and 4 M/Es
  - Up to 8 DME channels
- 4 Keyers per M/E (Standard with Chroma Key)
- 4 independent PGM output per M/E with any combination of keyers.
- Powerful independent M/E setting
  - Crosspoint Assign, 4:3/16:9, Snapshot, KF Effects

**Option Configuration - MVS-8000**

■ All standard boards are common for HD, SD and Multiformat	
■ Input Board	MKS-8110HD/SD/M
■ 12 Input Board (SD only)	MKS-8111SD
■ Output Board	MKS-8160HD/SD/M
■ Monitor Output Board	MKS-8161HD/SD/M
■ DME I/F Board	MKS-8170HD/SD/M
■ M/E Board	MKS-8210HD/SD/M
■ Frame Memory Board	MKS-8440HD/SD/M

See, "[3A MVS Multi Format Options.ppt](#)"

## Board Configuration (Outline)

	Function (Front)	Function (Rear)
TOP	CPU Board	CN-2132
		CN-2133
	M/E3 Block	-----
	M/E2 Block	-----
	DME I/F	DME I/F
	M/E1 Block	-----
	P/P Block	-----
	XPT Block	Input I/F
	Output Process Block	Output I/F
Bottom	FM Block	Input I/F (Additional 12 input)

## Board Configuration 1 - MVS-8000

Slot No.	Option Name	Front	Rear	Spec
1		CA-44 (*)	CN-2132 (*)	
2			CN-2133 (*)	
3	MKS-8210HD/SD/M	DO-41/42/44	-----	M/E 3
4		MIX-45	-----	M/E 3
5		KPC-16	-----	M/E 3
6		DI-40/41/43	-----	M/E 3
7	MKS-8210HD/SD/M	DO-41/42/44	-----	M/E 2
8		MIX-45	-----	M/E 2
9		KPC-16	-----	M/E 2
10		DI-40/41/43	-----	M/E 2
11	MKS-8170HD/SD/M	DIF-119/122/141	CN-2134 (*)	
12	MKS-8210HD/SD/M	DO-41/42/44	-----	M/E 1
13		MIX-45	-----	M/E 1
14		KPC-16	-----	M/E 1
15		DI-40/41/43	-----	M/E 1

Red: Standard Board (\*)

## Board Configuration 2 - MVS-8000

Slot No.	Option Name	Front	Rear	Spec.
16	MKS-8210HD/SD/M	DO-41/42/44	-----	P/P
17		MIX-45	-----	P/P
18		KPC-16	-----	P/P
19		DI-40/41/43	-----	P/P
20	MKS-8110HD/SD/M	-----	CNI-9/10/22	IN 1 - 17
21	MKS-8110HD/SD/M	XPT-18/18/ 21 (*)	CNI-9/10/22	IN 18 - 34
22	MKS-8110HD/SD/M	-----	CNI-9/10/22	IN 35 - 51
23	MKS-8110HD/SD/M	XPT-18/18/ 21 (*)	CNI-9/10/22	IN 52 - 68
24	MKS-8160HD/SD/M	OUT-23/24/27	CNO-11/17B/23	OUT 1 - 8
25	MKS-8160HD/SD/M	OUT-23/24/27	CNO-11/17B/23	OUT 9 - 16
26	MKS-8160HD/SD/M	OUT-23/24/27	CNO-11/17B/23	OUT 17 - 24
27	MKS-8160HD/SD/M	OUT-23/24/27	CNO-11/17B/23	OUT 25 - 32
28	MKS-8160HD/SD/M	OUT-23/24/27	CNO-11/17B/23	OUT 33 - 40
29	MKS-8160HD/SD/M	OUT-23/24/27	CNO-11/17B/23	OUT 41 - 48
30	MKS-8161HD/SD/M	-----	CNO-12/17A/23	OUT 49 - 56
31	MKS-8440HD/SD/M	DIO-62/63/74	CNI-17 (+)	IN 69 - 80 (+)
32		MY-102		

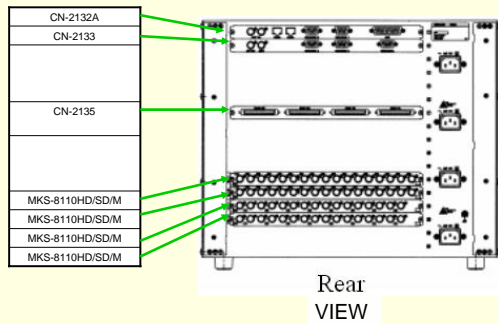
Blue: Option (+)  
(MKS-8111SD)

• Board Name  
XX-AA/BB  
AA: for HD  
BB: for SD

## MVS-8000SF – Board Configuration

	HD		SD		Multi Format		
1	--		--		--		
2	CA-44		CA-44		CA-44	--- CPU & SG	
3	DO-41		DO-42		DO-44	M/E	
4	MIX-45		MIX-45		MIX-45		
5	KPC-16	MKS-8210HD	KPC-16	MKS-8210SD	MKS-8210M		
6	DI-40		DI-41		DI-43		
7	DIF-119	MKS-8170HD	DIF-122	MKS-8170SD	DIF-141	MKS-8170M	MVE I/F
8	DO-41		DO-42		DO-44	M/E	
9	MIX-45		MIX-45		MIX-45		
10	KPC-16	MKS-8210HD	KPC-16	MKS-8210SD	MKS-8210M		
11	DI-40		DI41		DI-43		
12	--		--		--		
13	XPT-21		XPT-21		XPT-21	CROSS POINT	
14	OUT-23		OUT-24		OUT-27	OUTPUT PROCESS	
15	OUT-23	MKS-8160HD	OUT-24	MKS-8160SD	MKS-8160M		
16	DIO-62		DIO-63		DIO-74	FRAME MEMORY	
17	MY-102	MKS-8440HD	MY-102	MKS-8440SD	MY-102		

## MVS-8000SF – Board Configuration



## Overall 1 –MVS-8400/8300/8200

- Crosspoint Block (XPT)
  - Serial Matrix <NEW!>
  - All primary input signals are sent to XPT board first, then transferred to M/E and Output block.
- M/E Block (DI, KPC, MIX, DO)
  - Serial to Parallel Converter
  - Key, Wipe, Color BKGD Processing
  - Parallel to Serial Converter
- OUTPUT Block <OUT>
  - Serial to Parallel Converter
  - Phase Adj., Blanking, FTB, Safe Title add, etc
  - Parallel to Serial Converter

## Overall 2 –MVS-8400/8300/8200

- Frame Memory Block <DIO, MY>
  - Still files are stored in SDRAM
  - 2 inputs and 8 simultaneous outputs
- MVE I/F Block (DIF)
  - DME V/K signal I/F
  - DME Utility 1 and 2
- CPU Block (CA, SG)
  - Overall MVS Proc. Control
  - Communication with Local CPU (by IEEE1394)
    - XPT, M/E, OUTPUT, Frame Memory, MVE I/F
  - Clock and Timing Signal Generator

MVE-8000  
(MKS-8800)

## MVE-8000 Features

- Up to 4 channels in one MVE chassis
- Variety of effects with Non-linear effect capability
- Simple connection with MVS as Integrated DME
  - Up to 2 chassis (up to 8 channels) can be connected to MVS (as internal DME)

## Option Configuration -MVE-8000

- Common for HD and SD
  - Option Board
    - Effect Board           MKS-8810M
    - I/O Board             MKS-8820M
    - Non-Linear Board     MKS-8830M \*
- \* Must be installed on all Effect board.

## Board Configuration - MVE-8000

Slot No.	Option Name	Front	Rear	Spec.
1	MKS-8810M	DVP-21	----	CH1
2	MKS-8810M	DVP-21	----	CH2
3	MKS-8820M	VIF-26	CN-2153	MVS I/F
4	MKS-8810M	DVP-21	----	CH3
5	MKS-8810M	DVP-21	----	CH4
6	(CPU Block)	CA-44CF	CN-2132*	CPU board

## Overall -MVE-8000

- I/O Block (VIF)
  - Video Interface Process
  - Video Effect (Combiner, Recursive)
- Effect Block (DVP)
  - Border/Crop, Video Modify, Defocus, Blur etc
- CPU Block (CA, SG, DIF)
  - Overall control
    - DVP, VIF
  - Clock and Timing signal Generator
  - Program and FPGA Configuration data storage in Compact Flash

## CCP-8000 (MKS-8010/8011)

### CCP-8000 Features

- Layout Free Modules
- Color LCD Menu panel
  - Touch panel operation
  - 10.4 inches, 800x600 dots
  - 16bit (65,000) Color
- Large scale data storage
  - Internal Hard Disk Drive and PCMCIA Slot for memory card
    - Still files
    - Data (Setup, Snapshot, Effect, etc)
    - Application Software

### Options –CCP-8000

- Devices
  - MKS-8010 System Control Unit (SCU)
  - MKS-8011 Menu Panel
  - Main Panel \*No model name

### Board Configuration – SCU

Slot No.	Front	Rear	Spec.
1	-----	CN-2148	
2	-----	CN-2157	
3	CA-45	CN-2159	Main CPU
4	-----	-----	
5	-----	-----	
6	IF-855	CN-2136	Menu CPU I/F

## Modules 1 –Main Panel

29

■ 32/24 AUX Bus	MKS-8013/8014
■ 32/24 XPT	MKS-8017/8018
■ Transition (S/R/L*)	MKS-8020/8021/8022
■ Key Transition	MKS-8023
■ Flexi Pad	MKS-8024
■ MC/USB	MKS-8025
■ 10 Key Pad	MKS-8026

\*S: Standard, R: Simple right, L: Simple left

## Modules 2 –Main Panel

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■ Keyframe	MKS-8030
■ Joy Stick	MKS-8031JS
■ Track Ball	MKS-8031TB
■ DSK Fader	MKS-8032
■ Shot Box	MKS-8033
■ FTB	MKS-8034FB
■ Key Control	MKS-8035
■ 1/3, 1/2 Blank Panel	MKS-8040/8041

## Adaptors –CCP-8000

31

■ Extension Modules	
■ For MC/USB module	MKS-8076
■ For other module	MKS-8075

## USB Specification

32

- CCP supports USB 1.0 and USB 1.1.

\* USB 2.0 is not supported.



## Memory Card for Memory Card Module

- PCMCIA
- Use for
  - Application software download
  - Data Load/Save
    - Still file, Setup, Snapshot, Effect, etc
- Formatting
  - Usually not necessary
  - Can be done by Menu Panel
  - Do not format in PC

## Overall –CCP-8000

- Menu Control Block (IF-855, MAGIC)
  - GUI Menu management
  - OS = Linux
  - HDD
    - Data Store (Still file, Setup, Snapshot, etc)
- CPU Block (CA)
  - Real time control of CCP
  - OS = VxWorks

DCU-8000  
(MKS-8700)

## DCU-8000 Features

- Scalability
  - Up to 102 GPI/Tally Input
  - Up to 270 GPI/Tally Output
  - Up to 30 RS-422 Device Control
- Tally Setup
  - S-BUS Tally and/or Parallel Tally
  - On-Air Tally and/or Record Tally

### Option Configuration – DCU-8000

- Tally/GPI Input      Standard
- Tally/GPI Output    MKS-8701
- Serial I/F          MKS-8702

### Board Configuration – DCU-8000

Slot No.	Option Name	Front	Rear	Spec.
1		CA-47	CN-2198	CPU Board
2	MKS-8701 or MKS-8702	RC-90 or IF-848	CN-2195 or CN-2194	Tally/GPI Out or Device Control
3	MKS-8701 or MKS-8702	RC-90 or IF-848	CN-2195 or CN-2194	Tally/GPI Out or Device Control
4	MKS-8701 or MKS-8702	RC-90 or IF-848	CN-2195 or CN-2194	Tally/GPI Out or Device Control
5	MKS-8701 or MKS-8702	RC-90 or IF-848	CN-2195 or CN-2194	Tally/GPI Out or Device Control
6	MKS-8701 or MKS-8702	RC-90 or IF-848	CN-2195 or CN-2194	Tally/GPI Out or Device Control

### MVS System Configuration

### Redundant Power Supply

- Redundant Power Supply
  - MVS-8000    3 (Standard) + 1 (Backup) <Raid>
  - MKS-8010    1 (Standard) + 1 (Backup)
  - MKS-8700    1 (Standard) + 1 (Backup)
  - MKS-8800    1 (Standard) (No Backup)

## CPU Module

- Type
  - CPU-DR Module
  - CPU-DK Module
- Compatible between same CPU module type
  - Swappable CPU-DR <-> CPU-DR
  - Swappable CPU-DK <-> CPU-DK

## CPU Module – MVS-8000

Board	CPU Module
CA-44	CPU-DR
	CPU-DK
	CPU-DK
MIX-45	CPU-DR
DIF-119/122/141	CPU-DK
XPT-18/21 (in Slot23 only)	CPU-DK
OUT-23/24/27 (in Slot24 only)	CPU-DK
MY-102	CPU-DR

## [Note for CA-44 Board (A-8328-912-A) ]

- CA-44 board are common for MVS-8000 and MVS-8000SF.
- However, **DIP switch (S303-4) setting need to be set correctly.**

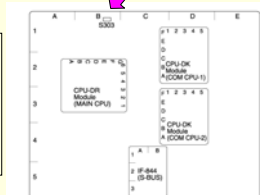
### MVS-8000

S303-1 :OFF  
S303-2 :OFF  
S303-3 :ON  
S303-4 :ON

(Default Setting)

### MVS-8000SF

S303-1 :OFF  
S303-2 :OFF  
S303-3 :ON  
S303-4 :OFF



If the Dip switch setting is wrong, MVS may not boot up.

## CPU Module – MVE-8000

Board	CPU Module
CA-44CF	CPU-DR
	CPU-DK
	CPU-DK
VIF-26	CPU-DR
DVP-21	CPU-DR

### CPU Module – CCP-8000

Board	CPU Module
CA-45	CPU-DR
	CPU-DK
	CPU-DK

### CPU Module – DCU-8000

Board	CPU Module
CA-47	CPU-DK
IF-848	CPU-DK

### Maintenance Tool

#### ■ Extension Board

- EX-840      A-8329-371-A
  - For front board of MVS, MVE, CCP, and DCU

# There is no Extension board for rear boards.  
# When a board is expanded, picture disturbance may occur with 1.5GHz signal.

### Adjustment –MVS-8000

- Voltage adjustment is NOT necessary.
  - Only 12VDC is supplied to every board.
  - 12VDC is converted to any necessary voltage by DC-DC converter on each board.
  - No need to adjust voltage according to change of board configuration.
- VCO adjustment is necessary in SD.
  - When S/P, P/S IC or its peripheral is replaced, VCO adjustment must be done.
  - VCO can be adjusted by Terminal.

## Compact Flash (1)

- Compact Flash
  - MKS-8800 64M Compact Flash
  - MKS-8010 128M Compact Flash
- Location
  - MKS-8800 On DIF-130 (CA-44CF) board
  - MKS-8010 On IF-855 board
- Stored Data
  - MKS-8800
    - Application Software and FPGA Configuration Data
  - MKS-8010
    - OS (Linux) and program

## Compact Flash (2)

- Failure
  - When Menu or MVE does not wake up after 3 minutes from power on.
  - When "E1" is displayed at D701/702 on CA-44CF board. (MVE)
- Format
  - If the above failure occurs, formatting of Compact Flash is necessary. Method of formatting will be advised.
  - DO NOT format it with PC.

## Questions?

Back to Main Menu

