

# 3G / HD-SDI Digital Video Matrix System



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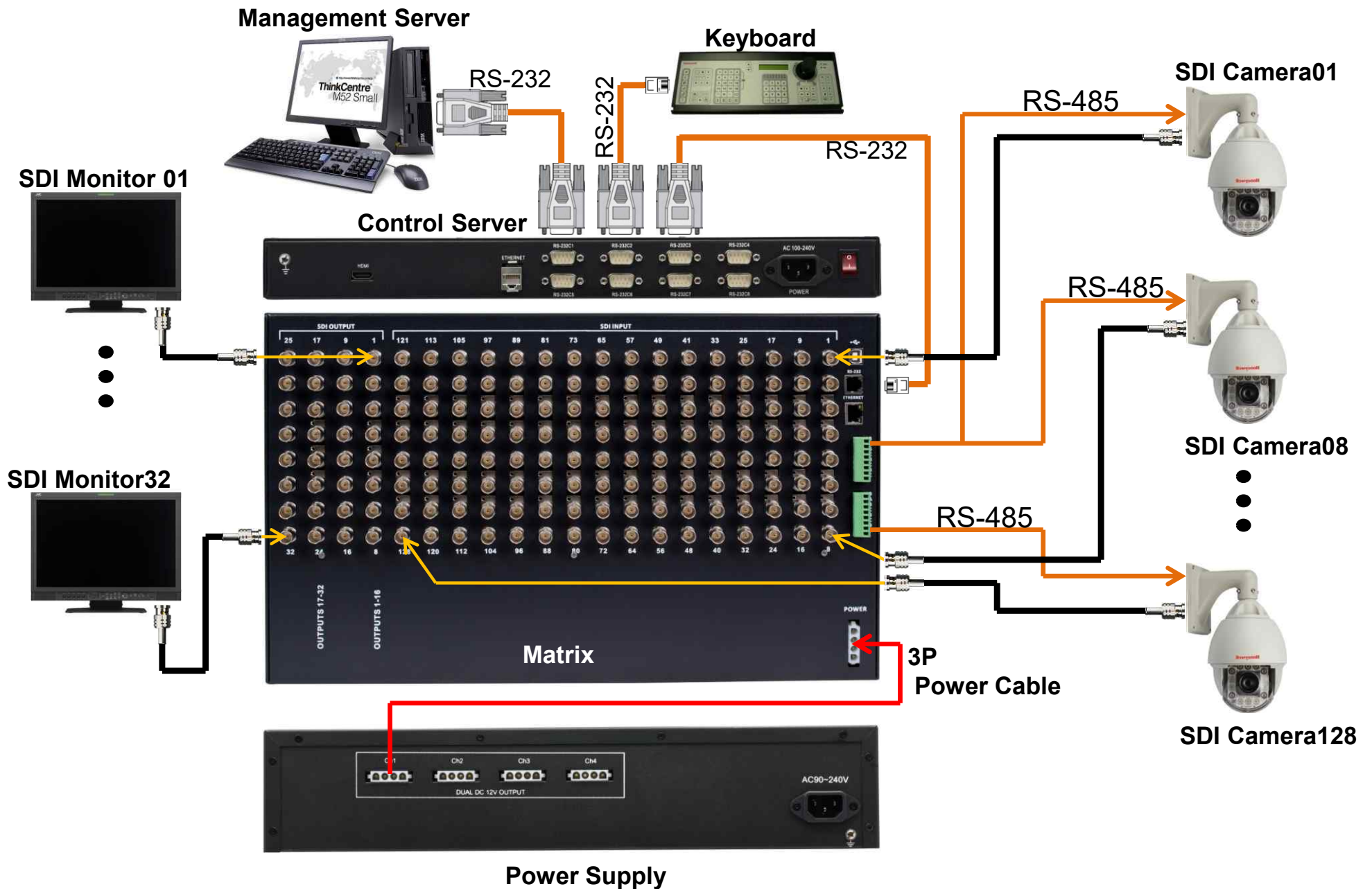
- SD/HD/3G SDI/DVB-ASI and EX-SDI/ 4K EX-SDI/ VC-2
- SMPTE259M/292M/424M
- Three type of chassis; 128X32、 128X128 ( 144X144 ) 、 256X256 ( 288X288 )
- Scalable and easy expansion System Design : From 8X8 to 10,000X4,000 at single node
- Modular architecture; Module frame & Plug-in function structure
- Double Easy FPOM™ Chassis structure ( Easy Front Plug in & out, Easy Operate & Maintenance , Front pluggable modular )
- Passive chassis, passive backplane design
- GIGA RP™ Passive backplane technology : Support 10G/SDI signal switching per channel ,2160p 4K SDI Ready
- GIGA SWITCHER™ Independent switching function : 3.2G channel data rate , Support full 3G SDI video process
- DAJA™ Technology , SDI signal integrity in 8 matrix cascade
- Dual CPU ( 128X128, 256x256 ) 、 Dual control card redundancy configuration , 24X7 system operation reliability
- RJ-45 Ethernet port for network configuration and control
- Network management capability , GUI device monitoring software for remote monitoring
- Dual RS-232 ( Connect to server or keyboard) , RS-485 for PTZ control
- CHECKFIELD code detection
- Integration with analog matrix of Honeywell Max1000、  
Honeywell VideoBlox、 Pelco、 AB、 AD、 Bosch . . .
- Program Management : All system function can be achieved through  
software Programing, Multi Operate access level
- Distributed control : Control and matrix separation,  
Multi-CPU independent control, Multi-Level networking.
- \* Compatibility design





- \* Passive chassis and Passive backplane Design for easy to maintenance
- \* Front plug in/out and Hot swap support for front access maintenance and easy system expansion
- \* Modular and plug-in architecture
- \* Dual CPU and redundancy control board support (except 128 x 32)





Model	PMX5000HD128-32	PMX5000HD128-128	PMX5000HD256-256
SDI Video Input	No of Video Input per single chassis Type of Connector Input Impedance	128 BNC 75Ω/Unballanced	128 ( 144Option )  256 ( 288Option )
SDI Video Output	No of Video Output per single chassis Type of Connector Output Impedance	32 BNC 75Ω/Unballanced	128 ( 144Option )  256 ( 288Option )
Slot	Video In : 1-16 ( 8Ch./card ) Video Out : 1-4 ( 8Ch/card ) Switching : 1	Video Out : 1-18 ( 8Ch/card )	Video In : 1-16 ( 18Ch./card ) Video Out : 1-18 ( 16Ch/Card )
SDI Signal	Amplitude	800mVp-p ± 10%	
	Overshoot	10% Amplitude	
	Video Format	SD-SDI、HD-SDI、 3G-SDI	
	Video Standard	SMPTE 259M/292M/424M/DVB-ASI	
	Video Rate	143M、 177M、 270M、 360M、 540M、 1485M、 2970M	
	Video Resolution	SD SDI : 525/60i, 625/50i HD SDI : 1080/60i, 1080/59.94i, 1080/50i, 1080/30p, 1080/30PsF, 1080/29.97p, 1080/29.97PsF, 1080/23.98p, 1080/23.98PsF, 1080/25p, 1080/25PsF, 1080/24PsF, 1080/24p, 720/60p, 720/59.94p, 720/50p 3G SDI : 1080/60p, 1080/59.94p, 1080/50p	
	Bandwidth per channel	3.2G/Channel	
	Video coding	8bit , 10bit , 12bit Auto	
	Retiming	Dynamic Retiming	
	Equalization	Auto Equalization	
Rise / Fall time	≥0.4ns , ≤1.50ns@270Mbps , Difference less than 0.5ns ≤270ps@1.485Gbps , Difference less than100ps ≤135ps@2.97Gbps , Difference less than50ps ≤0.2UI @270Mbps , at 1KHz		
Alignment Jitter ( 100KHz )	≤0.2UI @1.485Gbps , at 100KHz ≤0.3UI @2.97Gbps , at 100KHz ≤0.2UI @270Mbps		
Timming Jitter(10Hz)	≤1.0UI @1.485Gbps ≤2.0UI @2.97Gbps		
Auto Equalization ( 1694A )	> 400M/SD SDI ; > 200M/HD SDI ; > 100M/3G SDI ;		
Embaded Audio	Support , Streo Analog audio or AES/EBU digital audio		

Model		PMX5000HD128-32	PMX5000HD128-128	PMX5000HD256-256
Other Features	Switching Speed	≤10us		
	System Tour	128Ea		
	Salvo Switching	128Ea		
	Time Event	36Ea		
	System Link	Support		
	OSD	Work with chactor generator		
	Key Board Control Response Time	50ms ( Typical Values )		
	Keyboard Communication Interface	RS-232/RS-485/RS-422 , Ethernet		
	RS-485/RS-422	8 Ea		16Ea
	RS-232	1Ea		2Ea
Data I/F	RJ-45	1Ea		2Ea
	USB	1 Ea		2Ea
	Data Interface	RS-232/RS-485/RS-422		
	Data Rate	Manchester, Bi-phase		
	Data Format	RS-232 : DC ~ 115.2kbps ; RS-422/485 : DC ~ 500kbps		
	Operation	Simplex、 half-duplex or full-duplex		
	Signal Level :	0.25Vp-p ~ 10Vp-p		
	BER	< 10 <sup>-9</sup>		
	Surge protect(Voltage)	≥ ( 1.2/50μs ) +2.0KV		
	Surge protect(Current)	≥ ( 8/20μs ) +0.5KA		
Network I/F	Standard	IEEE802.3u 10Base-T 10/100M		
	Operation	Full duplex		
Alarm I/F	No of interface	Based on Alarm Input and Output modules, 8~256Ea		
Network Management	Function	Support; SNMP Support		

Model		PMX5000HD128-32	PMX5000HD128-128	PMX5000HD256-256
	Installation	19" EIA Standard Rack Mount		
	Dimension of Chassis ( H×W×D )	6U ,267×483×265mm	13U ,572×483×280mm	18.5U ,814×483×280mm
Mechanical	Dimension of server ( H×W×D )	1U ,44.5×483×250mm		
	Dimension of Power ( H×W×D )	2U ,89×483×350mm		3U ,132×483×350mm
	Dimension of OSD Module /17Ch. (H×W×D )	3U ,134mm×483mm×148mm		
	Power	12VDC±10%		48VDC±10%
	Power Consumption	Max 110W	Max 300W	Max 600W
Electrical	Power Supply Unit	Redundant Power Supply , 700VAC 200~240VAC.50Hz/60Hz		Redundent Power Supply , 1200VAC 200~240VAC.50Hz/60Hz
	Power Consumption of server	<10W		
	Power Consumption of Power Supply	<20W ( Fans and Exxt. )		
	Power Consumption of OSD	<60W ( Each 16Ch )		
	Operating Temperature	0°C~+50°C		
Working Environment	Storage Temperture	-20°C~+60°C		
	Operating Humadity	0~95% , Non-condensing		
Reliability	MTBF :	More than 100,000hr		
Status	LED Indicator	Power 1、 Power 2、 SDI、 Data、 Operation、 Control		

## Features of PMXPS12 :

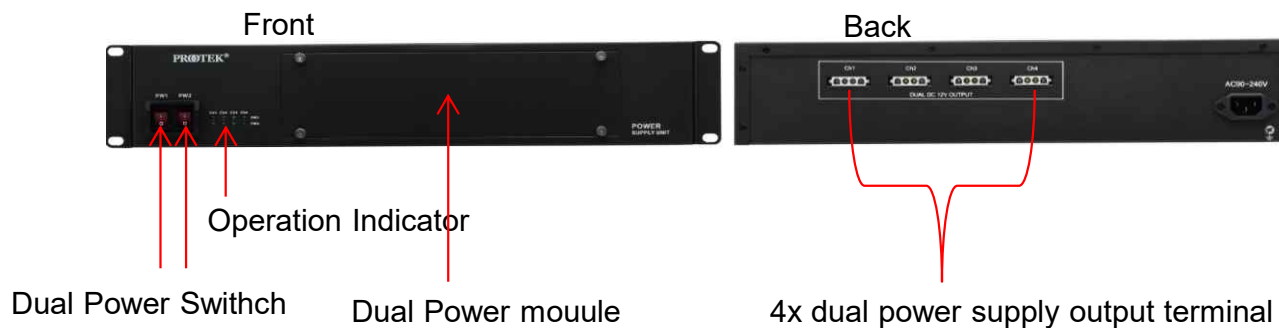
- \* Modular power system Design , Dual Redundant power supply system, Uninterruptible power maintenance、 Replacement of faulty board and power module , 24X365 stability、 Reliability ;
- \* Front drawer plug design , Easy replacement of power module without system power off ;
- \* Adapt standard power module in market ;
- \* Provide 4x redundant power
- \* Provide power for convert, fiber optic receiver, character generator and etc.,
- \* Dual Power Switch for protection against misuse ;



Open panel



Extract power module





## Features of PMXCMS08

- Built-in embedded industrial mini computer
- 8x Serial Port(Expand up to 64 ) for keyboard and matrix chassis
- Ethernet (TCP/IP Network) , SNMP support
- HDMI output for direct device display
- Built-in SD memory card for data and s/w back-up
- Role of stand-alone matrix management server



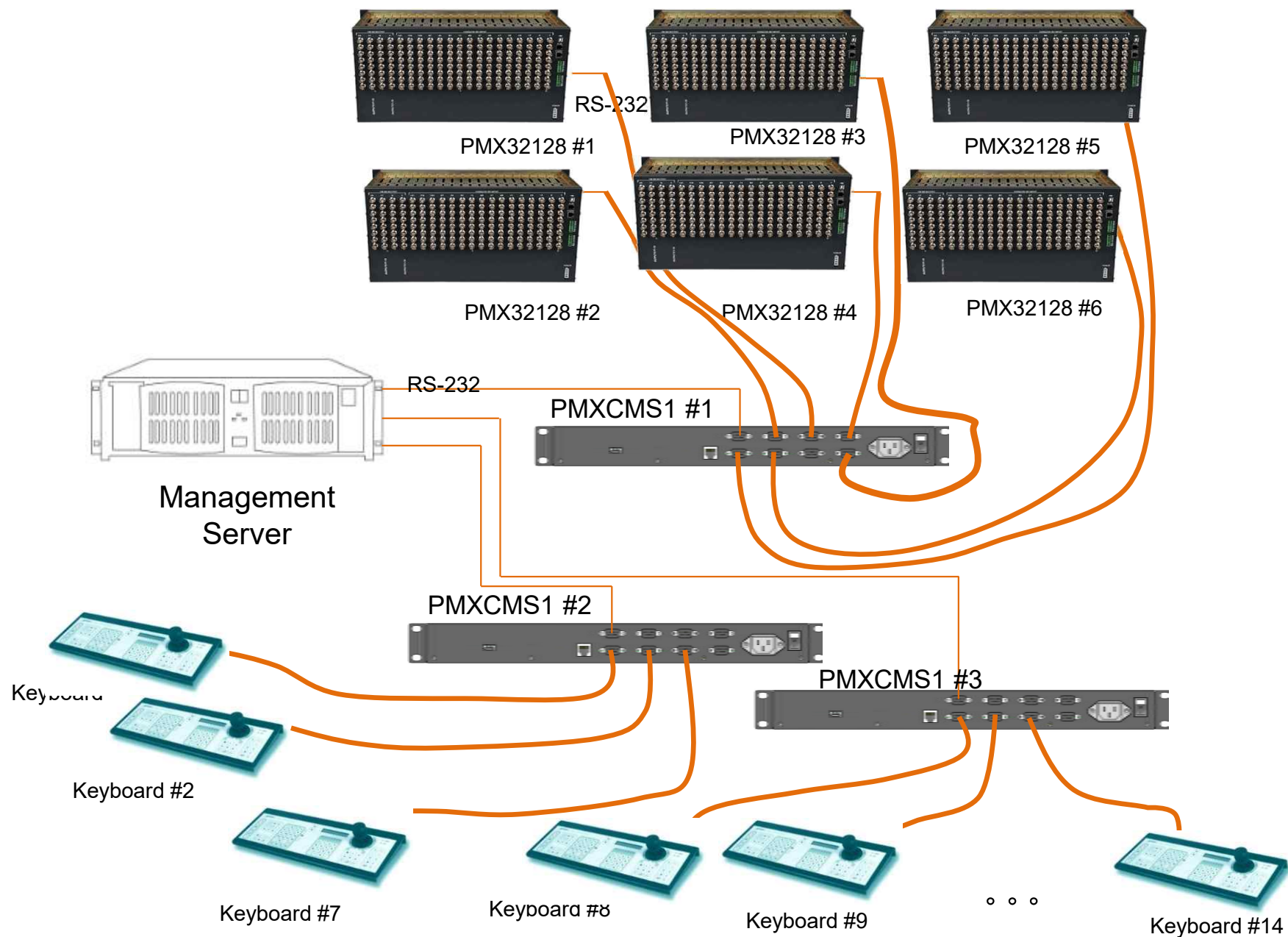
Status indicator

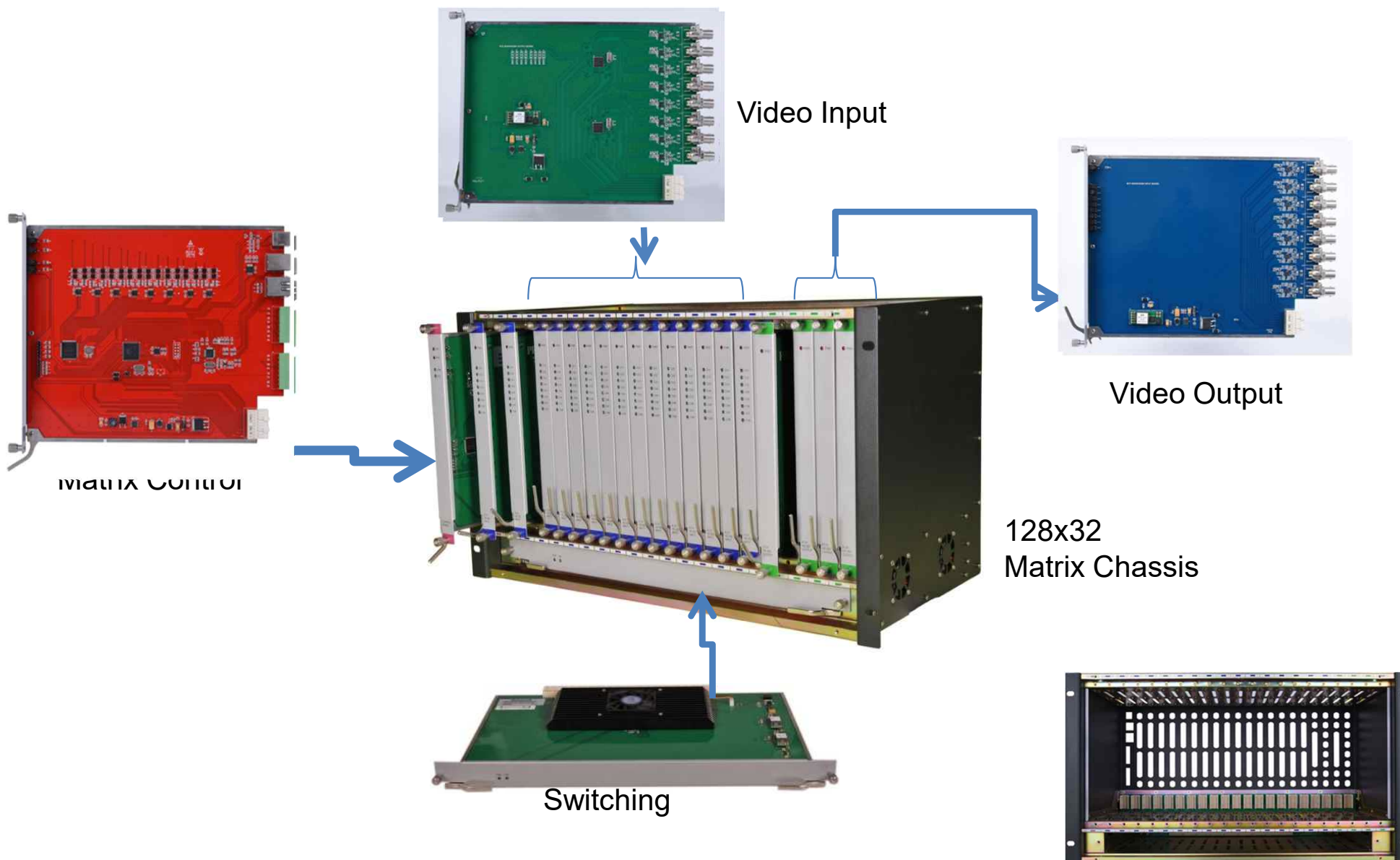


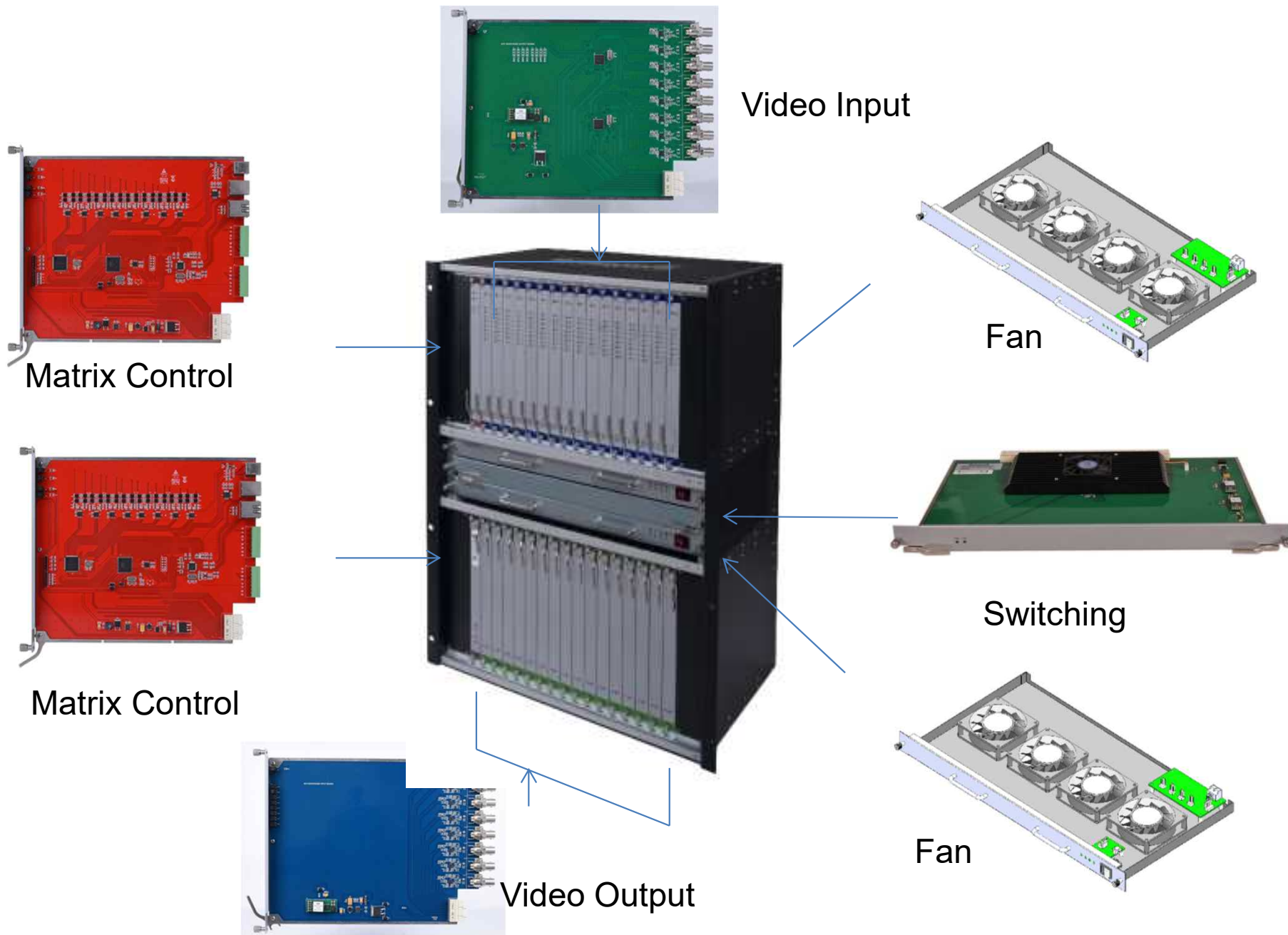
HDMI Out

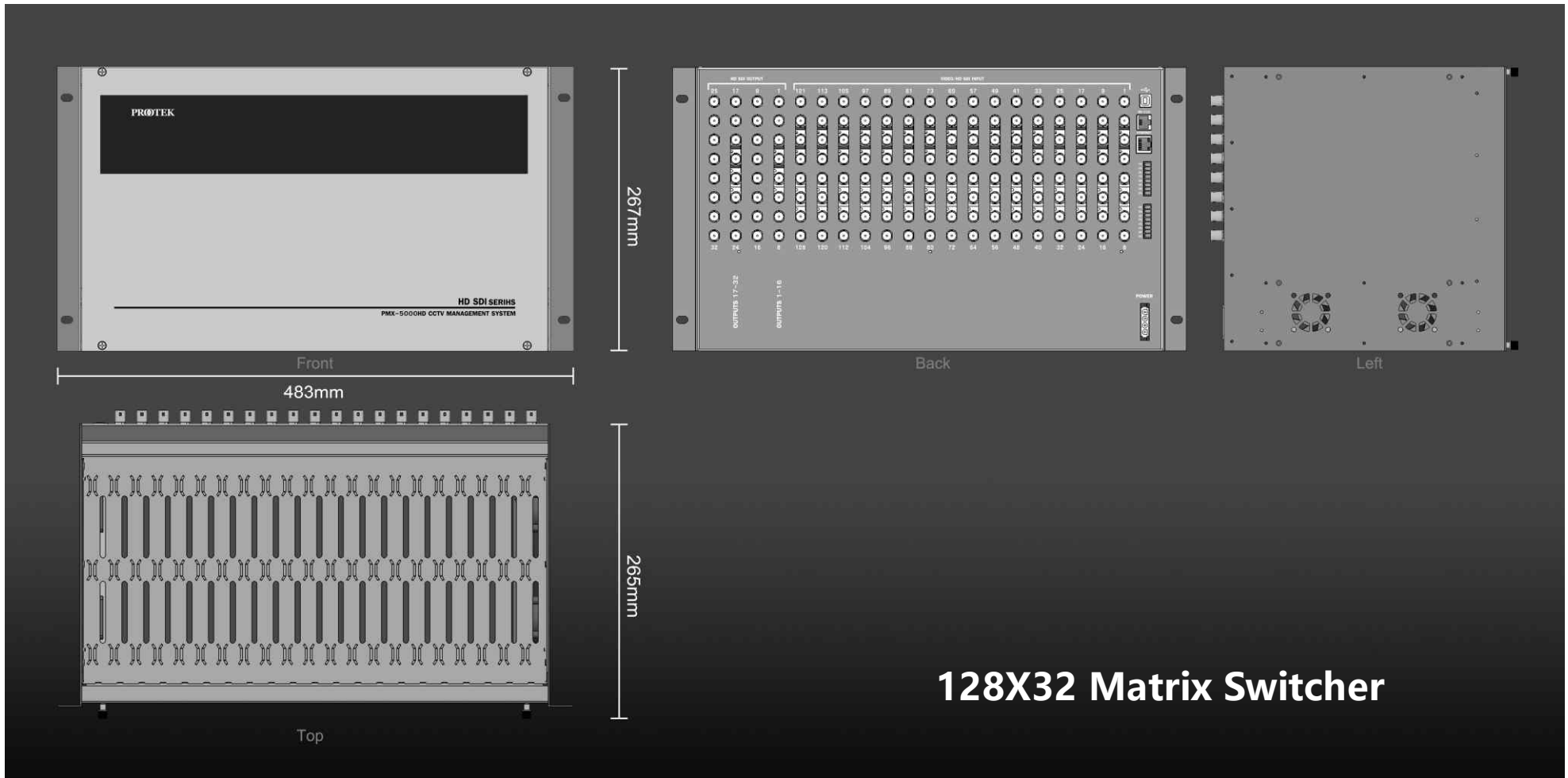
RJ-45(Ethernet)

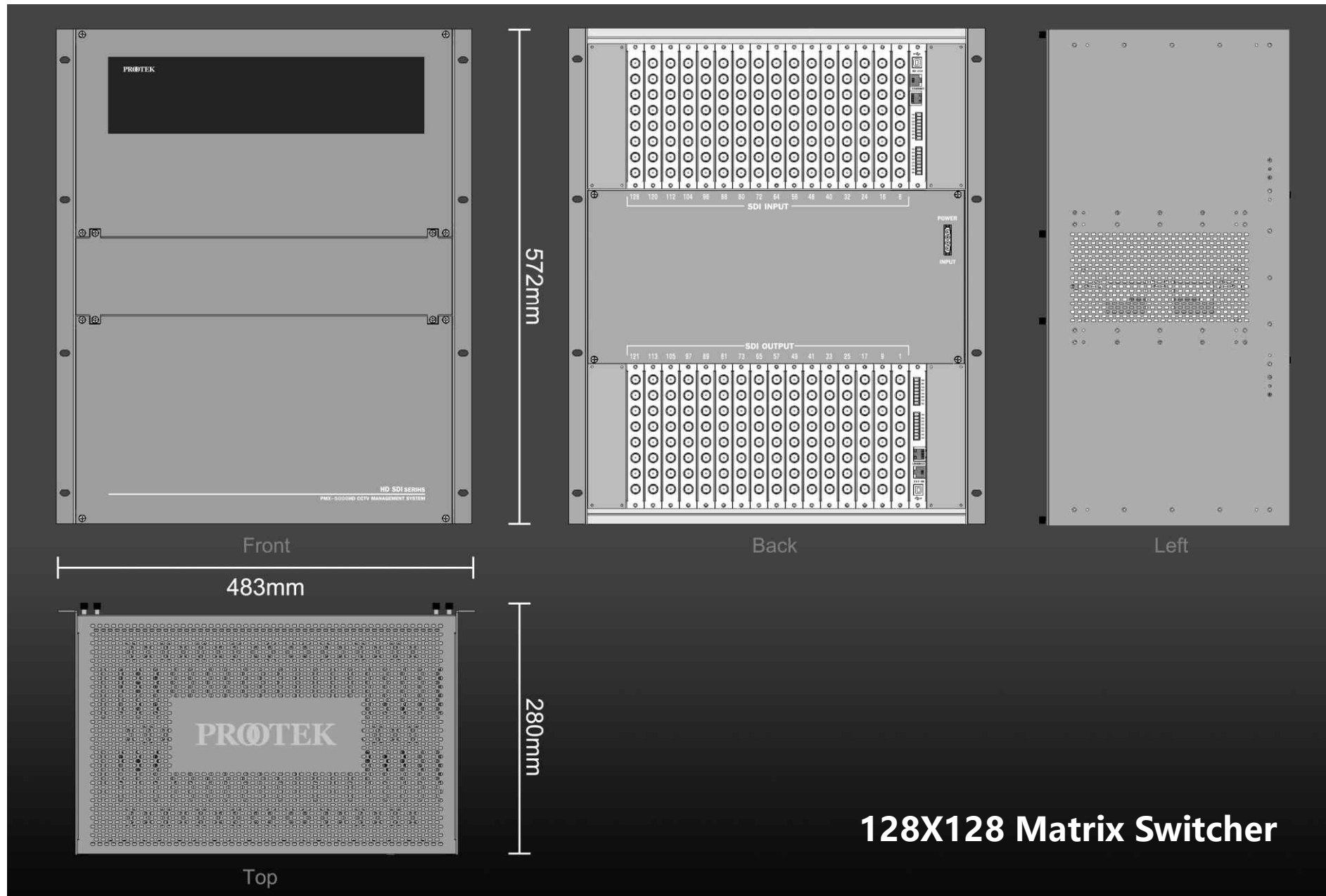
8x RS-232 Terminal



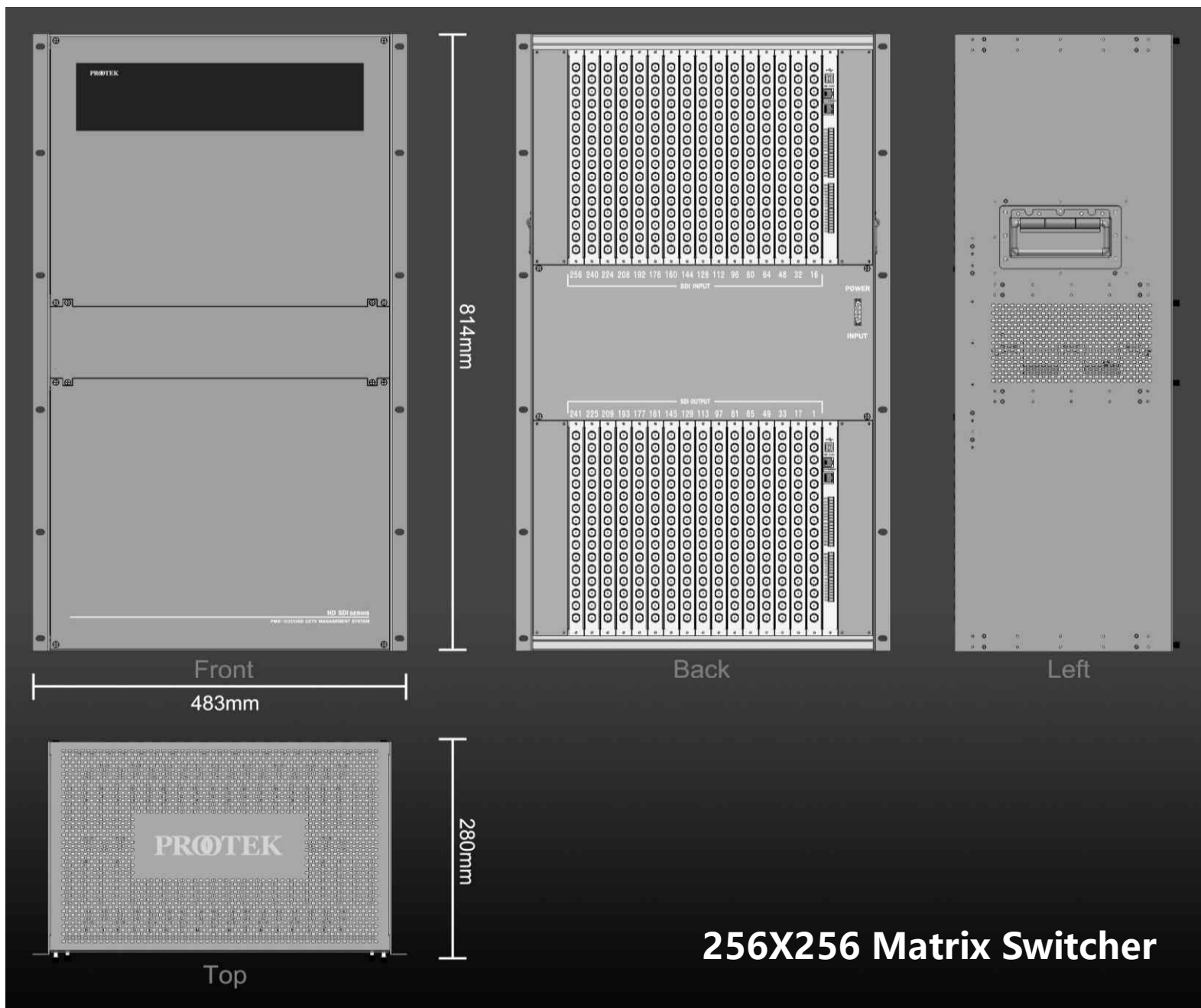








## 128X128 Matrix Switcher



Description	Model	128x32 HD-SDI Matrix System								
		Input	8	16	32	64	96	96	128	128
		Output	8	8	32	32	16	32	16	32
Matrix Chassis	PMX32128HD		1	1	1	1	1	1	1	1
Backplate	PMXF32128BD		1	1	1	1	1	1	1	1
Switching Board	PMX12832CPHD- CDR		1	1	1	1	11	1	1	1
Control Board	PMX128HD		1	1	1	1		1	1	1
Video Input (8Ch)	PMX832HD		1	2	4	8	12	12	16	16
Video Output (8Ch)	PMX108HD-CDR		1	1	4	4	2	4	2	4
Power Supply	PMXPS12		1	1	1	1	1	1	1	1
Control Server	PMXCMS1		1	1	1	1	1	1	1	1



Description	Model	128x128 HD-SDI Matrix System								
		Input	64	64	96	96	96	128	128	128
		Output	64	128	64	96	128	64	96	128
Chassis	PMXF128HD		1	1	1	1	1	1	1	1
Backplate	PMXF128128BD		1	1	1	1	1	1	1	1
Switching Board	PMX128128CPHD-CDR		1	1	1	1	11	1	1	1
Control Board	PMX128HD		2	2	2	2	2	2	2	2
Video Input (8Ch)	PMX832HD		8	2	4	12	12	12	16	16
Video Output (8Ch)	PMX108HD-CDR		8	16	8	8	12	8	12	16
Power Supply	PMXPS12		1	1	1	1	1	1	1	1
Control Server	PMXCMS1		1	1	1	1	1	1	1	1

## Comparision

Model	PMX32128HD	PMX128128HD	PMX256256HD	Remarks
Max. Video Input	128	128	256	
Max. Video Output	32	128	256	
Control Card	1	2	2	
Input @ Video Input Card	8	8	16	
Output @ Video Output Card	8	8	16	
RS-485	8	16	16	
RS-232	1	2	2	
RJ-45(10M/100Mbps)	1	2	2	
USB	1	2	2	
Chassis (mm)	6U, 267x483x265	13U, 572x483x280	19U, 836x483x280	
Power Supply (mm)	2U, 89x483x250	2U, 89x483x250	3U, 133x483x350	
Power Consumption	110W	210W	500W	



DK SOLUTIONS

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HD-SDI Matrix Switcher | HD-SDI Fiber Optic Link | HD-SDI Video Distributor | HD-SDI Character Generator  
CDMA Time Generator & Sync | HD-SDI Camera & Recorder