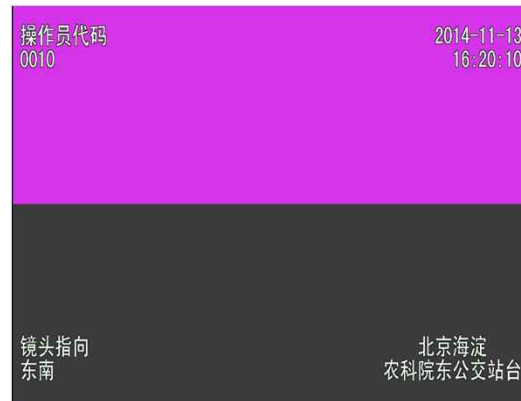


# Multi Format SDI

(3G SDI/ HD-SDI/SD-SDI/EX-SDI/4K EX-SDI/VC-2)

## Distribution & Character Generator



DK solutions

# Multi Format SDI Video Distributor

(3G SDI/ HD-SDI/SD-SDI/EX-SDI/4K EX-SDI/VC-2)

## Stand-Alone Type

### PVD-S1004HD

1: 4 Multi format SDI Video Distribution



## 19Inch Rack Mount Type, 84TE

### PVD-16S1004HD-2P

16 CHANNEL VIDEO DISTRIBUTION  
3U, 16 Group (1 In, 4 Out), Built-in Dual Power



### PVD-16S1004HD

16 CHANNEL VIDEO DISTRIBUTION  
3U, 16 Group (1 In, 4 Out)



### PVD-R1002HD

1 : 2 3G/HD-SDI Re-clocking Video Distribution



### PVD-16S1002HD

16 CHANNEL VIDEO DISTRIBUTION  
1U, 16 Group (1 In, 2 Out)



### PVD-80S1002HD

80 CHANNEL VIDEO DISTRIBUTION  
4U, 80 Group (1 In, 2 Out)



# Multi Format SDI Video Distributor

(3G SDI/ HD-SDI/SD-SDI/EX-SDI/4K EX-SDI/VC-2)



Front



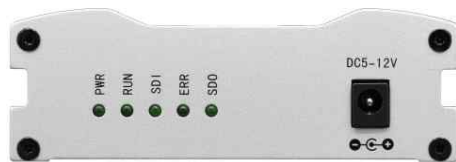
Rear



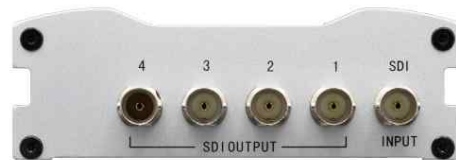
With Mount Accessory



1Ch. SDI Input  
4Ch. SDI Output



Front Panel & Indicator



Rear Panel Interface



Each 3U simple rack can be inserted in 10 units of PVD-S1004HD

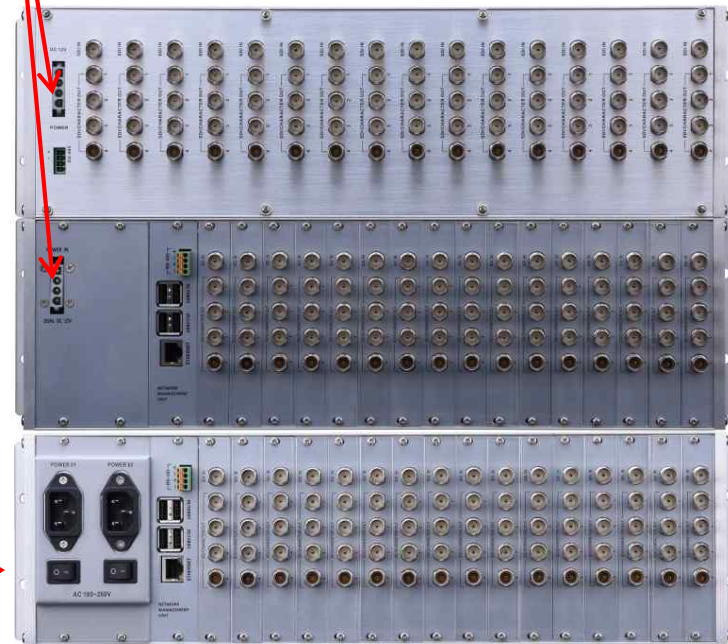
Front view of 4TE, 5TE flat business panel



Power In DC 12V



Rear View



Built-in Power Supply Unit





PVD-S1002HD  
With Case



PVD-R1002HD  
Board Type



PVD-S(R)1002HD  
Modular plug-in  
SDI video distributor  
Board and cartridge case



Front View



Rear View



NEW





# 1: 4 Multi Format SDI (3G /HD/SD/EX/4K EX/VC-2) Video Distribution

## PVD-S1004HD



- Multi-format Operation  
(SD/HD/3G SDI/DBV-ASI/EX-SDI/4K EX-SDI/VC-2)
- SMPTE259M/ 292M/424M Standard
- 1Input, 4 Output distribution w/ re-clocking and equalization
- 3G-SDI / HD-SDI / SD-SDI / EX-SDI /4K EX-SDI / VC-2 Signal
- Auto detection
- Embedded Digital Audio
- Auto Cable equalization, relocking
- Clock recovery circuit, Effective jitter remove
- Check-field test ( Pathological Code, Circle detection)
- SDI Indication LEDs

Model	PVD-S1004HD
SDI Video Input	1, BNC, 75Ω/Unbalanced
SDI Video Output	4, BNC, 75Ω/Unbalanced
Amplitude	800mVp-p ± 10%
Overshoot	10% Amplitude
Video Format	SD-SDI, HD-SDI, 3G-SDI, EX-SDI, 4K EX-SDI, VC-2
Video Standard	SMPTE 259M/292M/424M/DVB-ASI
Video Rate	143M, 177M, 270M, 360M, 540M, 1485M, 2970M
Video Resolution	SD 525i/625i HD 720p 24, 25/30, 50/60 HD 1080i 50/60 HD 1080p 24, 25/30, 50/60
Retiming	Auto retiming , Automatic identification of various rates
Equalization	Auto Equalization
Rise & Fall Time	≥0.4ns , ≤1.50ns@270Mbps , Difference less than 0.5ns
	≤270ps@1.485Gbps , Difference less than 100ps
	≤135ps@2.97Gbps , Difference less than 50ps
Alignment Jitter ( 100KHz )	≤0.2UI @270Mbps , at 1KHz
	≤0.2UI @1.485Gbps , at 100KHz
	≤0.3UI @2.97Gbps , at 100KHz
Timing Jitter(10Hz)	≤0.2UI @270Mbps
	≤1.0UI @1.485Gbps
	≤2.0UI @2.97Gbps
Auto Equalization ( 1694A Standard )	> 400M/SD SDI
	> 200M/HD SDI
	> 100M/3G SDI
Embaded Audio	Support, Stereo Analog audio or AES/EBU digital audio
Operating Temp.	-20°C~+70°C
Operating Humidity	0~90% , Non-condensing
Input Power	12VDC±10%
Power Consumption	Max 4W
Dimension	112x144x38mm
Led Indicator	Power, SDI, Error Code



# 1: 3 3G/HD-SDI Reclocking Video Distribution & 1 Ch. Analog Converter

## PVD-S1003HD1SD



- Multi-format Operation(SD/HD/3G SDI/DBV-ASI)
- SMPTE259M/ 292M/424M standard
- 1 Input, 3 Output Distribution w/ Reclocking and Equalization
- 1Ch. Analog Output converter
- 3G-SDI / HD-SDI / SD-SDI Signal Auto detection
- Embedded Digital Audio
- Auto Cable equalization, re-clocking
- Clock recovery circuit, Effective jitter remove
- Checkfield test ( Pathological Code, Circle detection) Pass
- HD-SDI Indication LEDs

Model	PVD-S1003HD1SD
SDI Video Input	1, BNC, 75Ω/Unbalanced
SDI Video Output	3, BNC, 75Ω/Unbalanced
Analog Video Output	1, BNC, 75Ω/Unbalanced, 1.0Vp-p/CVBS, NTSC/PAL
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 525i/625i HD 720p 24, 25/30, 50/60 HD 1080i 50/60 HD 1080p 24, 25/30, 50/60
Retiming	Auto retiming , Automatic identification of various rates
Equalization	Auto Equalization
Rise & Fall Time	≥0.4ns , ≤1.50ns@270Mbps , Difference less than 0.5ns
	≤270ps@1.485Gbps , Difference less than 100ps
	≤135ps@2.97Gbps , Difference less than 50ps
Alignment Jitter ( 100KHz )	≤0.2UI @270Mbps , at 1KHz
	≤0.2UI @1.485Gbps , at 100KHz
	≤0.3UI @2.97Gbps , at 100KHz
Timing Jitter(10Hz)	≤0.2UI @270Mbps
	≤1.0UI @1.485Gbps
	≤2.0UI @2.97Gbps
Auto Equalization ( 1694A Standard )	> 400M/SD SDI ;
	> 200M/HD SDI ;
	> 100M/3G SDI ;
Embaded Audio	Support, Streo Analog audio or AES/EBU digital audio
Operating Temp.	-20°C~+70°C
Operating Humidity	0~90% , Non-condensing
Input Power	12VDC±10%
Power Consumption	Max 4W
Dimension	112x144x38mm
Led Indicator	Power, SDI, Error Code

# 16Channel (1:4) Multi Format SDI (3G /HD/SD/EX/4K EX/VC-2) Video Distribution

## PVD-16S1004HD-2P



- Multi-format Operation (SD/HD/3G SDI/DBV-ASI/EX-SDI/4K EX-SDI/VC-2)
- SMPTE259M/ 292M/424M Standard
- 16Channel(1Input, 4 Output) distribution w/ re-clocking and equalization
- 3G-SDI / HD-SDI / SD-SDI / EX-SDI /4K EX-SDI / VC-2 Signal Auto detection
- Embedded Digital Audio
- Auto Cable equalization, relocking
- Clock recovery circuit, Effective jitter remove
- Checkfield test ( Pathological Code, Circle detection)
- HD-SDI Indication LEDs
- Built-in Dual Power
- 16pcs of 4TE Front Panel

Model	PVD-16S1004HD-2P
SDI Video Input	16 x 1, BNC, 75Ω/Unbalanced
SDI Video Output	16 x 4, BNC, 75Ω/Unbalanced
Amplitude	800mVp-p ± 10%
Overshoot	10% Amplitude
Video Format	SD-SDI、 HD-SDI、 3G-SDI、 EX-SDI、 4K EX-SDI、 VC-2
Video Standard	SMPTE 259M/292M/424M/DVB-ASI
Video Rate	143M、 177M、 270M、 360M、 540M、 1485M、 2970M
Video Resolution	SD 525i/625i HD 720p 24, 25/30, 50/60 HD 1080i 50/60 HD 1080p 24, 25/30, 50/60 4K 2160p25/30 ( 4K EX-SDI/VC2 SDI)
Retiming	Auto retiming , Automatic identification of various rates
Equalization	Auto Equalization
Rise & Fall Time	≥0.4ns , ≤1.50ns@270Mbps , Difference less than 0.5ns
	≤270ps@1.485Gbps , Difference less than 100ps
	≤135ps@2.97Gbps , Difference less than 50ps
Alignment Jitter ( 100KHz )	≤0.2UI @270Mbps , at 1KHz
	≤0.2UI @1.485Gbps , at 100KHz
	≤0.3UI @2.97Gbps , at 100KHz
Timing Jitter(10Hz)	≤0.2UI @270Mbps
	≤1.0UI @1.485Gbps
	≤2.0UI @2.97Gbps
Auto Equalization ( 1694A Standard )	> 400M/SD SDI
	> 200M/HD SDI
	> 100M/3G SDI
Embaded Audio	Support, Streo Analog audio or AES/EBU digital audio
Operating Temp.	-20°C~+70°C
Operating Humidity	0~90% , Non-condensing
Input Power	DC12V, 80W ( PSU : PPW-3U12V5A)
Power Consumption	Max 64W
Dimension	483x148x132mm
Type of Front Panel	4TE(20mm) x 16
Led Indicator	Power, SDI, Error Code

# 16Channel (1:4) Multi Format SDI (3G /HD/SD/EX/4K EX/VC-2) Video Distribution

## PVD-16S1004HD



- Multi-format Operation  
(SD/HD/3G SDI/DBV-ASI/EX-SDI/4K EX-SDI/VC-2)
- SMPTE259M/ 292M/424M Standard
- 16Channel(1Input, 4 Output) distribution w/ re-clocking and equalization
- 3G-SDI / HD-SDI / SD-SDI / EX-SDI /4K EX-SDI / VC-2 Signal Auto detection
- Embedded Digital Audio
- Auto Cable equalization, relocking
- Clock recovery circuit, Effective jitter remove
- Checkfield test ( Pathological Code, Circle detection)
- HD-SDI Indication LEDs

Model	PVD-16S1004HD
SDI Video Input	16 x 1, BNC, 75Ω/Unbalanced
SDI Video Output	16 x 4, BNC, 75Ω/Unbalanced
Amplitude	800mVp-p ± 10%
Overshoot	10% Amplitude
Video Format	SD-SDI、 HD-SDI、 3G-SDI、 EX-SDI、 4K EX-SDI、 VC-2
Video Standard	SMPTE 259M/292M/424M/DVB-ASI
Video Rate	143M、 177M、 270M、 360M、 540M、 1485M、 2970M
Video Resolution	SD 525i/625i HD 720p 24, 25/30, 50/60 HD 1080i 50/60 HD 1080p 24, 25/30, 50/60 4K 2160p25/30 ( 4K EX-SDI/VC2 SDI)
Retiming	Auto retiming , Automatic identification of various rates
Equalization	Auto Equalization
Rise & Fall Time	≥0.4ns , ≤1.50ns@270Mbps , Difference less than 0.5ns
	≤270ps@1.485Gbps , Difference less than 100ps
	≤135ps@2.97Gbps , Difference less than 50ps
Alignment Jitter ( 100KHz )	≤0.2UI @270Mbps , at 1KHz
	≤0.2UI @1.485Gbps , at 100KHz
	≤0.3UI @2.97Gbps , at 100KHz
Timing Jitter(10Hz)	≤0.2UI @270Mbps
	≤1.0UI @1.485Gbps
	≤2.0UI @2.97Gbps
Auto Equalization ( 1694A Standard )	> 400M/SD SDI
	> 200M/HD SDI
	> 100M/3G SDI
Embaded Audio	Support, Streo Analog audio or AES/EBU digital audio
Operating Temp.	-20°C~+70°C
Operating Humidity	0~90% , Non-condensing
Input Power	12VDC±10%
Power Consumption	Max 64W
Dimension	483x148x132mm
Type of Front Panel	5TE(25.1) x 16
Led Indicator	Power, SDI, Error Code
External PSU	PFS1U(DC12V, 80W,1U, Built in Fan cooling Unit)

# 1: 2 Multi Format SDI (3G /HD/SD/EX/4K EX/VC-2) Video Distribution

## PVD-S1002HD



- Multi-format Operation  
(SD/HD/3G SDI/DBV-ASI/EX-SDI/4K EX-SDI/VC-2)
- SMPTE259M/ 292M/424M Standard
- 1 Input, 2 Output distribution w/ reclocking and equalization
- 3G-SDI / HD-SDI / SD-SDI / EX-SDI /4K EX-SDI / VC-2 Signal Auto detection
- Embedded Digital Audio
- Auto Cable equalization, relocking
- Clock recovery circuit for Effective jitter remove
- Checkfield test ( Pathological Code, Circle detection) pass
- HD-SDI Indication LEDs

Model	PVD-S1002HD
SDI Video Input	1, BNC, 75Ω/Unbalanced
SDI Video Output	2, BNC, 75Ω/Unbalanced
Amplitude	800mVp-p ± 10%
Overshoot	10% Amplitude
Video Format	SD-SDI、 HD-SDI、 3G-SDI、 EX-SDI、 4K EX-SDI、 VC-2
Video Standard	SMPTE 259M/292M/424M/DVB-ASI
Video Rate	143M、 177M、 270M、 360M、 540M、 1485M、 2970M
Video Resolution	SD 525i/625i HD 720p 24, 25/30, 50/60 HD 1080i 50/60 HD 1080p 24, 25/30, 50/60
Retiming	Auto retiming , Automatic identification of various rates
Equalization	Auto Equalization
Rise & Fall Time	≥0.4ns , ≤1.50ns@270Mbps , Difference less than 0.5ns
	≤270ps@1.485Gbps , Difference less than 100ps
	≤135ps@2.97Gbps , Difference less than 50ps
Alignment Jitter ( 100KHz )	≤0.2UI @270Mbps , at 1KHz
	≤0.2UI @1.485Gbps , at 100KHz
	≤0.3UI @2.97Gbps , at 100KHz
Timing Jitter(10Hz)	≤0.2UI @270Mbps
	≤1.0UI @1.485Gbps
	≤2.0UI @2.97Gbps
Auto Equalization ( 1694A Standard )	> 400M/SD SDI ;
	> 200M/HD SDI ;
	> 100M/3G SDI ;
Embaded Audio	Support, Streo Analog audio or AES/EBU digital audio
Operating Temp.	-20°C~+70°C
Operating Humidity	0~90% , Non-condensing
Input Power	12VDC±10%
Power Consumption	Max 2.5W
Dimension	40x67x16mm
Led Indicator	SDI, Error

# 16Channel (1 : 2) Multi Format SDI (3G /HD/SD/EX/4K EX/VC-2) Video Distribution

## PVD-16S1002HD



- Multi-format Operation  
(SD/HD/3G SDI/DBV-ASI/EX-SDI/4K EX-SDI/VC-2)
- SMPTE259M/ 292M/424M Standard
- 16Ch.(1 Input, 2 Output distribution w/ reclocking and equalization)
- 3G-SDI / HD-SDI / SD-SDI / EX-SDI /4K EX-SDI / VC-2 Signal Auto detection
- Embedded Digital Audio
- Auto Cable equalization, relocking
- Clock recovery circuit for Effective jitter remove
- Checkfield test ( Pathological Code, Circle detection) pass
- HD-SDI Indication LEDs
- 1U, 19 Inch Rack Mount type

Model	PVD-16S1002HD
SDI Video Input	16 x 1, BNC, 75Ω/Unbalanced
SDI Video Output	16 x 2, BNC, 75Ω/Unbalanced
Amplitude	800mVp-p ± 10%
Overshoot	10% Amplitude
Video Format	SD-SDI, HD-SDI, 3G-SDI, EX-SDI, 4K EX-SDI, VC-2
Video Standard	SMPTE 259M/292M/424M/DVB-ASI
Video Rate	143M, 177M, 270M, 360M, 540M, 1485M, 2970M
Video Resolution	SD 525i/625i HD 720p 24, 25/30, 50/60 HD 1080i 50/60 HD 1080p 24, 25/30, 50/60
Retiming	Auto retiming , Automatic identification of various rates
Equalization	Auto Equalization
Rise & Fall Time	≥0.4ns , ≤1.50ns@270Mbps , Difference less than 0.5ns
	≤270ps@1.485Gbps , Difference less than 100ps
	≤135ps@2.97Gbps , Difference less than 50ps
Alignment Jitter ( 100KHz )	≤0.2UI @270Mbps , at 1KHz
	≤0.2UI @1.485Gbps , at 100KHz
	≤0.3UI @2.97Gbps , at 100KHz
Timing Jitter(10Hz)	≤0.2UI @270Mbps
	≤1.0UI @1.485Gbps
	≤2.0UI @2.97Gbps
Auto Equalization ( 1694A Standard )	> 400M/SD SDI ;
	> 200M/HD SDI ;
	> 100M/3G SDI ;
Embaded Audio	Support, Streo Analog audio or AES/EBU digital audio
Operating Temp.	-20°C~+70°C
Operating Humidity	0~90% , Non-condensing
Input Power	12VDC±10%
Power Consumption	Max 40W
Dimension	483 x 45x67mm
Led Indicator	SDI, Error

# 80Channel (1 : 2) Multi Format SDI (3G /HD/SD/EX/4K EX/VC-2) Video Distribution

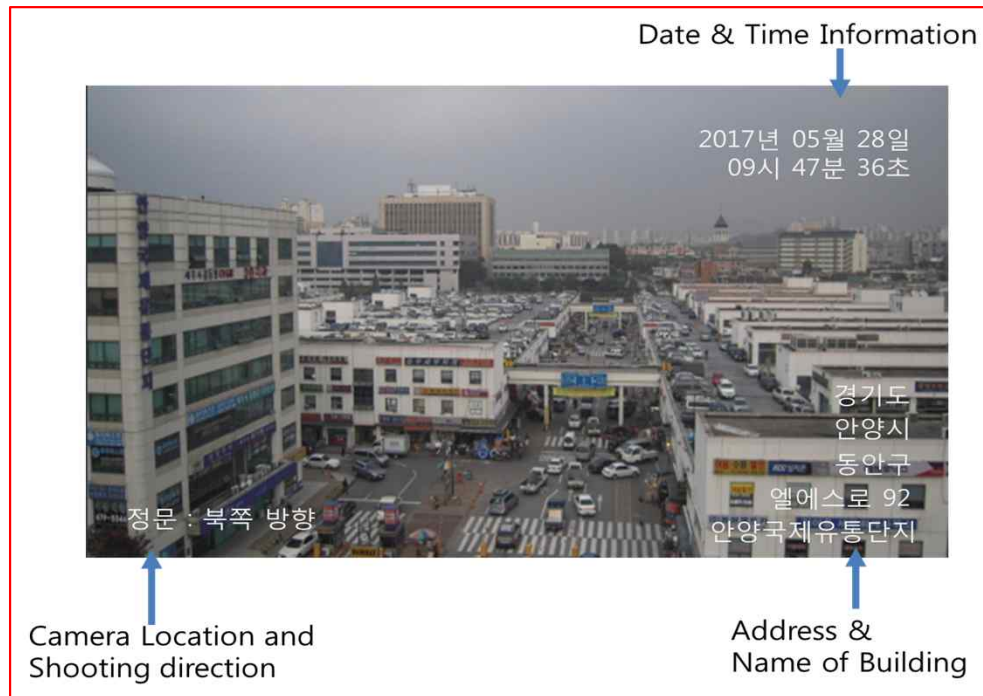
## PVD-80S1002HD



- Multi-format Operation  
(SD/HD/3G SDI/DBV-ASI/EX-SDI/4K EX-SDI/VC-2)
- SMPTE259M/ 292M/424M Standard
- 80Ch.(1 Input, 2 Output distribution w/ reclocking and equalization)
- 3G-SDI / HD-SDI / SD-SDI / EX-SDI /4K EX-SDI / VC-2 Signal Auto detection
- Embedded Digital Audio
- Auto Cable equalization, relocking
- Clock recovery circuit for Effective jitter remove
- Checkfield test ( Pathological Code, Circle detection) pass
- HD-SDI Indication LEDs

Model	PVD-80S1002HD
SDI Video Input	80x 1, BNC, 75Ω/Unbalanced
SDI Video Output	80 x 2, BNC, 75Ω/Unbalanced
Amplitude	800mVp-p ± 10%
Overshoot	10% Amplitude
Video Format	SD-SDI、 HD-SDI、 3G-SDI、 EX-SDI、 4K EX-SDI、 VC-2
Video Standard	SMPTE 259M/292M/424M/DVB-ASI
Video Rate	143M、 177M、 270M、 360M、 540M、 1485M、 2970M
Video Resolution	SD 525i/625i HD 720p 24, 25/30, 50/60 HD 1080i 50/60 HD 1080p 24, 25/30, 50/60
Retiming	Auto retiming , Automatic identification of various rates
Equalization	Auto Equalization
Rise & Fall Time	≥0.4ns , ≤1.50ns@270Mbps , Difference less than 0.5ns
	≤270ps@1.485Gbps , Difference less than 100ps
	≤135ps@2.97Gbps , Difference less than 50ps
Alignment Jitter ( 100KHz )	≤0.2UI @270Mbps , at 1KHz
	≤0.2UI @1.485Gbps , at 100KHz
	≤0.3UI @2.97Gbps , at 100KHz
Timing Jitter(10Hz)	≤0.2UI @270Mbps
	≤1.0UI @1.485Gbps
	≤2.0UI @2.97Gbps
Auto Equalization ( 1694A Standard )	> 400M/SD SDI ;
	> 200M/HD SDI ;
	> 100M/3G SDI ;
Embaded Audio	Support, Streo Analog audio or AES/EBU digital audio
Operating Temp.	-20°C~+70°C
Operating Humidity	0~90% , Non-condensing
Input Power	12VDC±10%
Power Consumption	Max 200W
Dimension	403x67x177mm
Led Indicator	SDI, Error

# 3G/HD-SDI Character Generator



## PCG-S1004HD

3G/ HD-SDI Real Time Text Insertion in to 3G/ HD-SDI video with 1: 4 Video Distribution



## PCG-16S1004HD-2P1C

16 Channel Text Inserter, 3U, 16 Group (1 In, 4 Out), Built-in Dual Power and communication



## PCG-16S1004HD

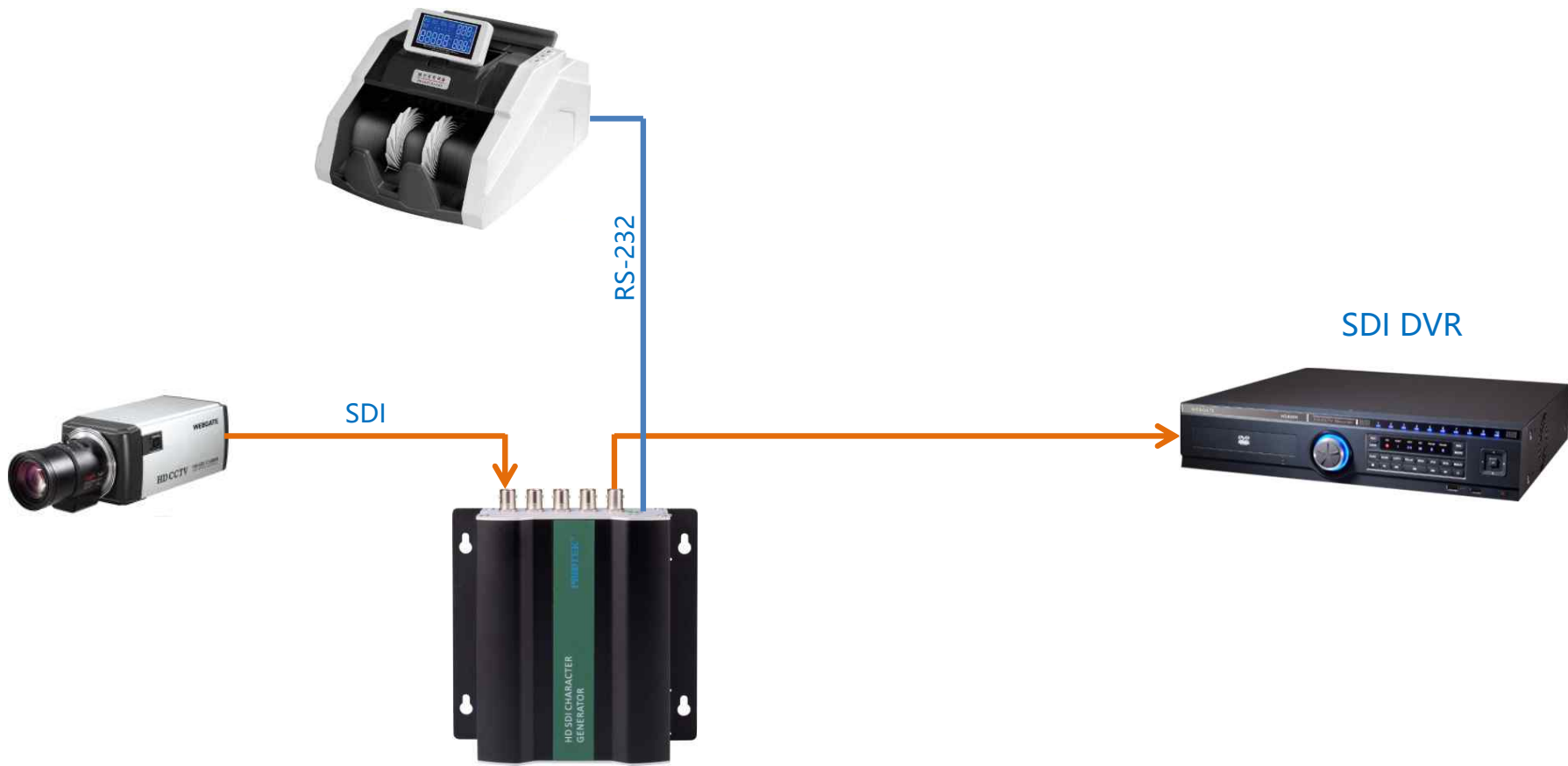
16 Channel Text Inserter, 3U, 16 Group (1 In, 4 Out), RS-485



## PCG-16S1004HD-TG

16 Channel Text Inserter, 3U, 16 Group (1 In, 4 Out), Built-in Time Generator, RS-485

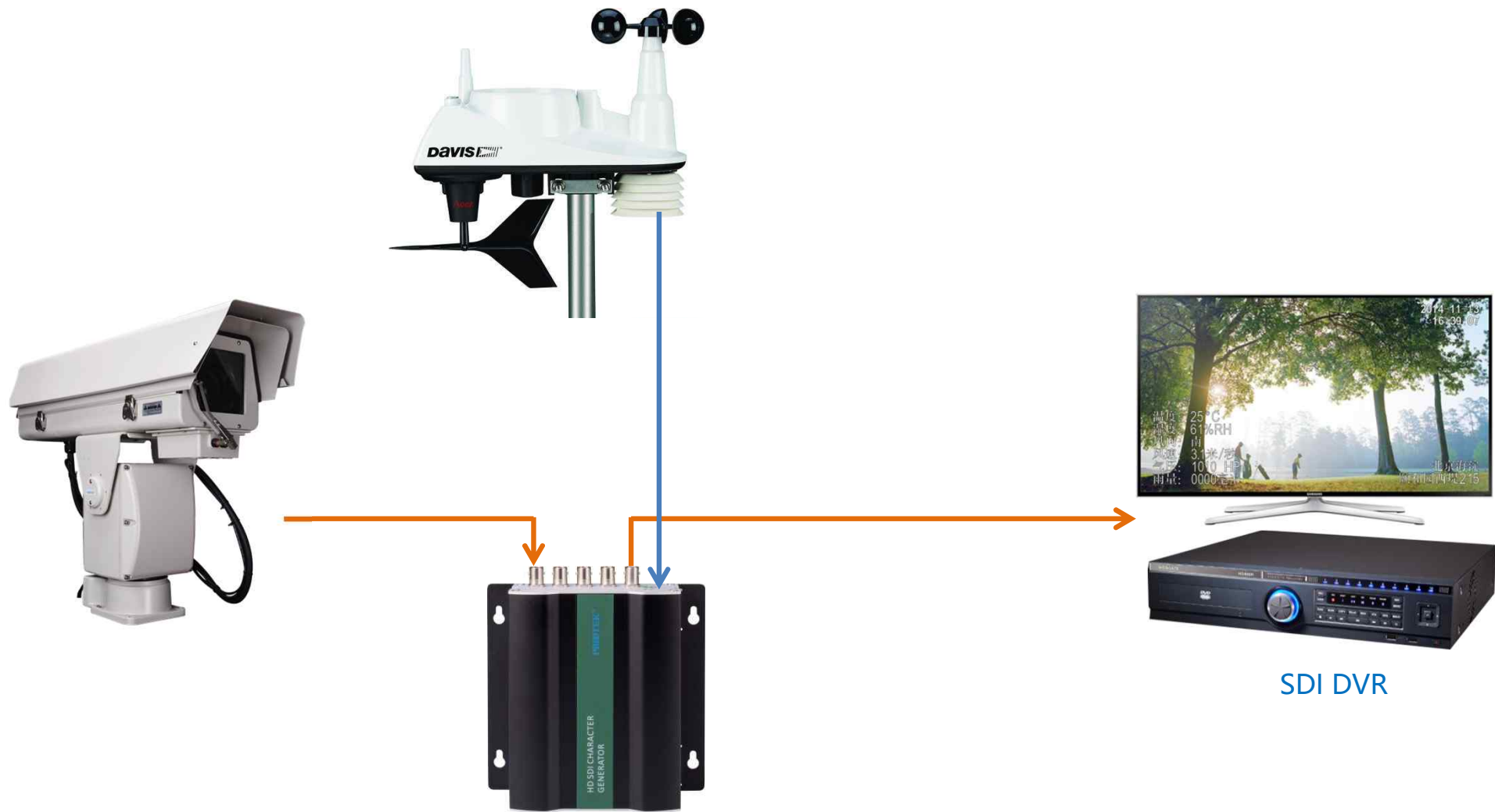








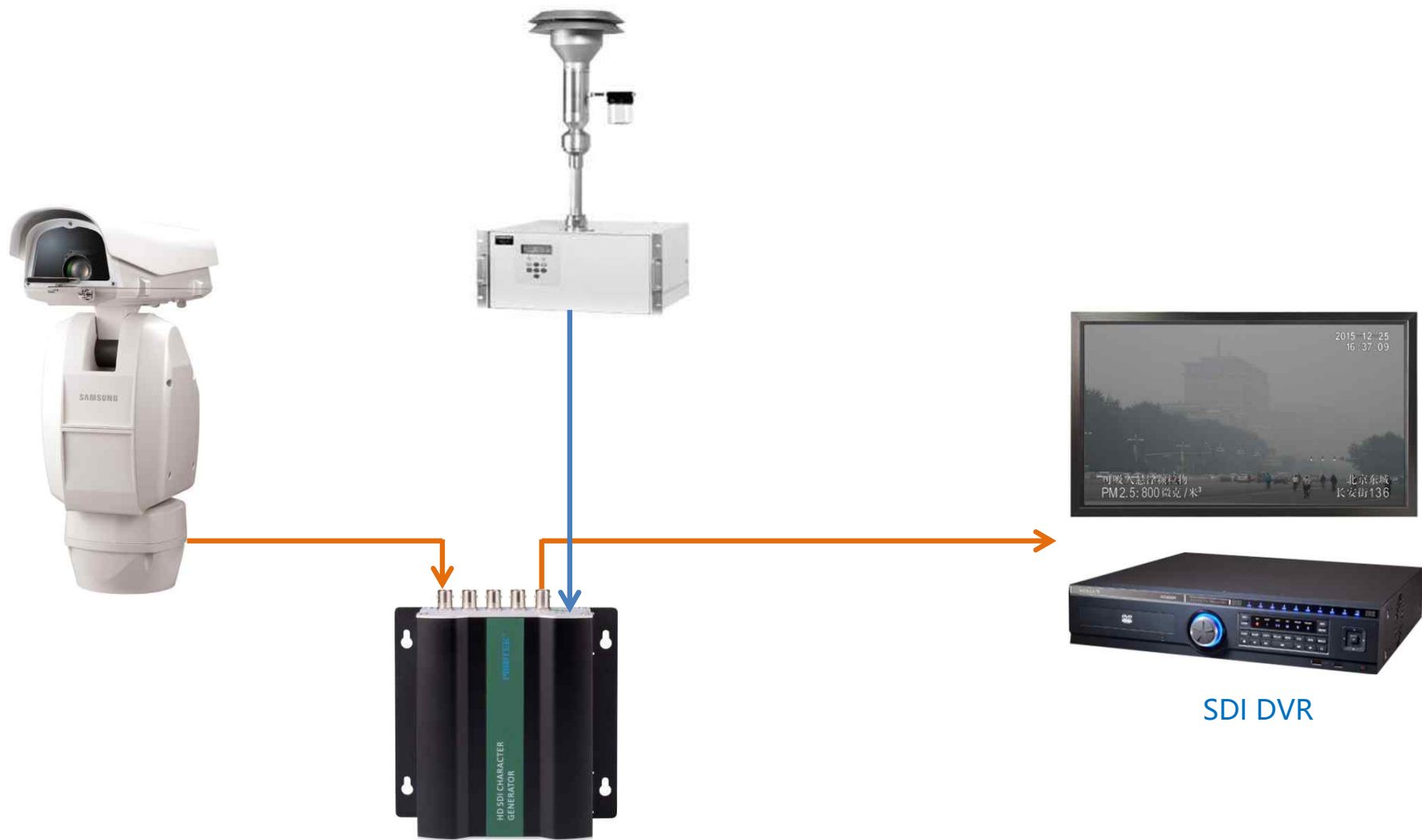
Superimpose the cash register information anywhere in the HD video image



## Weather data display on SDI video:



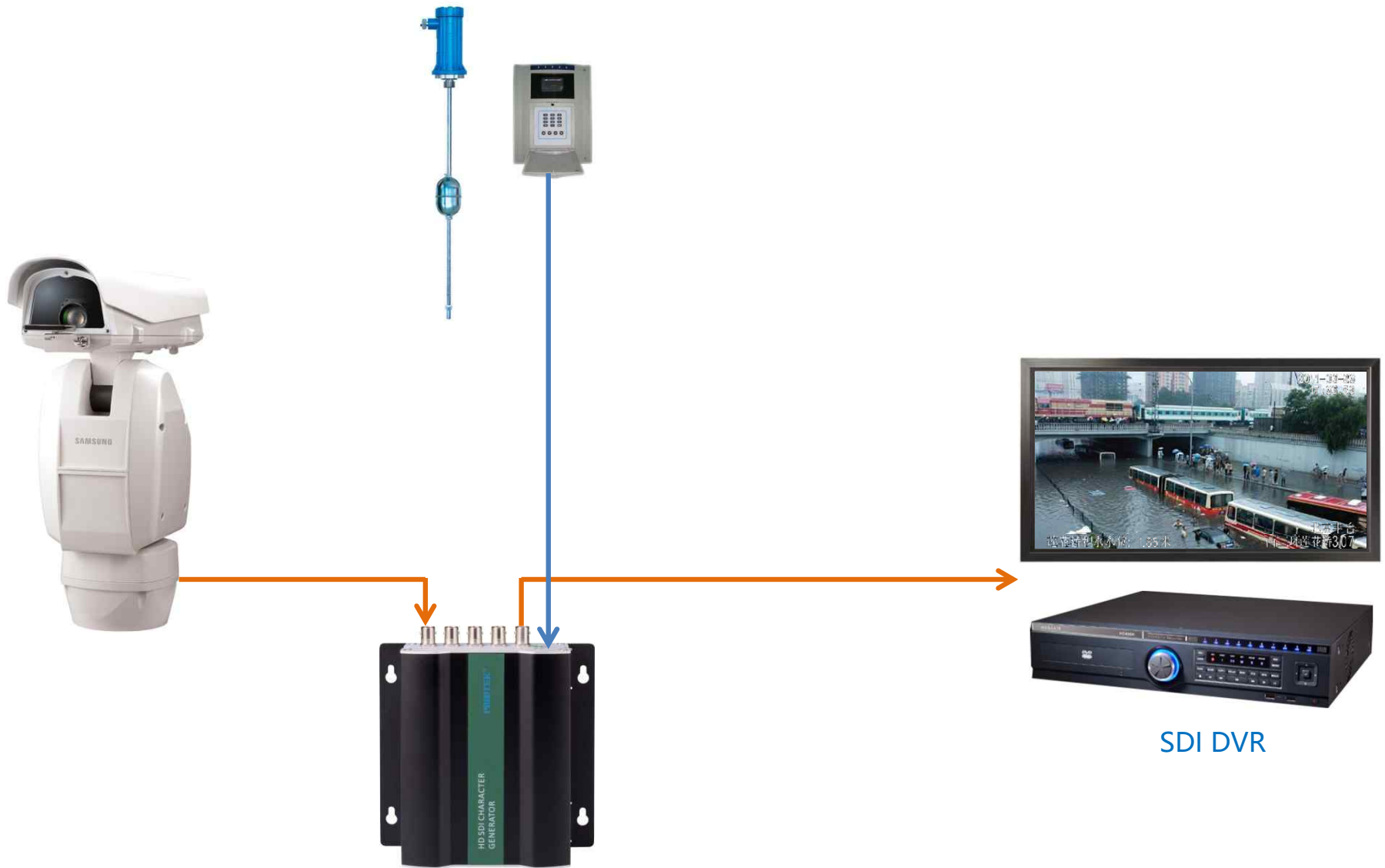
Live real-time weather data  
Can be placed anywhere on the screen



SDI DVR



Real-time of Air quality will be displayed anywhere on the screen



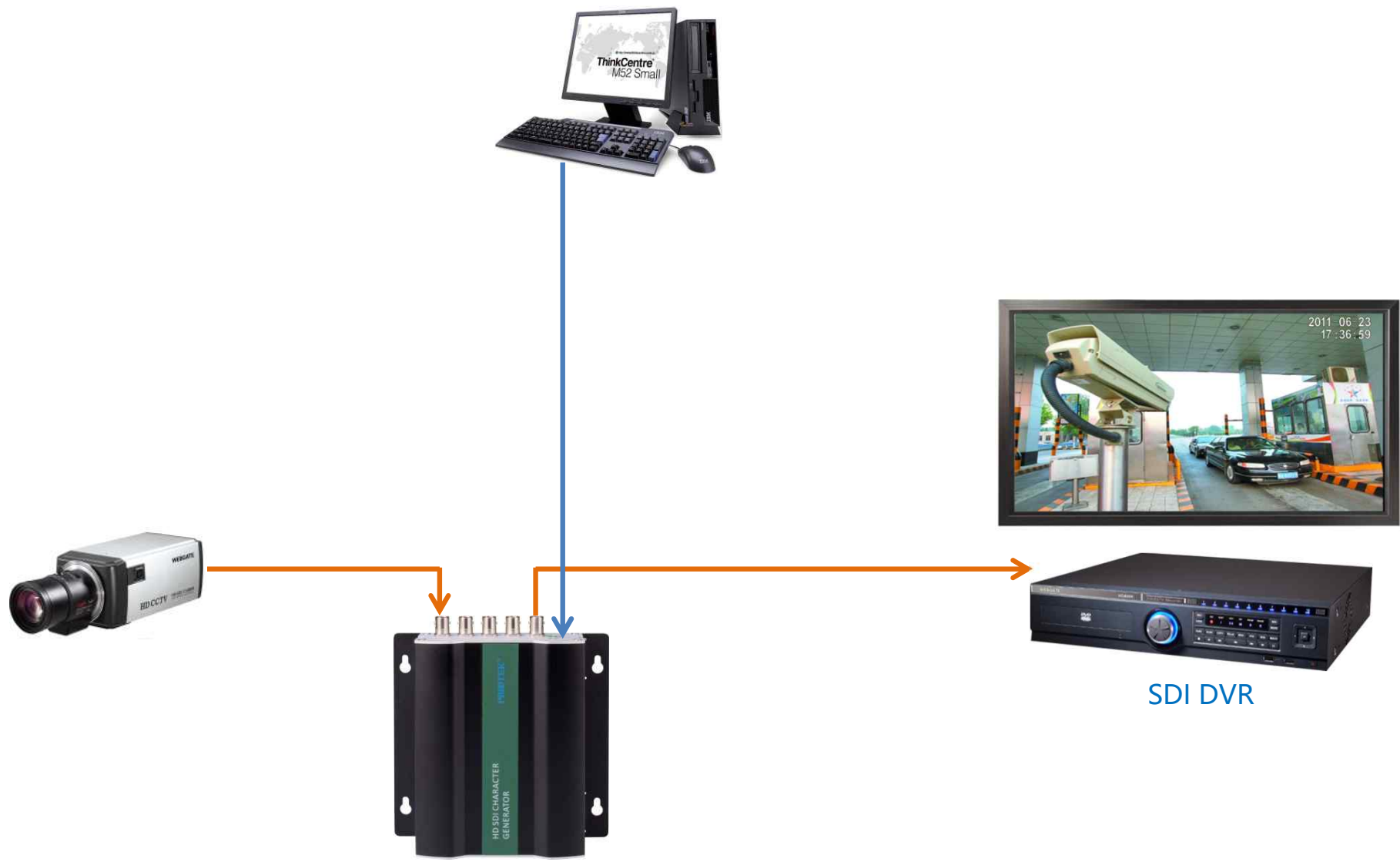
SDI DVR

2011-06-23  
17:36:59



莲花桥积水水位: 1.85米

北京丰台  
西三环莲花桥307



SDI DVR

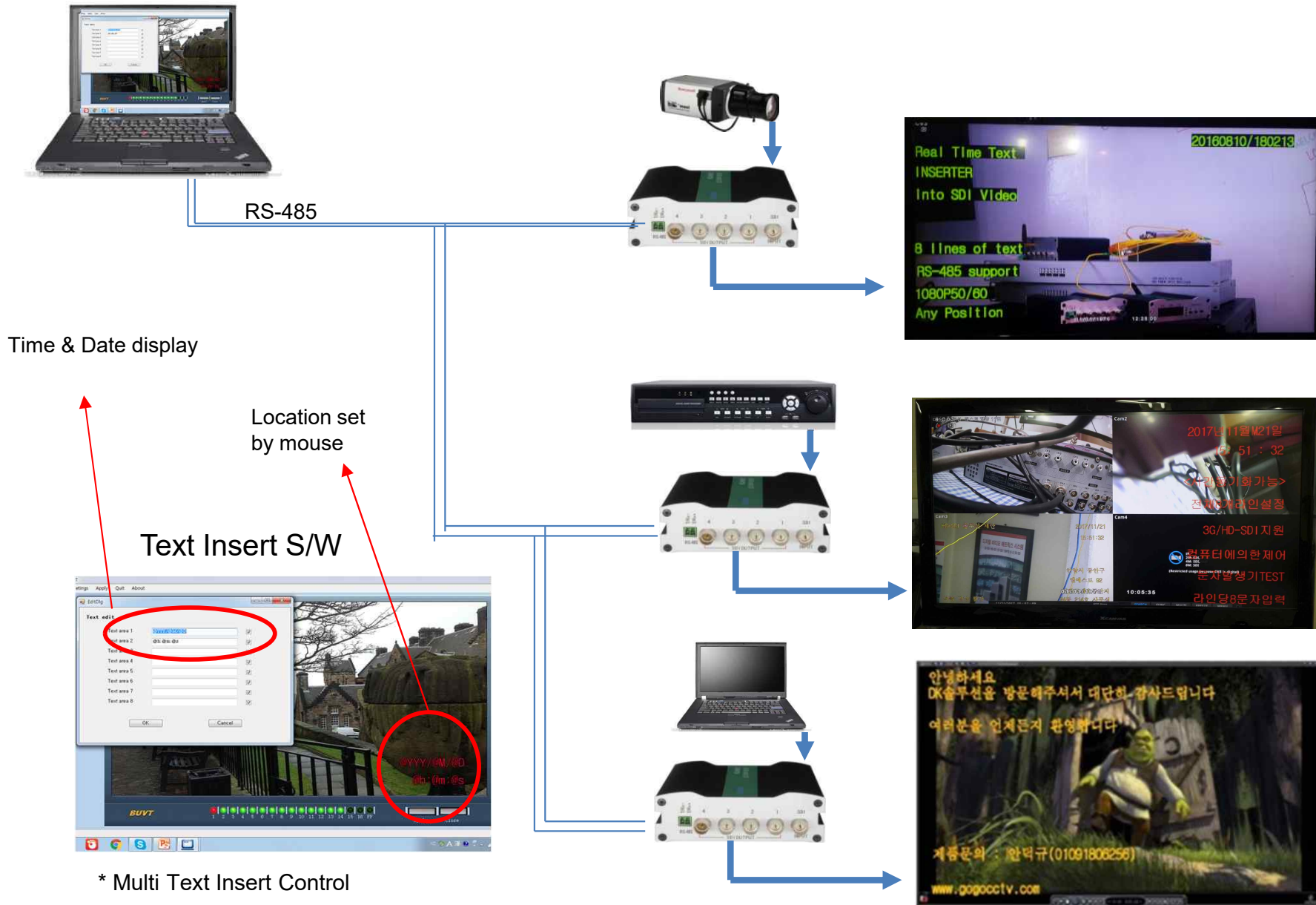


## Timestamping



Vehicle real-time data  
Can be placed anywhere on the screen

# 3G/HD-SDI Character Generator



# 3G HD-SDI Real Time Character Insertion in to 3G HD-SDI video and 1:4 Video Distribution

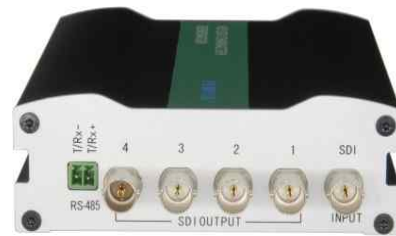
## PCG-S1004HD



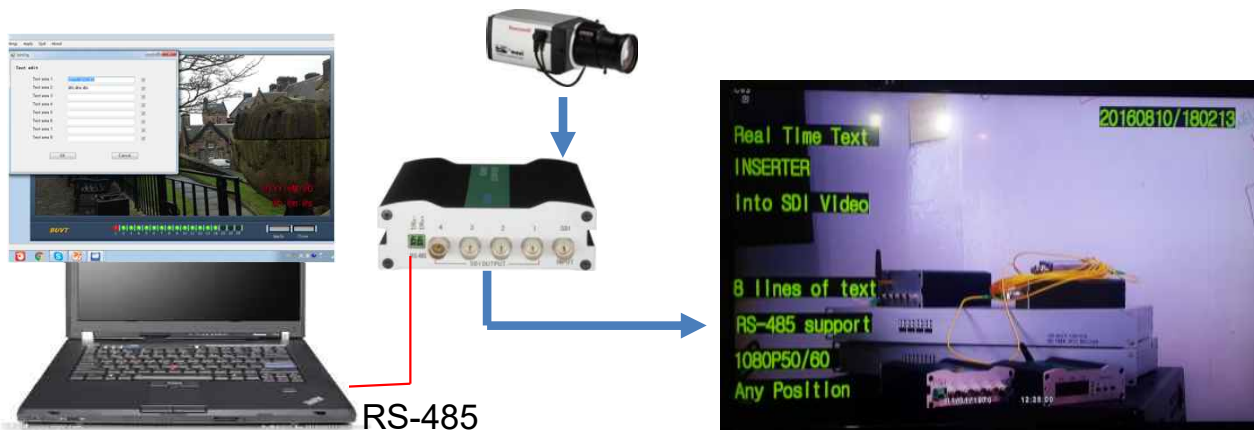
- Multi-format Operation(SD/HD/3G SDI/DBV-ASI)
- SMPTE259M/ 292M/424M standard
- 1 Input, 4 Output w/ Character
- 3G-SDI / HD-SDI / Signal Auto detection
- Embedded Digital Audio
- Text and Image Insertion
- 64x64 Dot Matrix Size Character support
- 8 Line character display at any position
- Time & Date display(Computer Time or External Time Sync generator)
- Fixed text or a dynamic display in real time(Sensor, date, counter, clock..)
- Set character position by mouse click( with free edit s/w)
- Character Edit by computer
- Color available (Character, background)
- Auto Cable equalization, re-clocking
- Clock recovery circuit, Effective jitter remove
- Checkfield test ( Pathological Code, Circle detection) pass
- HD-SDI Indication LEDs

Model	PVD-S(R)1004HD
SDI Video Input	1, BNC, 75Ω/Unballanced
SDI Video Output	4, BNC, 75Ω/Unballanced
Character Display	English/ Chinese/ Korean, 8 Lines of text, , 64x64 dot matrix size, dynamic character display , Any position, Time&Date display , Color(Character, Background)
Communication	RS-485
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 525i/625i HD 720p 24, 25/30, 50/60 HD 1080i 50/60 HD 1080p 24, 25/30, 50/60
Retiming	Auto retiming , Automatic identification of various rates
Equalization	Auto Equalization
Rise & Fall Time	≥0.4ns , ≤1.50ns@270Mbps , Difference less than 0.5ns
	≤270ps@1.485Gbps , Difference less than 100ps
	≤135ps@2.97Gbps , Difference less than 50ps
Alignment Jitter ( 100KHz )	≤0.2UI @270Mbps , at 1KHz
	≤0.2UI @1.485Gbps , at 100KHz
	≤0.3UI @2.97Gbps , at 100KHz
Timing Jitter(10Hz)	≤0.2UI @270Mbps
	≤1.0UI @1.485Gbps
	≤2.0UI @2.97Gbps
Auto Equalization ( Belden 1694A Standard )	> 400M/SD SDI ;
	> 200M/HD SDI ;
	> 100M/3G SDI ;
Embaded Audio	Support, Stereo Analog audio or AES/EBU digital audio
Operating Temp.	-20°C~+70°C
Operating Humidity	0~90% , Non-condensing
Input Power	12VDC±10%
Power Consumption	Max 4W
Dimension	112x144x38mm
Led Indicator	SDI, Error
Operation S/W	

# PCG-S1004HD



Mount Bracket



Modify slot interval

3U 19 Inch Rack Mount (Up to 10)

A PC application provided with the character generator allows to easy configure the parameters as bellows:

- The position of the text insertion(x and y) for each of 8lines / The text size
- The background presence or not / The text and background color
- Position set by mouse / Time and Date sync by compute time

# 3G HD-SDI Real Time Character Insertion in to 3G HD-SDI video and 1:4 Video Distribution

## PCG-16S1004HD-2P1C



Option :  
Plane Front Panel

- Multi-format Operation(SD/HD/3G SDI/DBV-ASI)
- SMPTE259M/ 292M/424M standard
- 16Channel(1 Input, 4 Output w/ Character)
- 3G-SDI / HD-SDI / Signal Auto detection
- Embedded Digital Audio
- Text and Image Insertion
- 64x64 Dot Matrix Size Character support
- 8 Line character display at any position
- Time & Date display(Computer Time or External Time Sync generator)
- Fixed text or a dynamic display in real time(Sensor, date, counter, clock..)
- Set character position by mouse click( with free edit s/w)
- Character Edit by computer
- Color available (Character, background)
- Auto Cable equalization, re-clocking
- Clock recovery circuit, Effective jitter remove
- Checkfield test ( Pathological Code, Circle detection) pass
- HD-SDI Indication LEDs
- Built-in Dual Power

Model	PVD-16S1004HD
SDI Video Input	1, BNC, 75Ω/Unbalanced
SDI Video Output	4, BNC, 75Ω/Unballanced
Character Display	English/ Chinese/ Korean, 8 Lines of text, , 64x64 dot matrix size, dynamic character display , Any position, Time&Date display , Color(Character, Backglound)
Communication	RS-485
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 525i/625i HD 720p 24, 25/30, 50/60 HD 1080i 50/60 HD 1080p 24, 25/30, 50/60
Retiming	Auto retiming , Automatic identification of various rates
Equalization	Auto Equalization
Rise & Fall Time	≥0.4ns , ≤1.5ns@270Mbps , Difference less than 0.5ns
	≤270ps@1.485Gbps , Difference less than 100ps
	≤135ps@2.97Gbps , Difference less than 50ps
Alignment Jitter ( 100KHz )	≤0.2UI @270Mbps , at 1KHz
	≤0.2UI @1.485Gbps , at 100KHz
	≤0.3UI @2.97Gbps , at 100KHz
Timming Jitter(10Hz)	≤0.2UI @270Mbps
	≤1.0UI @1.485Gbps
	≤2.0UI @2.97Gbps
Auto Equalization ( Belden 1694A Standard )	> 400M/SD SDI ;
	> 200M/HD SDI ;
	> 100M/3G SDI ;
Embaded Audio	Support, Stereo Analog audio or AES/EBU digital audio
Operating Temp.	-20°C~+70°C
Operating Humidity	0~90% , Non-condensing
Input Power	DC12V, 80W ( PSU : PPW-3U12V5A)
Communication Card	4TE, RS-485, TCP/IP(Optional)
Dimension	112x144x38mm
Led Indicator	SDI, Error

# 3G HD-SDI Real Time Character Insertion in to 3G HD-SDI video and 1: 4 Video Distribution

## PCG-16S1004HD-2P1C



Option :  
Plane Front Panel

- Multi-format Operation(SD/HD/3G SDI/DBV-ASI)
- SMPTE259M/ 292M/424M standard
- 16Channel(1 Input, 4 Output w/ Character)
- 3G-SDI / HD-SDI / Signal Auto detection
- Embedded Digital Audio
- Text and Image Insertion
- 64x64 Dot Matrix Size Character support
- 8 Line character display at any position
- Time & Date display(Computer Time or External Time Sync generator)
- Fixed text or a dynamic display in real time(Sensor, date, counter, clock..)
- Set character position by mouse click( with free edit s/w)
- Character Edit by computer
- Color available (Character, background)
- Auto Cable equalization, re-clocking
- Clock recovery circuit, Effective jitter remove
- Checkfield test ( Pathological Code, Circle detection) pass
- HD-SDI Indication LEDs

Model	PVD-16S1004HD
SDI Video Input	1, BNC, 75Ω/Unballanced
SDI Video Output	4, BNC, 75Ω/Unballanced
Character Display	English/ Chinese/ Korean, 8 Lines of text, , 64x64 dot matrix size, dynamic character display , Any position, Time&Date display , Color(Character, Background)
Communication	RS-485
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 525i/625i HD 720p 24, 25/30, 50/60 HD 1080i 50/60 HD 1080p 24, 25/30, 50/60
Retiming	Auto retiming , Automatic identification of various rates
Equalization	Auto Equalization
Rise & Fall Time	≥0.4ns , ≤1.50ns@270Mbps , Difference less than 0.5ns
	≤270ps@1.485Gbps , Difference less than 100ps
	≤135ps@2.97Gbps , Difference less than 50ps
Alignment Jitter ( 100KHz )	≤0.2UI @270Mbps , at 1KHz
	≤0.2UI @1.485Gbps , at 100KHz
	≤0.3UI @2.97Gbps , at 100KHz
Timing Jitter(10Hz)	≤0.2UI @270Mbps
	≤1.0UI @1.485Gbps
	≤2.0UI @2.97Gbps
Auto Equalization ( Belden 1694A Standard )	> 400M/SD SDI ;
	> 200M/HD SDI ;
	> 100M/3G SDI ;
Embaded Audio	Support, Stereo Analog audio or AES/EBU digital audio
Operating Temp.	-20°C~+70°C
Operating Humidity	0~90% , Non-condensing
Input Power	DC12V, 80W ( PSU : PPW-3U12V5A)
Communication Card	4TE, RS-485,
Dimension	112x144x38mm
Led Indicator	SDI, Error

# 3G HD-SDI Real Time Character Insertion in to 3G HD-SDI video and 1:4 Video Distribution

## PCG-16S1004HD-TG

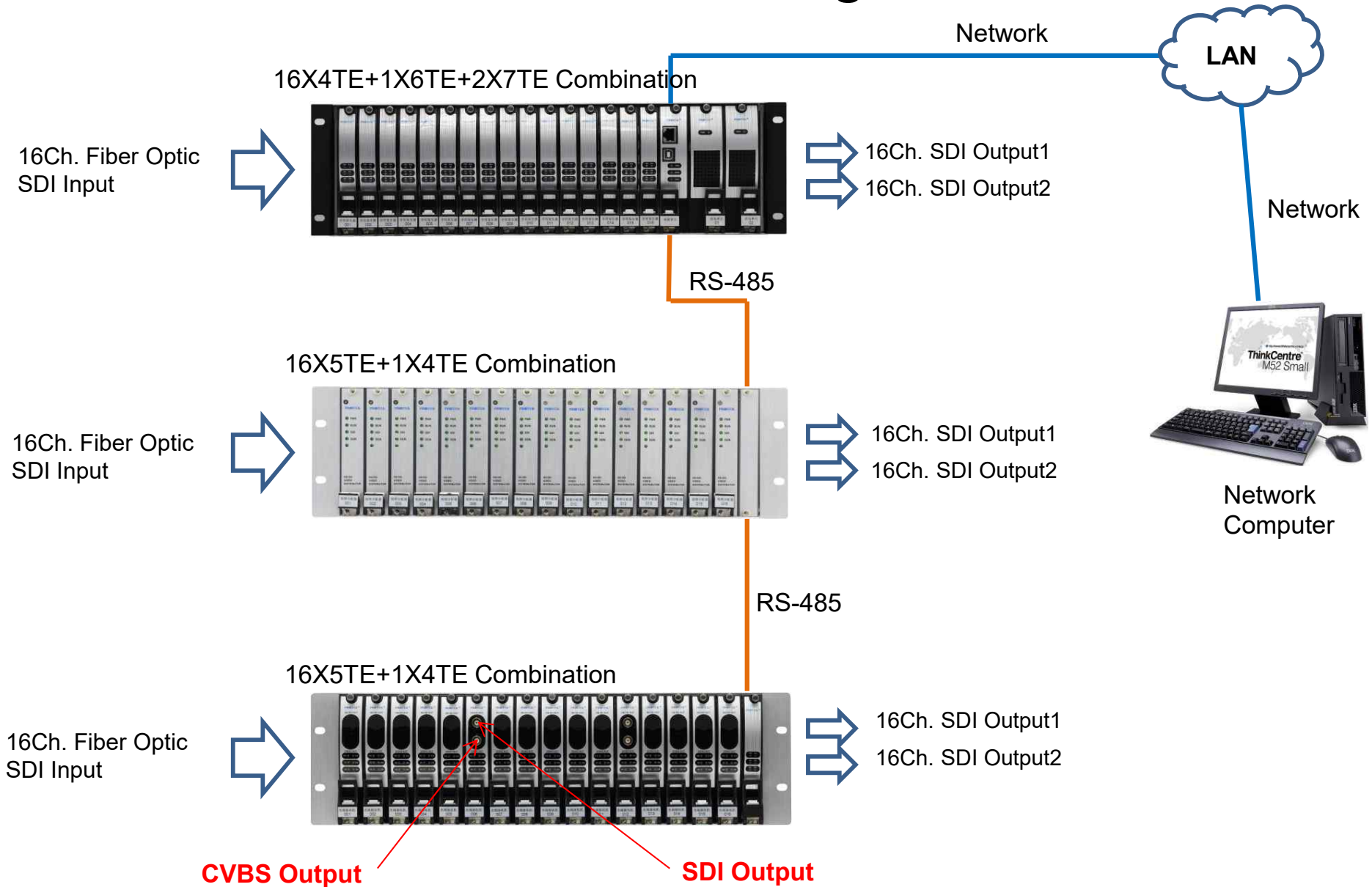


Option :  
Curve Front Panel

- Multi-format Operation(SD/HD/3G SDI/DBV-ASI)
- SMPTE259M/ 292M/424M standard
- 16Channel(1 Input, 4 Output w/ Character)
- 3G-SDI / HD-SDI / Signal Auto detection
- Embedded Digital Audio
- Text and Image Insertion
- 64x64 Dot Matrix Size Character support
- 8 Line character display at any position
- Time & Date display(Computer Time or External Time Sync generator)
- Fixed text or a dynamic display in real time(Sensor, date, counter, clock..)
- Set character position by mouse click( with free edit s/w)
- Character Edit by computer
- Color available (Character, background)
- Auto Cable equalization, re-clocking
- Clock recovery circuit, Effective jitter remove
- Checkfield test ( Pathological Code, Circle detection) pass
- HD-SDI Indication LEDs
- 4TE x 16 Front panel
- Built-in Time Generator

Model	PVD-16S1004HD
SDI Video Input	1, BNC, 75Ω/Unballanced
SDI Video Output	4, BNC, 75Ω/Unballanced
Character Display	English/ Chinese/ Korean, 8 Lines of text, , 64x64 dot matrix size, dynamic character display , Any position, Time&Date display , Color(Character, Background)
Communication	RS-485
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 525i/625i HD 720p 24, 25/30, 50/60 HD 1080i 50/60 HD 1080p 24, 25/30, 50/60
Retiming	Auto retiming , Automatic identification of various rates
Equalization	Auto Equalization
Rise & Fall Time	≥0.4ns , ≤1.50ns@270Mbps , Difference less than 0.5ns
	≤270ps@1.485Gbps , Difference less than 100ps
	≤135ps@2.97Gbps , Difference less than 50ps
Alignment Jitter ( 100KHz )	≤0.2UI @270Mbps , at 1KHz
	≤0.2UI @1.485Gbps , at 100KHz
	≤0.3UI @2.97Gbps , at 100KHz
Timming Jitter(10Hz)	≤0.2UI @270Mbps
	≤1.0UI @1.485Gbps
	≤2.0UI @2.97Gbps
Auto Equalization ( Belden 1694A Standard )	> 400M/SD SDI ;
	> 200M/HD SDI ;
	> 100M/3G SDI ;
Embaded Audio	Support, Stereo Analog audio or AES/EBU digital audio
Operating Temp.	-20°C~+70°C
Operating Humidity	0~90% , Non-condensing
Input Power	DC12V, 80W ( PSU : PPW-3U12V5A)
Communication Card	4TE, RS-485,
Dimension	112x144x38mm
Led Indicator	SDI, Error

# Connection Diagram





# 3G HD-SDI Real Time Character Insertion in to 3G HD-SDI video and 1: 3 Video Distribution, 1 Character Output

## PCG-S1013HD



- Multi-format Operation(SD/HD/3G SDI/DBV-ASI)
- SMPTE259M/ 292M/424M standard
- 1Ch. SDI Input, 1Ch. SDI Output w/ Character, 3Ch, SDI Output
- 3G-SDI / HD-SDI / Signal Auto detection
- Embedid Digital Audio
- Text and Image Insertion
- 64x64 Dot Matrix Size Character support
- 8 Line character display at any position
- Time & Date display(Computer Time or External Time Sync generator)
- Fixed text or a dynamic display in real time(Sensor, date, counter, clock..)
- Set character position by mouse click( with free edit s/w)
- Character Edit by computer
- Color available (Character, background)
- Auto Cable equalization, reclocking
- Clock recovery circuit, Effective jitter remove
- Checkfield test ( Pathological Code, Circle detection)
- HD-SDI Indication LEDs

Model	PVD-S(R)1013HD
SDI Video Input	1, BNC, 75Ω/Unbalanced
SDI Video Output	3, BNC, 75Ω/Unbalanced
SDI Video Output(Character)	1, BNC, 75Ω/Unbalanced
Character Display	English/ Chinese/ Korean, 8 Line, 64x64 dot matrix size, dynamic character display, Any position, Time & Date display, Color(Character, Background)
Communication	RS-485
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 525i/625i HD 720p 24, 25/30, 50/60 HD 1080i 50/60 HD 1080p 24, 25/30, 50/60
Retiming	Auto retiming, Automatic identification of various rates
Equalization	Auto Equalization
Rise & Fall Time	≥0.4ns, ≤1.50ns@270Mbps, Difference less than 0.5ns
	≤270ps@1.485Gbps, Difference less than 100ps
	≤135ps@2.97Gbps, Difference less than 50ps
Alignment Jitter ( 100KHz )	≤0.2UI @270Mbps, at 1KHz
	≤0.2UI @1.485Gbps, at 100KHz
	≤0.3UI @2.97Gbps, at 100KHz
Timing Jitter(10Hz)	≤0.2UI @270Mbps
	≤1.0UI @1.485Gbps
	≤2.0UI @2.97Gbps
Auto Equalization ( 1694A Standard )	> 400M/SD SDI ;
	> 200M/HD SDI ;
	> 100M/3G SDI ;
Embaded Audio	Support, Stereo Analog audio or AES/EBU digital audio
Operating Temp.	-20°C~+70°C
Operating Humidity	0~90% , Non-condensing
Input Power	12VDC±10%
Power Consumption	Max 4W
Dimension	112x144x38mm
Led Indicator	Power, SDI, Error Code

# PCG-S1013HD



1Ch. SDI Input  
3Ch. SDI Output  
1Ch. SDI Output w/ Character



Modify slot interval

3U 19 Inch Rack Mount (Up to 10)

A PC application provided with the character generator allows to easy configure the parameters as bellows:

- The position of the text insertion(x and y) for each of 8lines / The text size
- The background presence or not / The text and background color
- Position set by mouse / Time and Date sync by compute time

# 3G HD-SDI Fiber Optic Receiver with 3G HD-SDI Real Time Character Insertion in to 3G HD-SDI video and 1: 2 Video Distribution

## POT-S01HD-20KM-Rx-CG



- Digital Video signals over fiber optic link
- Multi-format Operation(SD/HD/3G SDI/DBV-ASI)
- SMPTE259M/ 292M/424M
- 2Ch. SDI Output w/ Character
- 3G-SDI / HD-SDI / SD-SDI Signal Auto detection
- Embedded Digital Audio
- Text and Image Insertion
- 64x64 Dot Matrix Size Character support
- 8 Line character display at any position
- Time & Date display
- Dynamic Character support
- Set character position by mouse click( with free edit s/w)
- Character Edit by computer
- Color (Character, background)
- Auto Cable equalization, reclocking
- Clock recovery circuit, Effective jitter remove
- Checkfield test ( Pathological Code, Circle detection)
- HD-SDI Indication LEDs

Model	POT-S01HD-20KM-Rx-CG
SDI Video Input	1, BNC, 75Ω/Unballanced
SDI Video Output	4, BNC, 75Ω/Unballanced
Character Display	English/ Chinese/ Korean, 8 Line, 64x64 dot matrix size, dynamic character display , Any position, Time&Date display , Color(Character, Background)
Communication	RS-485
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 525i/625i , HD 720p 24, 25/30, 50/60, HD 1080i 50/60 HD 1080p 24, 25/30, 50/60
Retiming	Auto retiming , Automatic identification of various rates
Equalization	Auto Equalization
Rise & Fall Time	≥0.4ns , ≤1.50ns@270Mbps , Difference less than 0.5ns
	≤270ps@1.485Gbps , Difference less than 100ps
	≤135ps@2.97Gbps , Difference less than 50ps
Alignment Jitter ( 100KHz )	≤0.2UI @270Mbps , at 1KHz
	≤0.2UI @1.485Gbps , at 100KHz
	≤0.3UI @2.97Gbps , at 100KHz
Timming Jitter(10Hz)	≤0.2UI @270Mbps
	≤1.0UI @1.485Gbps
	≤2.0UI @2.97Gbps
Auto Equalization ( 1694A Standard )	> 400M/SD SDI ;
	> 200M/HD SDI ;
	> 100M/3G SDI ;
Embaded Audio	Support, Streo Analog audio or AES/EBU digital audio
No of optic fiber	1
Optical Wavelength	Single Core, 1310/1550nm WDM
Distance	≤20Km (Option 20 ~ 60km)
Operating Temp.	-20°C~+70°C
Operating Humidity	0~90% , Non-condensing
Input Power	12VDC±10%
Power Consumption	Max 4W
Dimension	112x144x38mm
Led Indicator	SDI, Error

# POT-S(R)01HD-20KM-Rx-CG

## Receiver



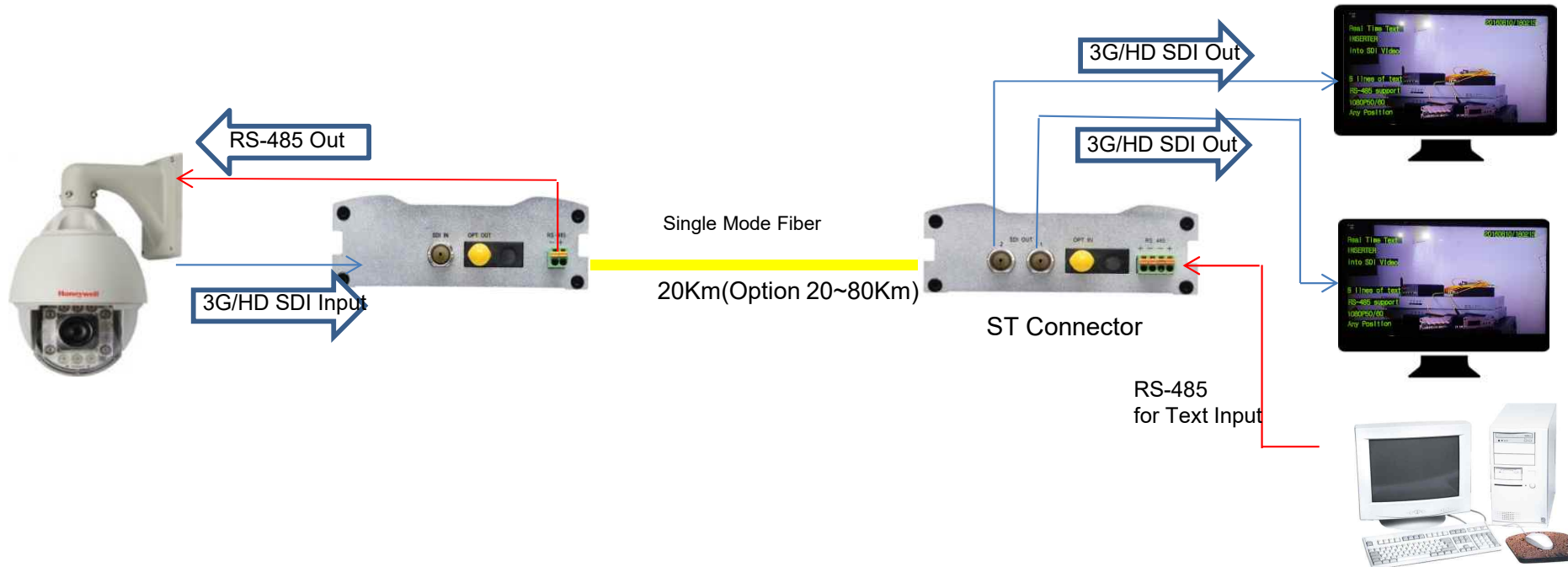
LC Connector



ST Connector



Mount Bracket





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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