

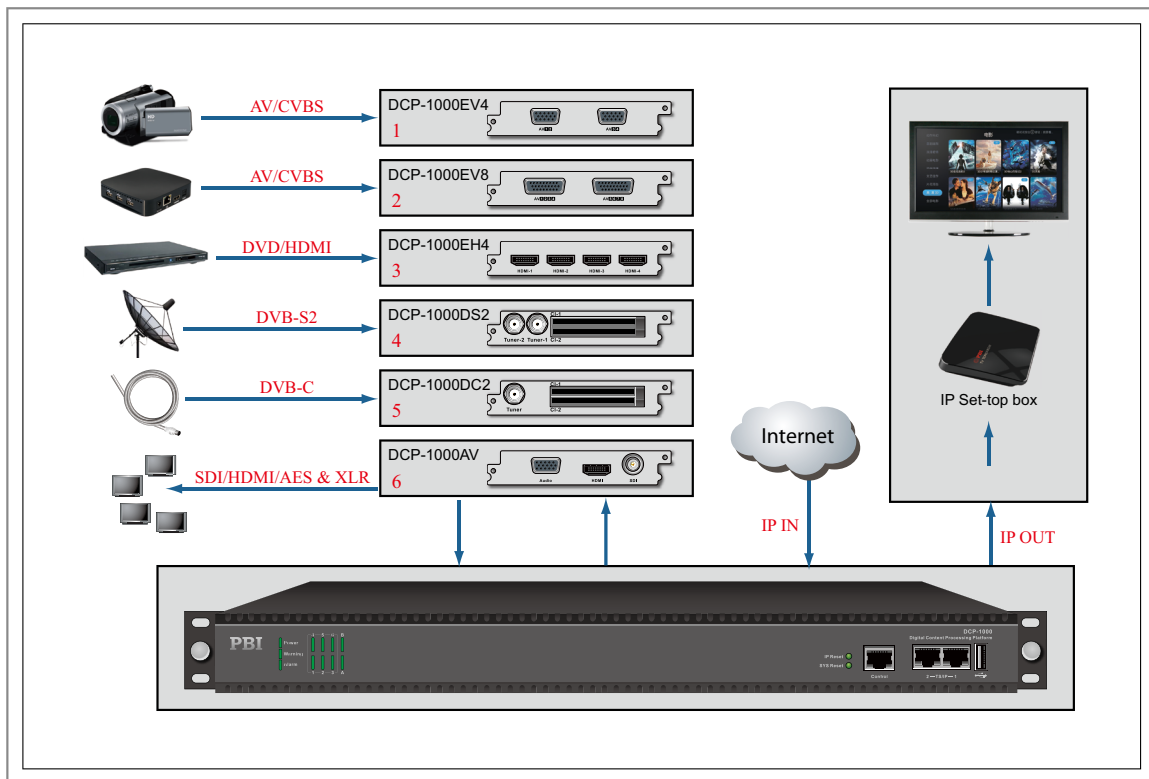
## DCP-1000 Digital Contents Processing Platform

DCP-1000 brings a compact and flexible solutions that allow the users to build or update the DTV or IPTV headend to meet a variety of requirements of today's new network architecture. DCP-1000 is a 1RU chassis with six independent I/O modules which be capable of transforming into digital headend as 48-channel H.264/SD encoder, 24-channel H.264/HD encoder, 12-channel satellite/cable IRD or 6-channel decoder. The six I/O modules and power supply all can support hot-swap.



### Main Feature

- Support flexible combination of kinds of functional modules
- 800Mbps effective bit-rate through per TS/IP port
- SNMP & WEB Management System
- Redundant Power Supplies
- 19" x 1 U EIA standard chassis
- Module can independently work with mini chassis



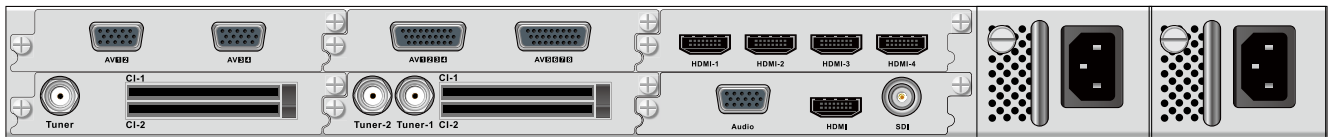
DCP-100MF



Data Protocol	UDP
Control Protocol	ICMP, ARP, IGMP v2/v3
<b>Front Panel</b>	
TS/IP and Control Port	1 x RJ45(GbE), 10/100/1000 Base-T (DS2/DC2/DA2/AV) 1 x RJ45(GbE), 10/100 Base-T (EV4/EV8/EH4)
USB Port	1 x USB (Upgrade)
Button	1 x IP reset

Status Indicator Lamp	2 x LED, Power (Green), Alarm(Red)
<b>Physical</b>	
Power Supply	DC12V/1.5A Max
Power Consumption	MAX.18W
Operating Temperature	0 ~ 45°C
Storage Temperature	-10 ~ 60°C
Operation Humidity	10 ~ 90%, (Non-condensed)
Dimension	233 × 130 × 30mm
Weight	1Kg

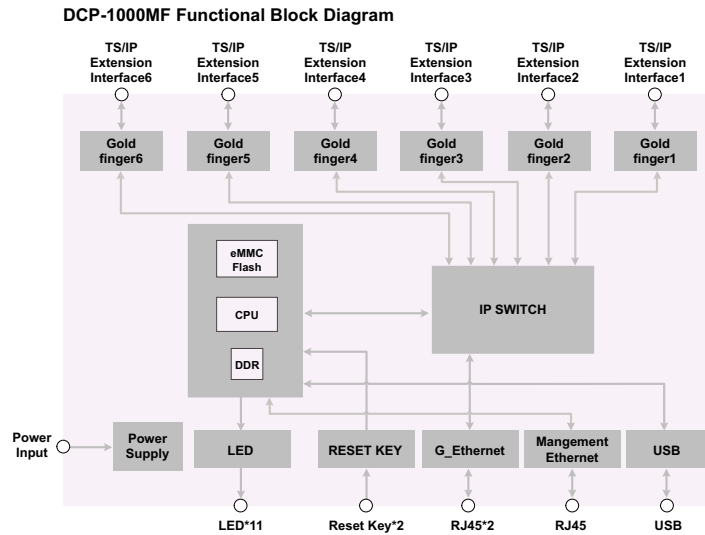
DCP-1000MF



Data Protocol	UDP
Control Protocol	ICMP, ARP, IGMP v2/v3
Max. Effective Bit Rate	800Mb/s per port
<b>Front Panel</b>	
TS/IP	2 × RJ45(GbE), 10/100/1000 Base-T
Control	1 × RJ45, 10/100 Base-T
USB	1 x USB
Status Indicator Lamp	11 x LED

<b>Rear Panel</b>	
Module Slot	6 x Slots
<b>Others</b>	
Power Supply	AC 100 - 240V 50/60Hz 1.5A Max
Operating Temperature	0 ~ 45°C
Storage Temperature	-10 ~ 60°C
Operation Humidity	10 ~ 90%, (Non-condensed)

Block Diagram



Encoding Module

**DCP-1000EV4**

4-channel H.264 Encoding Module



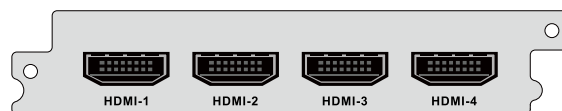
**DCP-1000EV8**

8-channel H.264 Encoding Module



**DCP-1000EH4**

4-channel H.264 Encoding Module



### Video Input & compression Coding

Connect Type	4 × CVBS (DCP-1000EV4) , 8 × CVBS (DCP-1000EV8) , 4 × HDMI (DCP-1000EH4)
Compression Standard	H264 BP, MP (CABAC) , HPJPEG/MJPEG
Sampling Format	YCbCr 4:2:0
Compression Bit Rate	16kbps~40Mbps 1080P (1920 × 1080) @50Hz,60Hz(Max. 2 Channels only) SMPTE274M:4~8Mb/s 1080i (1920 × 1080) @25Hz,29.97Hz SMPTE274: 4~8Mb/s
Video Resolution & Recommend	720p (1280 × 720) @50Hz, 59.94Hz SMPTE296M: 4~8Mb/s
Compression Bit Rate H.264	720p (1280 × 720) @25Hz, 29.97Hz SMPTE296M: 4~8Mb/s EV4/EV8:480P (720 × 480) @29.97Hz SMPTE656M: 2~4Mb/s EV4/EV8:576P (720 × 476) @25Hz SMPTE656M: 2~4Mb/s
Video Resolution & Recommend	480i (720 × 480) @29.97Hz SMPTE656M:3~10Mb/s
Compression Bit Rate MPEG-2	576i(720 × 476)@25Hz SMPTE656M:3~10Mb/s
Video Resolution	Vertical & Horizontal adjustable
Down Scaling	respectively (frame rate is not scalable)
Aspect Ratio	4:3, 16:9 Selectable

### Audio Input & Compression Coding

Connect Type	Embedded (DCP-1000EH4) or Analog (DCP-1000EV4/EV8)
Coding Standard	MPEG1 Layer II MPEG-2/4 AAC-LC/HE-AAC (V1, V2) Passthrough (EH4)
Sampling Rate	11.25/12/16/22/24/32/44.1/48KHz (EV4/EV8)

### TS over IP

Connect Type	1 x RJ45, 10/100Base-T
Maximum Effective Bit Rate	80M
Encapsulation	SPTS
Multicast Protocol	UDP, Multicast, IGMPv2

### Control & Monitoring

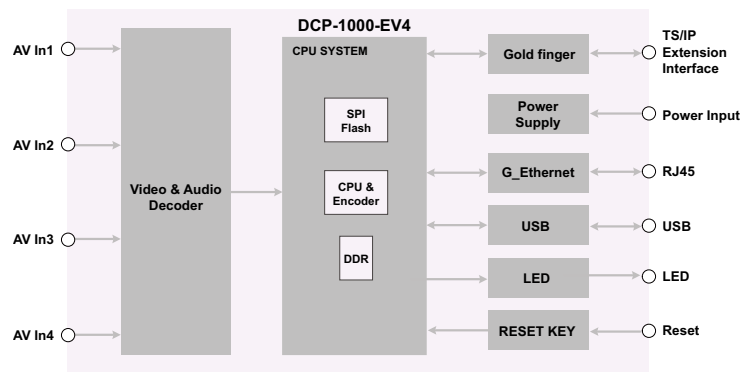
Remote Control Upgrade	SNMP, HTTP WEB HTTP
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### Physical

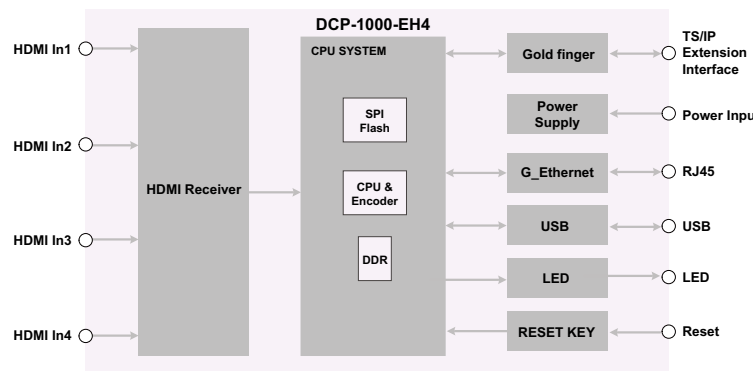
Power Supply	DC 12V
Power Consumption	20W
Operating temperature	0 ~ 45°C
Storage temperature	-10 ~ 60°C
Operating Humidity	10~90%, non-condensed

## Block Diagram

#### DCP-1000-EV4 Functional Block Diagram



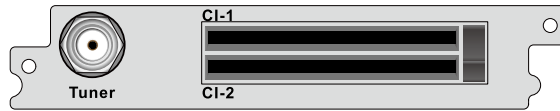
#### DCP-1000-EH4 Functional Block Diagram



## Descrambling Module

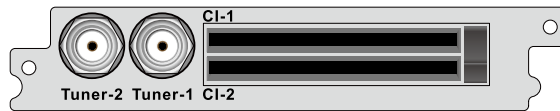
### DCP-1000DC2

2-channel DVB-C Demodulator Module



### DCP-1000DS2

2-channel DVB-C Demodulator Module

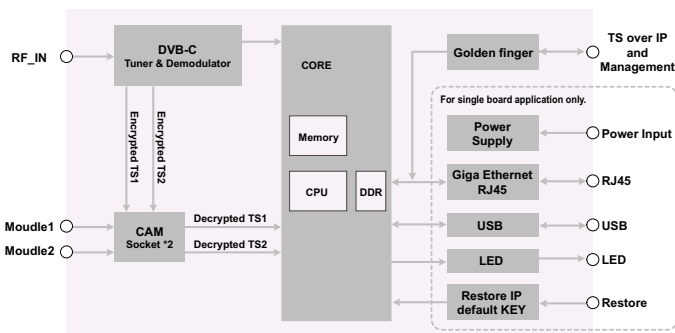


<b>Tuner Input</b>	
<b>DVB-S2/S</b>	
Connect Type	2 x F type female, 75Ω
Input Frequency Range	950 ~ 2150 MHz
Input Level	-65dBm ~ -25dBm
Symbol Rate	2 ~ 45Mbaud
Roll Off Factor	0.35(DVB-S QPSK), 0.35/0.25/0.2(DVB-S2 8PSK)
FEC Puncture Rate	2/3, 3/4, 5/6, 6/7, 7/8(DVB-S QPSK); 2/3, 3/4, 3/5, 5/6, 8/9, 9/10(DVB-S2 8PSK)
LNB Polarity Selection Voltage	0, 13V, 18V selectable
LNB Band Selection Tone	0/22K selectable
DiSEqC	DiSEqC 1.0
<b>DVB-C</b>	
Connect Type	F type female, 75Ω
Input Frequency Range	51 ~ 862 MHz
Input Level	45 ~ 75dB μV
Symbol Rate	1 ~ 7Mbaud (ITU J.83 Anne × A)
Modulation	16QAM, 32QAM, 64QAM, 128QAM, 256QAM
Bandwidth	6MHz, 7MHz, 8MHz
Input Return Loss	7dB
<b>ATSC</b>	
Connect Type	F type female 75Ω input; F type female 75Ω Loop

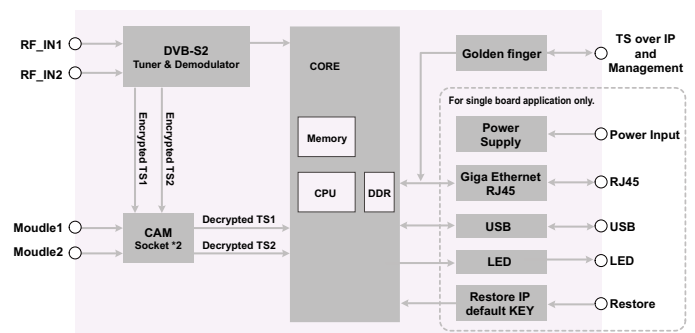
Input Frequency Range	54~864MHz
Input Level	-75~-7dBm (ATSC 8VSB)
Symbol Rate	10.762Mbaud
Modulation	8VSB
Roll Off Factor	0.115
Bandwidth	6MHz
<b>TS over IP</b>	
Connect Type	1 × RJ-45, 10/100/1000 Base-T
Maximum Effective Bit Rate	70Mb/s
Protocol	UDP, Multicast, IGMPv2
Unicast/Multicast	MPTS
<b>TS Processing</b>	
TS Input	Tuner1, Tuner2
TS Output	TS over IP
BISS Decrypt	BISS-1, BISS-E
Descrambling Connector	PCMCIA, 2xCI Slot
<b>Control &amp; Monitoring</b>	
Remote Control Upgrade	SNMP, HTTP WEB HTTP
<b>Physical</b>	
Power Supply	DC 12V
Power Consumption	20W
Operating temperature	0 ~ 45°C
Storage temperature	-10 ~ 60°C
Operating Humidity	10~90%, non-condensed

## Block Diagram

DCP-1000DC2 Functional Block Diagram



DCP-1000DS2 Functional Block Diagram



## Decoding Module

### DCP-1000AV Decoding Module

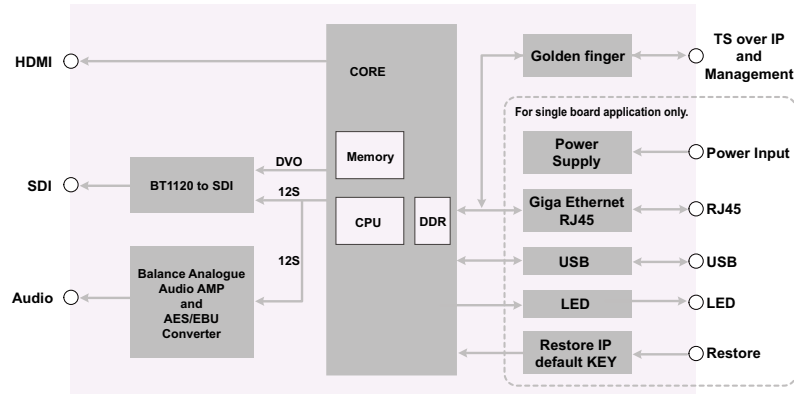


<b>TS over IP</b>	
Connect Type	1 × RJ-45, 10/100Base-T
Effective Bit Rate	70Mb/s
Protocol	UDP, Multicast, IGMPv2/v3
Video Decode	MPEG-2(MP@ ML for SD, MP@HL for HD) MPEG 4/H.264 AVC Part 10 (MP@L3 for SD, HP@L4.1 for HD)
Audio Decoder	MPEG-1 Layer-I/II, MPEG-2 Layer-II LC-AAC, HE-AAC
<b>HDMI Output</b>	
Connect Type	1 × HDMI 1.3
Video Resolution and Frame Rate	1080P@30Hz, 1080P@25Hz, 1080P@24Hz, 1080i@50Hz, 1080i@60Hz, 720P@60Hz, 720P@50Hz, 576i@50Hz
Embedded Audios	1 stereo pairs or digital audio pass-through
<b>SDI Output</b>	
Connect Type	1 × BNC type female, 75 Ω
Video Resolution and Frame Rate	1080P@30Hz, 1080P@25Hz, 1080P@24Hz, 1080i@50Hz, 1080i@60Hz, 720P@60Hz, 720P@50Hz, 576i@50Hz

HD SDI standard	SMPTE252M, 1.485Gbit/s (10bit)
Output Level	800mVp-p
<b>Audio Output</b>	
Connect Type	1 × D-sub15 male with XLR adaptor cable
Sampling Rate	32KHz, 44.1KHz, 48KHz
Bit Rate	MPEG-1 Layer I: 32,64,96,128,160,192,224,256,288,320,352,384,416 and 448kb/s MPEG-1 Layer II: 32,48,56,64,80,96,112,128,144,160,192,224,256,320 and 384kb/s
Output Level	1Vp-p (with standard test stream)
Output Format	AES/EBU
<b>Control &amp; Monitoring</b>	
Remote Control	SNMP, HTTP
Upgrade	WEB HTTP
<b>Physical</b>	
Power Supply	DC 12V
Power Consumption	20W
Operating temperature	0 ~ 45°C
Storage temperature	-10 ~ 60°C
Operating Humidity	10~90%, non-condensed

## Block Diagram

DCP-1000AV Functional Block Diagram



## Order Information

Module list	
DCP-1000EV4	4-channel SD H.264 Encoder Module
DCP-1000EV8	8-channel SD H.264 Encoder Module
DCP-1000EH8	4-channel HD H.264 Encoder Module
DCP-1000DC2	2-channel DVB-C Demodulation & Descrambling Module
DCP-1000DS2	2-channel DVB-S2 Demodulation & Descrambling Module
DCP-1000DA2	2-channel ATSC Demodulation & Descrambling Module
DCP-1000AV	HD/SD Decoding Module