



CMP201



CMP201D



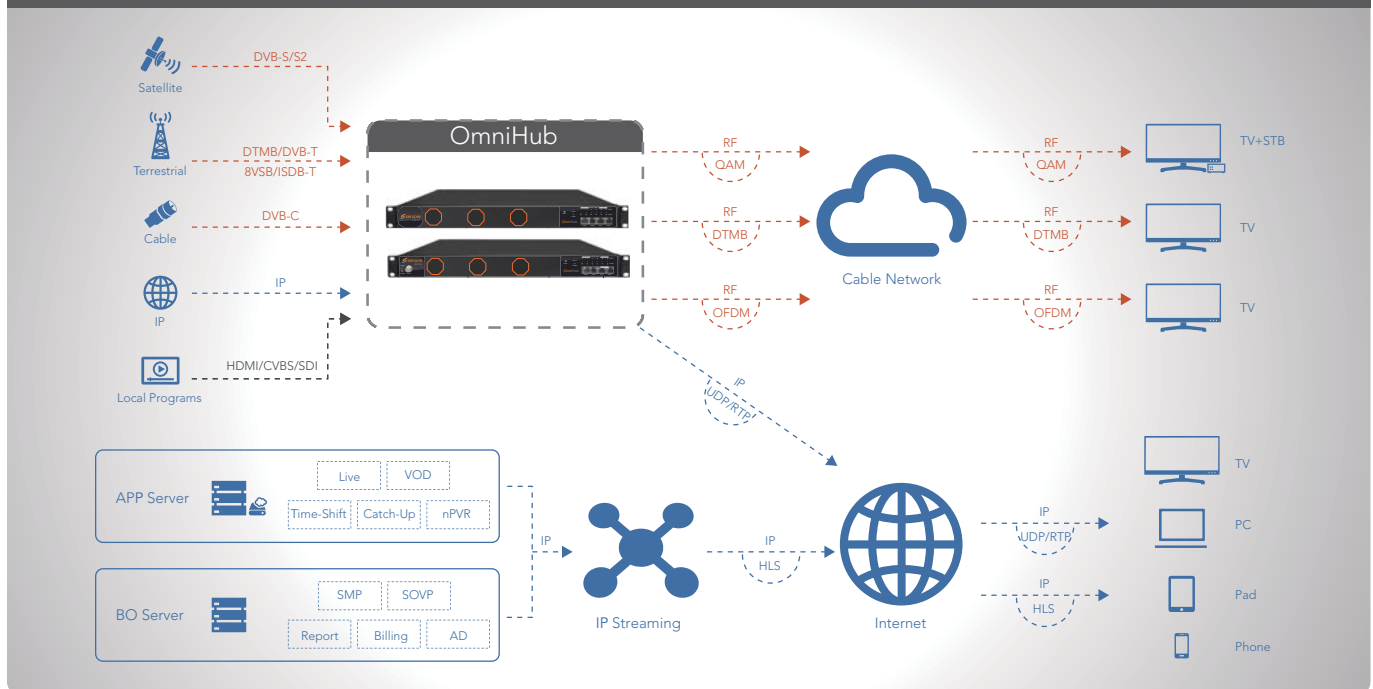
CMP203

INTRODUCTION

CMP201/203 is a new generation of media platform in modular design that focuses on both cost-effective commercial TV market and traditional DTV market. Thanks to the benefit of high-density, strong performance and large flexibility, CMP201/203 can meet all the major video delivery requirements of signal receiving, descrambling, encoding, multiplexing, modulation and IP processing in one unit. With optional commercial/broadcast encoder, multi-mode receiver/modulator module, it can be configured flexibly to meet any video delivery requirements. Due to its compact design and powerful function, it can be widely used at hotel, hospital, community, club, campus and DTV headend room, where massive programs are required to be processed in a cost-effective way.

SOLUTION

IPTV/MATV/CATV Video Delivery Solution



FEATURES

- 19" 1RU standard rack unit
- Optional dual power supply (CMP201D)
- Optional 8-CH QAM/DTMB/OFDM modulation module on front panel (CMP203)
- 4 GbE Ethernet ports on front panel (2 for management, 2 for IP stream in/out)
- 6 slots for hot-swappable functional modules on rear panel
- Supports up to 24 HDMI HD encoding
- Supports up to 48 CVBS SD encoding
- Supports up to 24 DVB-C/DTMB/DVB-S/S2/DVB-T/T2/8VSB/ISDB-T receiving
- Supports up to 48 CH modulation outputs
- Configuration takes effect immediately without reboot
- Web-based network management and software upgrade with user-friendly GUI
- Simple installation and easy configuration

Chassis	
6 hot-swappable slots	
Dual redundant power supplies	
Service level multiplexing	
4 x Gigabit RJ45 (embedded):	
• MPEG TS over UDP/RTP multicast/unicast SPTS/MPTS	
• Max. 120 inputs and 120 outputs	

Physical & Environment	
Input Voltage	100~240 VAC
Power	120W
Chassis Dimension	120mm x 177mm x 345mm (W x H x D), 1 RU
Operating Temperature	0°C~50°C
Storage Temperature	-10°C~70°C
Operating Humidity	<95%
MTBF	≥100,000 hours

SPECIFICATIONS



DVB-C/DTMB Receiver Module

DVB-C	
Input	4 channels via 1 RF female connector
CI	2 x PCMCIA CI slots
CAM	Descrambled channel quantity depends on CAM capability, 2 CAMs could be different
QAM Mode	Annex A/C
Frequency Range	47~862MHz
Bandwidth	6/7/8MHz
Constellation	16QAM/32QAM/64QAM/128QAM/256QAM
Symbol Rate	3.6~6.952Ms/s
Signal Level	40~80dBuV
CA System	Supports mainstream CAS

DTMB	
Input	4 channels via 1 RF female connector
CI	2 x PCMCIA CI slots
CAM	Descrambled channel quantity depends on CAM capability, 2 CAMs could be different
Modulation Mode	TDS-OFDM
Frequency Range	47~862MHz
Constellation	4QAM-NR/4QAM/16QAM/32QAM/64QAM
Signal Level	-65~-25dm
CA System	Supports mainstream CAS



DVBC Annex B/ISDB-T Receiver Module

DVBC Annex B	
Input	4 channels via 1 RF female connector
CI	2 x PCMCIA CI slots
CAM	Descrambled channel quantity depends on CAM capability, 2 CAMs could be different
QAM Mode	Annex B
Frequency Range	47~862MHz
Bandwidth	6MHz
Constellation	64QAM, 256QAM
Symbol Rate	5.057Ms/s (64QAM) 5.360Ms/s (256QAM)
Signal Level	40~80dBuV
CA System	Supports mainstream CAS

ISDB-T	
Input	4 channels via 1 RF female connector
CI	2 x PCMCIA CI slots
CAM	Descrambled channel quantity depends on CAM capability, 2 CAMs could be different
Frequency Range	177.143-863.143 MHz
Bandwidth	6/7/8MHz
Constellation	DQPSK, QPSK, 16QAM, 64QAM
FEC	1/2, 2/3, 3/4, 5/6, 7/8, Automatic
Signal Level	-80~-20dBm
CA System	Supports mainstream CAS

SPECIFICATIONS



DVB-S/S2 FTA Receiver Module

DVB-S/S2	
Input	C/Ku Band, 4 channels via 4 RF female connectors
LNB Power	Independent power supplies for LNB-1 & LNB-3
LNB Voltage	13V/18V
LNB Current	Max. 400mA
Constellation	QPSK, 8PSK
Frequency Range	950~2150MHz
Signal Level	-70~-20dBm
Roll-off Factor	0.15, 0.20, 0.25, 0.35
Symbol Rate	DVB-S: 1~45Msps DVB-S2: 1~45Msps
FEC	DVB-S: 1/2, 2/3, 3/4, 5/6, 7/8 DVB-S2: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10



DVB-T/T2 with CI Receiver Module

DVB-T/T2	
Input	4 channels via 1 RF female connector
CI	2 x PCMCIA CI slots
CAM	Descrambled channel quantity depends on CAM capability, 2 CAMs could be different
Frequency Range	47~862MHz
Bandwidth	6/7/8MHz
Constellation	DVB-T: QPSK/16QAM/64QAM DVB-T2: QPSK/16QAM/64QAM/256QAM
Guard Interval	DVB-T: 1/4, 1/8, 1/16, 1/32 DVB-T2: 1/4, 1/8, 1/16, 1/32, 1/128 19/256, 19/128
FFT Size	DVB-T: 2K, 8K DVB-T2: 1K, 2K, 4K, 8K, 16K, 32K
Signal Level	-80~-20dBm
CA System	Supports mainstream CAS



DVB-S/S2 with CI Receiver Module

DVB-S/S2	
Input	C/Ku Band, 4 channels via 2 RF female connectors CH1 & CH2 via LNB-1 CH3 & CH4 via LNB-2
LNB Power	Independent power supplies for each LNB
LNB Voltage	13V/18V
LNB Current	Max. 400mA
CI	2 x PCMCIA CI slots
CAM	Descrambled channel quantity depends on CAM capability, 2 CAMs could be different
Constellation	QPSK, 8PSK
Frequency Range	950~2150MHz
Signal Level	-70~-20dBm
Roll-off Factor	0.15, 0.20, 0.25, 0.35
Symbol Rate	DVB-S: 1~45Msps DVB-S2: 1~45Msps
FEC	DVB-S: 1/2, 2/3, 3/4, 5/6, 7/8 DVB-S2: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
CA System	Supports mainstream CAS



DVB-S/S2 FTA Receiver Module

DVB-S/S2	
Input	C/Ku Band, 8 channels via 8 RF female connectors
LNB Power	Independent power supplies for LNB-1 LNB-3, LNB-5 and LNB-7
LNB Voltage	13V/18V
LNB Current	Max. 400mA
Constellation	QPSK, 8PSK
Frequency Range	950~2150MHz
Signal Level	-70~-20dBm
Roll-off Factor	0.15, 0.20, 0.25, 0.35
Symbol Rate	DVB-S: 1~45Msps DVB-S2: 1~45Msps
FEC	DVB-S: 1/2, 2/3, 3/4, 5/6, 7/8 DVB-S2: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10

SPECIFICATIONS



8VSB Receiver Module

8VSB	
Input	4 channels via 4 RF female connector
Frequency Range	50~860MHz
Bandwidth	6MHz
Modulation	8VSB
Signal Level	-80~-20dBm



CI Scrambler/Descrambler module
(Coming soon)

CI	
Standard	EN 50221
Interface	2 x PCMCIA CI slots
CAM Scrambling	Support Xcrypt CAMCAS
CAM Descrambling	Supports mainstream CAS Descrambled channel quantity depends on CAM capability, 2 CAMs could be different



OFDM Modulation Module

OFDM	
Output	4/8 frequencies via 1 RF female connector 75Ω
Standard	ETSI EN 300744
Frequency Range	47~862MHz
Bandwidth	8MHz
Constellation	QPSK/16QAM/64QAM
Guard Intervals	1/4, 1/8, 1/16, 1/32
FFT Size	2K, 8K
Code Rates	1/2, 2/3, 3/4, 5/6, 7/8
Output Level	Max. 105dBμV
MER	≥32dB



8VSB Modulation Module

8VSB	
Output	4/8 frequencies via 1 RF female connector 75Ω
Standard	ATSC A/35
Frequency Range	50~860 MHz
Bandwidth	6MHz
Constellation	8VSB
Output Level	Max. 105dBμV
MER	≥40dB



DTMB Modulation Module

DTMB	
Output	4/8 frequencies via 1 RF female connector 75Ω
Standard	DTMB GB20600-2006
Frequency Range	47~862MHz
Constellation	4QAM-NR/4QAM/16QAM/32QAM/64QAM
Output Level	Max. 105dBμV
MER	≥32dB

SPECIFICATIONS



QAMA Modulation Module

QAMA	
Output	4/8 frequencies via 1 RF female connector 75Ω
Standard	ITU-T J.83 Annex A/C
Frequency Range	47~862MHz
Bandwidth	6/7/8MHz
Constellation	16QAM/32QAM/64QAM/128QAM/256QAM
Symbol Rate	3.6~6.9 Ms/s
Output Level	Max. 105dBμV
MER	≥32dB



QAMB Modulation Module

QAMB	
Output	4/8 frequencies via 1 RF female connector 75Ω
Standard	ITU-T J.83 Annex B
Frequency Range	47~862MHz
Bandwidth	6/7/8 MHz
Constellation	64QAM/256QAM
Symbol Rate	3.6~6.9 Ms/s
Output Level	Max. 105dBμV
MER	≥32dB



QAM Modulation Module

QAM	
Output	16 non-adjacent frequencies via 1 RF female connector 75Ω
1 x RJ45	Reserved for scrambling
Standard	ITU-T J.83 Annex A/B/C
Frequency Range	47~862MHz
Bandwidth	6/7/8MHz
Constellation	16QAM/32QAM/64QAM/128QAM/256QAM
Symbol Rate	3.6~6.9Ms/s
Output Level	Max. 106dBμV
MER	>40dB



ISDB-T Modulation Module

ISDB-T	
Output	4/8 frequencies via 1 RF female connector, 75Ω
Standard	ARIB STD-B31
Frequency Range	57-860MHz
Bandwidth	6MHz
Constellation	QPSK, 16QAM, 64QAM
Transmission Mode	2K
RS Code	RS(204.188)
FEC	1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval	1/4, 1/8, 1/16, 1/32
Hierarchy Mode	Layer A
Segment Mode	Full Seg
Output Level	Max. 104dBμV
MER	≥40dB

SPECIFICATIONS



Commercial HDMI Encoder Module

HDMI	
Input	4 channels via 4 HDMI female connectors (HDMI 1.4)
Video	H.264/AVC HD: MP/HP@L4.0/4.1/4.2 SD: MP/HP@L3.0/3.1/3.2
Resolution	SD: 576i50, 480i59.94 HD: 1080p-25/30/50/59.94/60 1080i-50/59.94/60 720p-50/60 *Output supports progressive only, and resolution supports up to 1920*1080p30
Bitrate Control	CBR
Video Bitrate	600~12,000Kbps
GOP Structure	IPPP
GOP Size	1~99
Aspect Ratio	Automatic or Manual
Audio	MPEG-1 Layer II, AAC (optional), AC3 (optional)
Audio Bitrate	32~384Kbps
Audio Mode	Stereo (2.0, including downmix)
Audio Sampling Rate	48kHz
Audio Volume Leveling	-20dB~20dB
OSD Overlay	Text, Image, QR Code



Professional HDMI Encoder Module

HDMI	
Input	4 channels via 4 HDMI female connectors (HDMI 1.4)
Video	H.264/AVC HD: MP/HP@L4.0 SD: MP/HP@L3.0 MPEG-2 SD: MP@ML
Resolution	SD: 576i50, 480i59.94 HD: 1080p-25/30/50/59.94/60 1080i-50/59.94/60 720p-50/60
Bitrate Control	CBR/VBR
Video Bitrate	1,000~14,000Kbps
GOP Structure	IBBP, IPPP, IBP
GOP Size	6~63
Aspect Ratio	Automatic or Manual
Audio	MPEG-1 Layer II, AAC (optional), AC3 (optional)
Audio Bitrate	32~384Kbps
Audio Mode	Stereo (2.0, including downmix)
Audio Sampling Rate	48kHz
Audio Volume Leveling	-20dB~20dB



HDMI Encoder Module with YPbPr/CC

HDMI	
Input	2 channels via 2 HDMI or 2 component Female connectors (HDMI1.4) CC/Component input via DB15 port
Video	H.264/AVC HD: MP/HP@L4.0, SD: MP/HP@L3.0 MPEG-2 SD: MP @ML HD: MP@HL
Resolution	SD: 576i50, 480i59.94 HD: 1080p-25/30/50/59.94/60 1080i-50/60 720p-50/60 * The maximum output resolution is 1080i60.
Bitrate Control	CBR
Bitrate	1,000~18,000Kbps
GOP Structure	IBBP, IPPP, IBP
GOP Size	6~63
Audio	MPEG-1 Layer II, AAC (optional), AC3 (optional) Support AC3 pass-through and dual audio encoding.
Audio Mode	Stereo (2.0, including downmix)
Sampling Rate	48kHz



HDMI Encoder Module with CC

HDMI	
Input	2 channels via 2 HDMI Female connectors (HDMI1.4) CC via RCA connector
Video	H.264/AVC HD: MP/HP@L4.0, SD: MP/HP@L3.0 MPEG-2 SD: MP @ML HD: MP@HL
Resolution	SD: 576i50, 480i59.94 HD: 1080p-25/30/50/59.94/60 1080i-50/60 720p-50/60 *The maximum output resolution is 1080i60.
Bitrate Control	CBR
Bitrate	1,000~18,000Kbps
GOP Structure	IBBP, IPPP, IBP
GOP Size	6~63
Audio	MPEG-1 Layer II, AAC (optional), AC3 (optional) Support AC3 pass-through and dual audio encoding.
Audio Mode	Stereo (2.0, including downmix)
Sampling Rate	48kHz

SPECIFICATIONS



Commercial CVBS Encoder Module

CVBS	
Input	8 channels via 2 DB15 connectors each DB15 for 4 channels 2 x RCA-DB15 adaptor cables come along with module
Video	H.264/AVC SD: MP/HP@L3.0/3.1/3.2
Resolution	SD: 576i50, 480i59.94
Bitrate Control	CBR
Bitrate	600~6,000Kbps
GOP Structure	IPPP
GOP Size	1~99
Aspect Ratio	Automatic or Manual
Audio	MPEG-1 Layer II
Audio Bitrate	32~384Kbps
Audio Mode	Stereo (2.0, including downmix)
Audio Sampling Rate	48kHz
Audio Volume Leveling	-20dB~20dB
OSD Overlay	Text, Image, QR Code



Professional CVBS Encoder Module

CVBS	
Input	6 channels via 2 DB15 connector each DB15 for 3 channels 2 x RCA-DB15 adaptor cables come along with module
Video	H.264/AVC SD: MP/HP@L3.0 MPEG-2 SD: MP@ML
Resolution	SD: 576i50, 480i59.94
Bitrate Control	CBR
Bitrate	1,000~6,000Kbps
GOP Structure	IBBP, IPPP, IBP
GOP Size	6~63
Aspect Ratio	Automatic or Manual
Audio	MPEG-1 Layer II
Audio Bitrate	32~384Kbps
Audio Mode	Stereo (2.0, including downmix)
Audio Sampling Rate	48kHz
Audio Volume Leveling	-20dB~20dB



Commercial CVBS Encoder Module

CVBS	
Input	16 channels via 4 DB15 connectors, each DB15 for 4 channels 4 x RCA-DB15 adaptor cables come along with module
Video	H.264/AVC SD: MP/HP@L3.0/3.1/3.2
Resolution	SD: 576i50, 480i59.94
Bitrate Control	CBR
Bitrate	1,000~8,000Kbps
GOP Structure	IPPP
GOP Size	1~99
Aspect Ratio	Automatic or Manual
Audio	MPEG-1 Layer II
Audio Bitrate	32~384Kbps
Audio Mode	Stereo (2.0, including downmix)
Sampling Rate	48kHz
Audio Volume Leveling	-20dB~20dB
OSD Overlay	Text, Image, QR Code



EAS Processing Module

EAS	
Input	Digital EAS input (SCTE-18) via 1*RJ45 port Analogue EAS input via 3PIN contact closure CVBS input via 1*RCA connector Audio L/R input via 2*RCA connector TS input via 1*BNC connector
Video	H.264 SD: MP/HP@L3.0 MPEG-2 SD: MP @ML (By default)
Resolution	SD: 480i59.94
ASI	500Kbps to 100Mbps
Contact Closure	3PIN Connector with Dry Contact or 5~24V DC input for EAS trigger
RJ45	10/100M Ethernet for SCTE-18 digital EAS input
Bitrate Control	CBR
Bitrate	5,00~8,000Kbps
GOP Structure	IBBP, IPPP, IBP
GOP Size	6~63
Audio	MPEG-1 Layer II, AAC-LC/HE, AC3
Audio Mode	Stereo (2.0, including downmix)
Sampling Rate	48kHz

SPECIFICATIONS



SDI Encoder Module

SDI	
Input	2 channels via 2 SDI or CVBS SDI or CVBS via BNC connector Audio via phoenix connector
Video	H.264/AVC HD: MP/HP@L4.0, SD: MP/HP@L3.0 MPEG-2 SD: MP @ML HD: MP@HL
Resolution	SD: 576i50, 480i59.94 HD: 1080p-25/30/50/59.94/60, 1080i-50/60 720p-50/60 *The maximum output resolution is 1080i60.
Bitrate Control	CBR
Bitrate	1,000~18,000Kbps
GOP Structure	IBBP, IPPP, IBP
GOP Size	6~63
Audio	MPEG-1 Layer II, AAC (optional), AC3 (optional) Support AC3 pass-through and dual audio encoding.
Audio Mode	Stereo (2.0, including downmix)
Sampling Rate	48kHz



HEVC HDMI Encoder Module (4-CH)
(Coming soon)

HEVC	
Input	4 channels via 4 HDMI female connectors (HDMI 1.4)
Video	H.264/AVC MP/HP@4.2 H.265/HEVC MP@L4.1
Resolution	HD: 1080p-29.97/30/50/59.94/60 1080i-29.97/30/50/59.94/60 720p-50/59.94/60 SD: 576i50 576p50 480i-59.94/60 480p-59.94/60 *Output supports progressive only, and resolution supports up to 1080p30.
Bitrate Control	CBR
Video Bitrate	600~20000 Kbps
GOP Structure	IPPP
GOP Size	1~60
Aspect Ratio	Automatic or Manual
Audio	MPEG-1 Layer II, AAC, AC3
Audio Bitrate	32~192 Kbps
Audio Mode	Stereo 2.0
Audio Sampling Rate	48kHz
Audio Volume Leveling	-20dB~20dB
OSD Overlay	Text, Image, QR Code



HEVC HDMI Encoder Module (8-CH)
(Coming soon)

HEVC	
Input	8 channels via 8 HDMI female connectors (HDMI 1.4)
Video	H.264/AVC MP/HP@4.2 H.265/HEVC MP@L4.1
Resolution	HD: 1080p-29.97/30/50/59.94/60 1080i-29.97/30/50/59.94/60 720p-50/59.94/60 SD: 576i50 576p50 480i-59.94/60 480p-59.94/60 *Output supports progressive only, and resolution supports up to 1080p30.
Bitrate Control	CBR
Video Bitrate	600~20000 Kbps
GOP Structure	IPPP
GOP Size	1~60
Aspect Ratio	Automatic or Manual
Audio	MPEG-1 Layer II, AAC, AC3
Audio Bitrate	32~192 Kbps
Audio Mode	Stereo 2.0
Audio Sampling Rate	48kHz
Audio Volume Leveling	-20dB~20dB
OSD Overlay	Text, Image, QR Code