CMP200

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INTRODUCTION

CMP200 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, CMP200 product 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, where massive programs are required to be processed in a cost-effective way.

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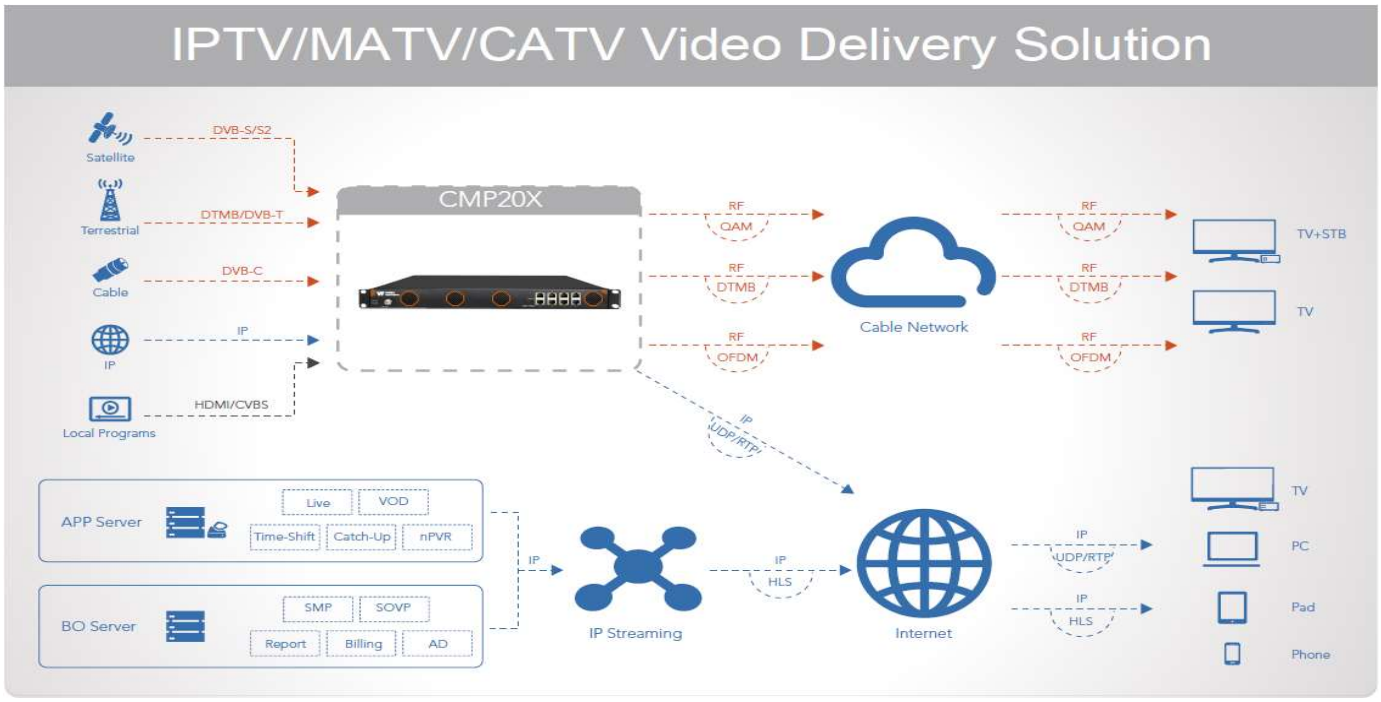
SOLUTION



FEATURES

- 19”1RU standard rack unit
- Optional dual power supplies
- Optional modulation module on front panel (8-CH QAMA/QAMB/DTMB/OFDM)
- 6 swappable slots on rear panel for flexible module combination
- 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
- Configuration takes effect immediately without reboot
- Web-based network management and software upgrade with user-friendly GUI
- MPTS/SPTS Unicast, Multicacst streaming
- Service mulmtiplexing, PID/Service filtering
- EAS (Emergency Alert System) support
- SNMP Management

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ORDERING INFORMATION

Model	Description
Chassis	
CMP201	1RU Chassis, six swappable slots, single PSU
CMP201D	1RU Chassis, six swappable slots, dual PSU
CMP203	1RU Chassis, six swappable slots, single PSU, with 8 channels modulator on front panel
Receiving Modules	
CR2-DVBC-00	DVB-C Annex A/C or DTMB receiving module, 4 CH, 1 RF input connector with 4 tuners, w/ CI slots
CR2-DVBC-01	DVB-C Annex B or ISDB-T receiving module, 4 CH, 1 RF input connector with 4 tuners, w/ CI slots
CR2-DVBT2-00	DVB-T/T2 receiving module, 4 CH, 1 input connector with 4 tuners
CR2-8VSB-00	8VSB receiving module, 4 CH, 4 input connectors with 4 tuners
CR2-DVBS2CI-00	DVB-S2 receiving module, 4 CH, 2 input connectors each with 2 transponders receiving, w/ 2 CI slots, independent power supplies for each LNB
CR2-DVBS2FTA-00	DVB-S2 receiving module, 4 CH, support internal signal passthrough from one tuner to the others, Independent power supplies for LNB-1 & LNB-3, LNB-2 shares power with LNB-1, LNB-4 with LNB-3
CR2-DVBS2FTA-00A	8 CH DVB-S2 receiving module, another interface card added on CR-DVBS2FTA-00, each module occupies 2 slots
Encoding Module	
CE2-HDMI-00	HDMI encoding module, 4 CH, supports H.264 HD/SD, MPEG-2 SD, MPEG1L2, AAC, AC3 (professional chip)
CE2-HDMI-R01	HDMI encoding module, 4 CH, supports H.264 HD/SD, MPEG1L2, AAC(optional), AC3(optional) (commercial chip)
CE2-HDMI-02	HDMI encoding module , 2 CH, supports H.264/MPEG-2 HD/SD, MPEG1L2, AAC(optional), AC3(optional) , supports CC input
CE2-HDMI-02C	HDMI/Component encoding module , 2 CH, supports H.264/MPEG-2 HD/SD, MPEG1L2, AAC(optional), AC3(optional) , supports CC and analog audio input
CE2-SDI-00	SDI encoding module , 2 CH, supports H.264/MPEG-2 HD/SD, MPEG1L2, AAC(optional), AC3(optional) , supports CC and analog audio input
CE2-CVBS-00	CVBS encoding module, 6 CH, supports H.264/MPEG-2 SD, MPEG1L2
CE2-CVBS-01	CVBS encoding module, 8 CH, supports H.264 SD, MPEG1L2
Processing Modules	
CP2-EAS-00	EAS processing module, supports EAS triggerring by analogue EAS input and digital EAS input
Modulation Modules	
CM2-QAMA-R00	QAM modulator module, Annex A/C, 16x non-adjacent channels output
CM2-QAMB-R00	QAM modulator module, Annex B, 16x non-adjacent channels output
CM2-DTMB-01	DTMB modulator module, 4 CH
CM2-DTMB-01A	DTMB modulator module, 8 CH
CM2-QAMA-01	QAM A/C modulator module, 4 CH
CM2-QAMA-01A	QAM A/C modulator module, 8 CH
CM2-QAMB-01	QAM B modulator module, 4 CH
CM2-QAMB-01A	QAM B modulator module, 8 CH
CM2-OFDM-01	ODFM modulator module, 4 CH
CM2-OFDM-01A	ODFM modulator module, 8 CH

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SPECIFICATIONS

DVB-C/DTMB Receiver Module (CR-DVBC-00)

DVB-C Mode	
Input	4 channels via1 RF female connector
CI	2 x PCMCIA CI slots
CAM	Descrambled channel quantity depends on CAM capability, 2CAMscouldbedifferent
QAM Mode	Annex A/C
Frequency Range	47~862 MHz
Constellation	16QAM/32QAM/64QAM/ 128QAM/256QAM
Symbol Rate	3.6~6.952 Ms/s
Bitrate per RF Input	Up to 55Mbps
Signal Level	40~80 dBuV
CA System	Supports mainstream CAS
Bandwidth	6/7/8 MHz

DTMB Mode	
Input	4 channels via 1 RF female connector
CI	2 x PCMCIA CI slots
CAM	Descrambled channel quantity depends on CAM capability, 2CAMscouldbedifferent
Modulation Mode	TDS-OFDM
Frequency Range	47~862 MHz
Constellation	4QAM-NR/4QAM/ 16QAM/32QAM/64QAM
Bitrate per RF Input	Up to 32.486Mbps
Signal Level	-65~-25 dm
CA System	Supports mainstream CAS

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DVB-T/T2 Receiver Module (CR-DVBT2-00)

Input	4channelsvia1RFfemaleconnector
Frequency Range	47~862 MHz
Bandwidth	6/7/8 MHz
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
FFTSize	DVB-T: 2k, 8k DVB-T2:1k,2k, 4k,8k,16k,32k
SignalLevel	-80~-20 dBm

DVB-S/S2 FTA Receiver Module (CR-DVBS2FTA-00A)

Input	C/KuBand,8channelsvia8RF femaleconnectors
LNB Power	Independent power supplies for LNB-1, LNB-3, LNB-5 and LNB-7, LNB-2 shares power with LNB-1, LNB-4 with LNB-3, LNB-6 with LNB-5, LNB-8 with LNB-7
LNB Voltage	13V/18V
LNB Current	Max. 400mA
Constellation	QPSK, 8PSK, 16APSK
Frequency Range	950~2150 MHz
Signal Level	0.15, 0.20, 0.25, 0.35
Symbol Rate	DVB-S: 1~45 Msps DVB-S2: 1~45 Msps
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

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DVB-S/S2 FTA Receiver Module (CR-DVBS2FTA-00)

Input	C/KuBand,4channelsvia4RF female connectors
LNB Power	Independent power supplies for LNB-1&LNB-3,LNB-2sharespower withLNB-1,LNB-4withLNB-3
LNB Voltage	13V/18V
LNB Current	Max. 400mA
Constellation	QPSK, 8PSK, 16APSK
Frequency Range	950~2150 MHz
Signal Level	-70~-20 dBm
Roll-off Factor	0.15, 0.20, 0.25, 0.35
Symbol Rate	DVB-S: 1~45 Msps DVB-S2: 1~45 Msps
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-S/S2 with CI Receiver Module (CR-DVBS2CI-00)

Input	C/KuBan,4channelsvia2RF femaleconnectors,CH1&CH2via LNB-1,CH3&CH4viaLNB-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 dependsonCAMcapability,2CAMs could be different
Constellation	QPSK, 8PSK, 16APSK
Frequency Range	950~2150 MHz
Signal Level	-70~-20 dBm

Roll-off Factor	0.15, 0.20, 0.25, 0.35
Symbol Rate	DVB-S: 1~45 Msps DVB-S2: 1~45 Msps
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

Commercial CVBS Encoder Module (CE-CVBS-01A)

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: 576i@25fps, 480i@29.97fps
Bitrate Control	VBR
Bitrate	1,000~8,000 Kbps
GOP Structure	IPPP
GOP Size	1~99
Audio	MPEG-1 Layer II
Audio Mode	Stereo(2.0,includingdownmix)
Sampling Rate	48kHz

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Professional HDMI Encoder Module (CE-HDMI-00)

Input	4channelsvia4HDMI femaleconnectors(HDMI1.4)
Video	H.264/AVC HD: MP/HP@L4.0, SD: MP/HP@L3.0 MPEG-2 SD: MP@ML
Resolution	SD: 576i@25fps, 480i@29.97fps HD: 1080p@25/30fps, 1080i@50/60fps, 720p@50/60fps
Bitrate Control	CBR/VBR
Bitrate	1,000~14,000 Kbps
GOP Structure	IBBP, IPPP, IBP
GOP Size	6~63
Audio	MPEG-1 Layer II, AAC-LC/HE, AC3
Audio Mode	Stereo(2.0,includingdownmix)
Sampling Rate48kHz	

Commercial HDMI Encoder Module (CE-HDMI-01)

Input	4channelsvia4HDMI femaleconnectors(HDMI1.4)
Video	H.264/AVCHD:MP/HP@L4.0/4.1/4.2, SD:MP/HP@L3.0/3.1/3.2
Resolution	SD:576i@25fps,480i@29.97fps HD:1080p@25/30fps,1080i@50/60fps, 720p@50/60fps
Bitrate Control	VBR
Bitrate	1,000~12,000 Kbps
GOP Structure	IPPP
GOP Size	1~99
Audio	MPEG-1 Layer II
Audio Mode	Stereo(2.0,includingdownmix)
Sampling Rate	48kHz

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Professional CVBS Encoder Module (CE-CVBS-00)

Input	6 channels via 2 DB15 connectors, 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: 576i@25fps, 480i@29.97fps
Bitrate Control	CBR/VBR
Bitrate	1,000~6,000 Kbps
GOP Structure	IBBP, IPPP, IBP
GOP Size	6~63
Audio	MPEG-1 Layer II
Audio Mode	Stereo(2.0,includingdownmix)
Sampling Rate	48kHz

Commercial CVBS Encoder Module (CE-CVBS-01)

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/AVCSD:MP/HP@L3.0/3.1/3.2
Resolution	SD: 576i@25fps, 480i@29.97fps
Bitrate Control	VBR
Bitrate	1,000~8,000 Kbps
GOP Structure	IPPP
GOP Size	1~99
Audio	MPEG-1 Layer II
Audio Mode	Stereo(2.0,includingdownmix)
Sampling Rate	48kHz

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QAM Modulation Module (CM-QAMA/QAMB-R00)

Output	16non-adjacentfrequencies via1RFfemaleconnector750
1 x RJ45	Reserved for scrambling
Standard	ITU-T J.83 Annex A/B/C
Frequency Range	47~862 MHz
Bandwidth	6, 7 and 8 MHz
Constellation	16QAM/32QAM/64QAM/ 128QAM/256QAM
Symbol Rate	3.6~6.9 Ms/s
Output Level	Max. 106dBμV
MER	>40dB
ReturnLoss	>12dB

QAMA Modulation Module (CM-QAMA-01/01A)

Output	4/8 frequencies via 1 RF female connector750
Standard	ITU-T J.83 Annex A/C
Frequency Range	47~862MHz
Bandwidth	6/7/8 MHz
Constellation	16QAM/32QAM/64QAM/ 128QAM/256QAM
Symbol Rate	3.6~6.9 Ms/s
Output Level	Max.95dBμV
MER	≥32dB
Return Loss	>12dB

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OFDM Modulation Module (CM-OFDM-01/01)

Output	4/8 frequencies via 1 RF female connector750
Standard	ETSI EN 300744
Frequency Range	47~862 MHz
Bandwidth	6/7/8 MHz
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.95dBμV
MER	≥32dB
Return Loss	>12dB

DTMB Modulation Module (CM-DTMB-01/01A)

Output	4/8 frequencies via 1 RF female connector750
Standard	DTMB GB20600-2006
Frequency Range	47~862 MHz
Constellation	4QAM-NR/4QAM/16QAM/ 32QAM/64QAM
Output Level	Max.95dBμV
MER	≥32dB
ReturnLoss	>12dB

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8VSB Receiver Module (CR-8VSB-00)

Input	4channels via 4 RFfemaleconnector
Frequency Range	50~860 MHz
Bandwidth	6 MHz
Modulation	8VSB
SignalLevel	-80~-20 dBm

DVBC Annex B/ISDB-T Receiver Module (CR-DVBC-01)

DVBC Annex B	
Input	4 channels via1 RF female connector
CI	2 x PCMCIA CI slots
CAM	Descrambledchannelquantity dependsonCAMcapability, 2CAMscouldbedifferent
QAM Mode	Annex B
Frequency Range	47~862 MHz
Bandwidth	6 MHz
Constellation	64QAM, 256QAM
Symbol Rate	5.057Ms/s (64QAM), 5.360 Ms/s
Signal Level	40~80 dBuV
CA System	Supports mainstream CAS

ISDB-T Mode	
Input	4 channels via1 RF female
CI	2 x PCMCIA CI slots
CAM	Descrambledchann elquantity dependsonCAMcap
Frequency Range	47~862 MHz
Bandwidth	6/7/8 MHz
Constellation	DQPSK, QPSK, 16QAM, 64QAM
FEC	1/2, 2/3, 3/4, 5/6, 7/8, Automatic
Signal Level	-80~-20 dBm
CA System	Supports mainstream CAS

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SDI Encoder Module (CE-SDI-00)

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	Input: SD: 576i@25fps, 480i@29.97fps HD: 1080p@25/30/50/59.94/60fps, 1080i@50/60fps, 720p@50/60fps Output: SD: 576i@25fps, 480i@29.97fps HD: 1080p@25/30fps, 1080i@50/60fps, 720p@50/60fps *For mpeg-2 encoding, the maximum input resolution is 1080i@60fps.
Bitrate Control	CBR
Bitrate	1,000~18,000 Kbps
GOP Structure	IBBP, IPPP, IBP
GOP Size	6~63
Audio	MPEG-1 Layer II, AAC-LC/HE, AC3
Audio Mode	Stereo(2.0,includingdownmix)
Sampling Rate:	48kHz

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EAS Processing Module (CP-EAS-00)

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: 480i@29.97fps.
ASI	500Kbps to 100Mbps
Contact Closure	3PIN Connector with Dry Contact or 5~12V DC input for EAS trigger
Bitrate Control	CBR
Bitrate	5,00~8,000 Kbps
GOP Structure	IBBP, IPPP, IBP
GOP Size	6~63
Audio	MPEG-1 Layer II, AAC-LC/HE, AC3
Audio Mode	Stereo(2.0,includingdownmix)
Sampling Rate:	48kHz
RJ45	10/100M Ethernet for SCTE-18 digital EAS input