

# MCE-4000 HD/SD Contribution H.264/MPEG4/MPEG2 Encoder

MCE-4000 is a high quality H.264/MPEG4 encoder with multiple analog and digital video and audio inputs, multiple DVB-ASI and IP/Ethernet outputs and remote web-based and SNMP management.

## Features

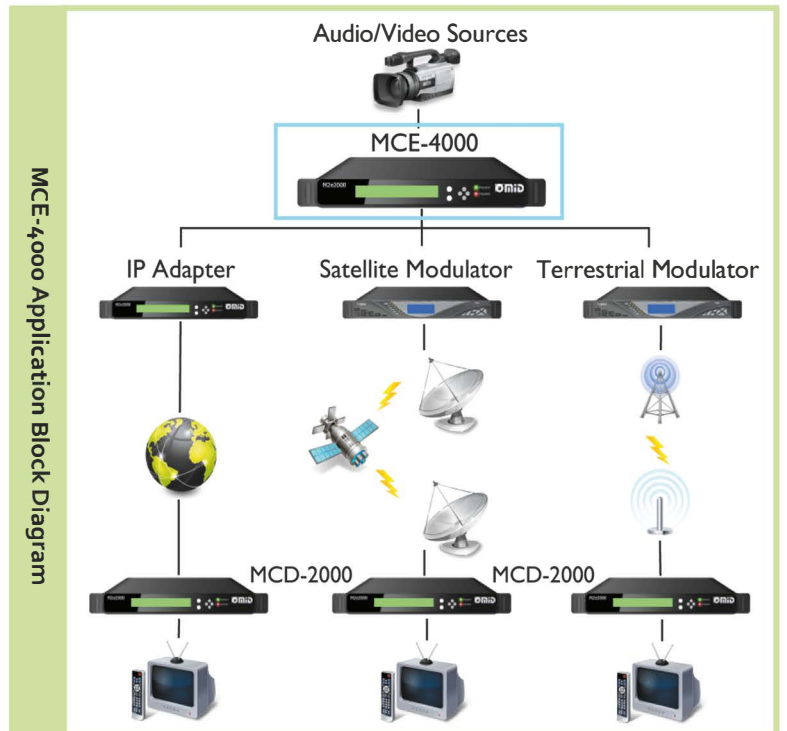
- Encodes both High Definition (HD) and Standard Definition (SD) video inputs
- Contribution video and audio quality with bit rates as low as 256Kbps
- High reliability and 24/7/365 operation
- Live IP streaming to up to eight multicast/unicast destinations
- Simultaneous encoding of up to two stereo audio pairs
- Supports various MPEG2 and MPEG4 profiles and levels
- Web-based control and monitoring
- SNMP management
- Compatible with HMS-6000 Hardware Management System
- Compact 1RU size
- SDI de-embedding of two stereo audio pairs
- Up to 6 MPEG-2 ASI transport stream outputs

## Applications

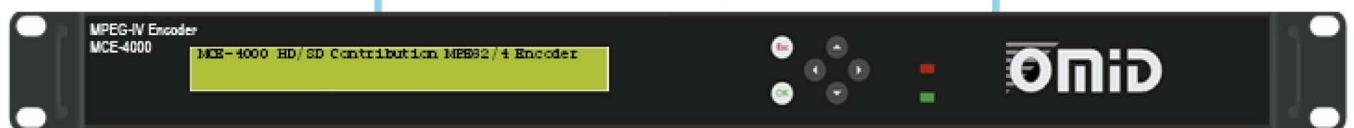
- IP, SDH and optical fibre inter- or intra-studio links
- IPTV
- Telemedicine
- Telepresence and Video conferencing
- Digital signage
- Satellite or terrestrial uplinks or head-ends
- Satellite News Gathering (SNG) or IP SNG
- Microwave links
- eLearning
- Remote video surveillance
- Cable broadcasting
- LAN TV applications

## Web Management Interface

- Password protected
- Based on SNMP
- Firmware upgrade from network
- Live monitoring of inputs and encoding engine
- Configuration of all device parameters



MCE-4000 front panel view



MCE-4000 rear panel view



# MCE-4000 HD/SD Contribution H.264/MPEG4/MPEG2 Encoder

## Related Products

- MCD-2000 MPEG2/MPEG4/H.264 Decoder
- HMS-6000 Hardware Management System

## Technical Specifications

<b>Input Video</b>	<ul style="list-style-type: none"><li>• Single SDI (Serial Digital Interface) with 4:2:2 or 4:2:0 chroma resolutions, 10/8 bit precision and 270 Mbps rate</li><li>• Analog video input (Option MCE-AVIO)</li><li>• 625 and 525 line PAL and NTSC standards and automatic video source and format detection supported</li><li>• Internal color bar and black pattern generator</li></ul>
<b>Input Audio</b>	<ul style="list-style-type: none"><li>• Up to two stereo digital audio inputs (Option MCE-DAIO)</li><li>• Up to two stereo analog audio inputs (Option MCE-AAIO)</li><li>• AES/EBU, 48 KHz, 16/24 bit</li><li>• Up to two digital audio inputs de-embedded from input SDI (Option MCE-EAIO)</li><li>• Internal test tone or silence generator</li></ul>
<b>Outputs</b>	<ul style="list-style-type: none"><li>• Two DVB-ASI outputs on base system</li><li>• Up to four additional DVB-ASI outputs (Option MCE-AASI)</li><li>• IP output to up to eight unicast/multicast destinations with UDP or RTP/UDP (Option MCE-VOIP)</li><li>• Two SDI re-clocked loop through outputs</li></ul>
<b>Video Encoding</b>	<ul style="list-style-type: none"><li>• Constant Bit Rate (CBR) encoding with zero null stuffing in the output</li><li>• I, IB, IBB, IP, IBP and IBBP GOP Structures supported.</li><li>• GOP lengths of 1 to 30 supported.</li><li>• MPEG2 Encoding:<ul style="list-style-type: none"><li>• 4:2:0 MPEG2 Main Profile at Main Level, MP@ML (ISO-13818-1, 2, 3) with rates of 512Kbps to 15 Mbps</li><li>• 4:2:2 MPEG2 4:2:2 Profile at Main Level, 422P@ML (Option MCE-422P) with rates of 3 to 50 Mbps</li><li>• Simple Profile at Main Level SP@ML (ISO-13818-1, 2, 3)</li></ul></li><li>• MPEG4/H.264 AVC Encoding:<ul style="list-style-type: none"><li>• Standards: ITU-T H.264, ISO/IEC 14496-10, MPEG4 AVC</li><li>• Profiles: High 422, High, Main, Baseline</li><li>• Levels: 4.1, 4.0, 3.2, 3.1 and 3.0</li><li>• Output video rates down to 256Kbps</li><li>• Interlace Coding: Field structure, PAFF, MBAFF</li><li>• Entropy Coding: CAVLC, CABAC</li><li>• Intra Prediction: All modes supported</li><li>• Inter Prediction: Block sizes of 16x16, 16x8, 8x16, 8x8 supported</li></ul></li></ul>
<b>Audio Encoding</b>	<ul style="list-style-type: none"><li>• MPEG I Layer II audio encoding (ISO-13818-3)</li><li>• AAC supported (Option MCE-AAC)</li><li>• Output rates of 24, 32, 48, 56, 72 Kbps for AAC and 96 Kbps up to 384 Kbps for MPEG I Layer II</li><li>• One stereo pair encoding on base system; Optional simultaneous second stereo pair encoding (Option MCE-AUD2)</li></ul>
<b>Management and Control</b>	<ul style="list-style-type: none"><li>• Full monitoring and control of system and encoding parameters through front panel, password-protected web browser interface (Option MCE-RIMO) and SNMP or HMS-6000 Hardware Management System</li></ul>
<b>Physical Dimensions and Power</b>	<ul style="list-style-type: none"><li>• Dimensions (WxDxH): 490 x 350 x 44 mm (19" x 14" x 1RU); approximate weight: 4 Kg</li><li>• Power: 100-285V, 3-pin IEC connector, with removable circuit breaker; consumption: 25 Watts</li></ul>
<b>Environmental Conditions</b>	<ul style="list-style-type: none"><li>• Operating temperature: 0°C to 50°C (32°F to 122°F)</li><li>• Operating humidity: 10%-75% non-condensing</li></ul>

## MCE-4000 HD/SD Contribution H.264/MPEG4/MPEG2 Encoder

### Ordering Information

Ordering Number	Description	Quantity	Ordering Number	Description	Quantity
MCE-4BAS	MCE-4000 Base System	1	MCE-VOIP	IP Streaming Output Option	1
MCE-AVIO	Analog Video Input Option	1	MCE-422P	4:2:2 Profile Encoding Option	1
MCE-DAIO	Digital Audio Input Option	1-2	MCE-AUD2	Second Audio Encoding Option	1
MCE-AAIO	Analog Audio Input Option	1-2	MCE-AACP	HE-AAC V1 and V2 Audio Encoding Option	1
MCE-EAIO	Embedded Audio Input Option	1	MCE-RIMO	Remote IP Management Option	1
MCE-AASI	Additional ASI Output Option	1-4	MCE-H264	H.264/MPEG4 Video Encoding Option	1
MCE-HDEO	High Definition Encoding Option	1	MCE-ATSY	Additional Technical Support Year Option	1-5