

MCE-4050 Spark Professional Encoder

Simultaneously experience highest quality of video and lowest bandwidth in full-HD Contribution HEVC encoder



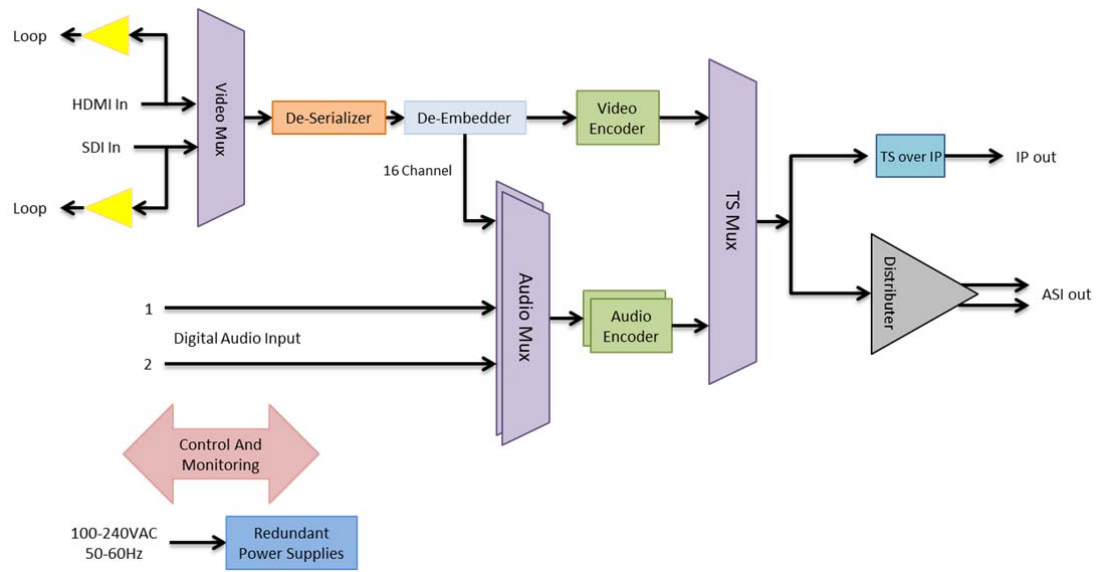
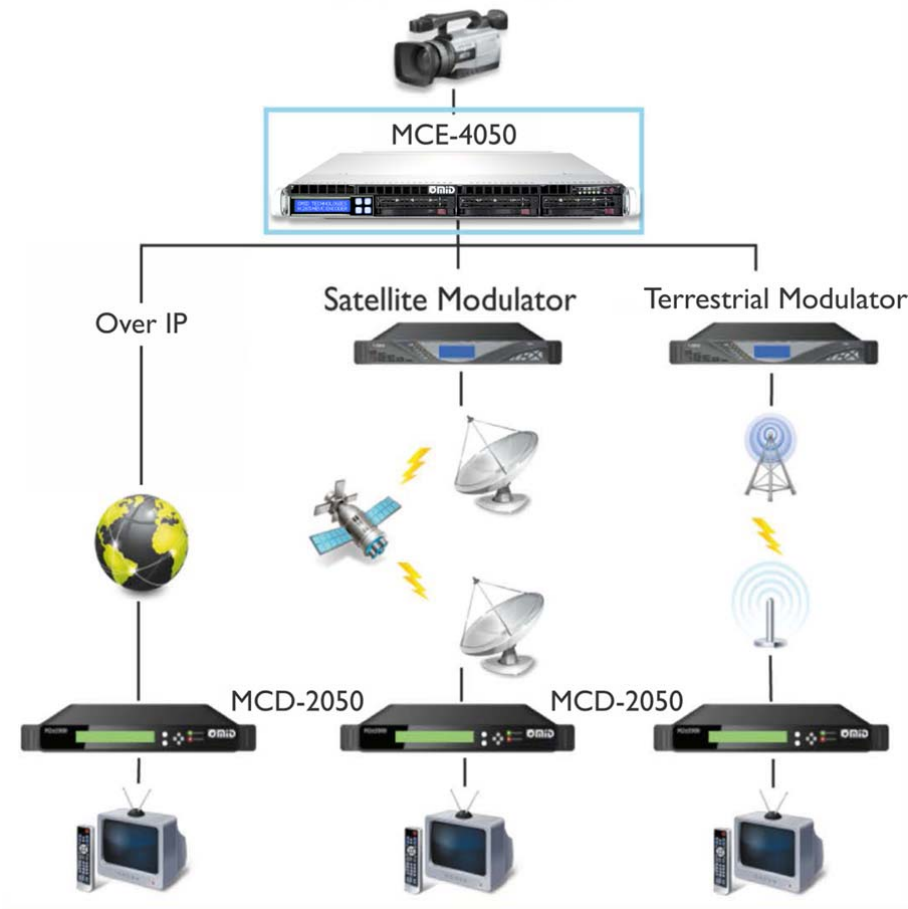
Features

- Supports H.265/HEVC and H.264/MPEG-4 AVC video encoding
- Encodes video input resolutions up to 1080p@60Hz
- Supports MPEG1-Layer II, AAC-LC, AAC+, HE-AAC V2 audio encoding
- Supports simultaneous IP output as well as ASI
- Embedded audio input up to 16-channel
- 3G-SDI input
- Multicast/Unicast over IPV4 with ProMPEG FEC
- Two Ethernet ports for Management and TS over IP
- Dual power supply for redundancy
- High reliability and 24/7/365 operation

Applications

- IP, SDH and Optical Fiber 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

Application Block Diagram of MCE-4050



Block Diagram of MCE-4050

Technical Specifications

| | |
|--------------------------------------|---|
| Input Video | <ul style="list-style-type: none"> ▪ Input Interface: <ul style="list-style-type: none"> ▪ BNC: 3G-SDI (SMPTE 424M), HD-SDI (SMPTE 292M), SD-SDI (SMPTE 259M) ▪ HDMI (Option MCE-HDMI) ▪ SDI Color Precision: 8, 10-bit YUV 4:2:2 in all modes ▪ HDMI Color Precision: 8, 10 and 12-bit (Deep Color) ▪ Video Resolution@Rate: <ul style="list-style-type: none"> ▪ 1080p (1920x1080)@23.98Hz, 24Hz, 25Hz, 29.97Hz, 30Hz, 50Hz, 59.94Hz, 60Hz ▪ 1080i (1920x1080)@50Hz, 59.94Hz, 60Hz ▪ 720p (1280x720)@50Hz, 59.94Hz, 60Hz ▪ PAL: 576i (720x576)@50Hz ▪ NTSC: 480i (720x480)@60Hz ▪ Internal Color Bar and Black Pattern Generator |
| Input Audio | <ul style="list-style-type: none"> ▪ Embedded Audio Sampling: Television Standard sample rate of 48 KHz at 24-bit ▪ Up to 16 channel Embedded Audio from SDI Input (SMPTE 299, SMPTE 272) ▪ Up to 2 channel AES/EBU Digital Audio Input (Option MCE-DAIO) ▪ Internal Test Tone or Silence Generator |
| Outputs | <ul style="list-style-type: none"> ▪ SDI re-Clocked Loop through Output ▪ IP Output to unicast/multicast Destination with UDP or RTP/UDP <ul style="list-style-type: none"> ▪ Forward Error Correction (ProMPEG FEC), SMPTE 2022-1 ▪ 2 ASI Outputs (Option MCE-ASI) <ul style="list-style-type: none"> ▪ Maximum TS Rate: 50.00Mbps |
| Video Encoding | <ul style="list-style-type: none"> ▪ Constant Bit-Rate (CBR) Encoding with Zero Null Stuffing in the Output ▪ Supports GOP Lengths of 1 to 250 ▪ Output Encoded Video Rate Down to 500Kbps ▪ H.265/HEVC Encoding <ul style="list-style-type: none"> ▪ Standard: ITU-T H.265, ISO/IEC 23008-2, HEVC ▪ Profiles: Main10 422, Main10, Main ▪ Levels: 5.1, 5.0, 4.1, 4.0, 3.2, and 3.1 ▪ Adaptive GOP Supported ▪ Entropy Coding: CABAC ▪ H.264/MPEG-4 AVC Encoding <ul style="list-style-type: none"> ▪ Standard: ITU-T H.264, ISO/IEC 14496-10, MPEG-4 AVC ▪ Profiles: High 422, High, Main ▪ Levels: 4.1, 4.0, 3.2, 3.1 and 3.0 ▪ Interlace Coding: Field Structure, PAFF, MBAFF ▪ Entropy Coding: CAVLC, CABAC ▪ Intra Prediction: All Modes Supported ▪ Inter Prediction: All Block Sizes Supported |
| Audio Encoding | <ul style="list-style-type: none"> ▪ One Stereo pair Encoding on Base System; Optional Simultaneous Second Stereo pair Encoding (Option MCE-AUD2) ▪ AAC-LC, HE-AAC (AAC+), HE-AAC V2 (Option MCE-AAC) <ul style="list-style-type: none"> ▪ Output Rates: 24, 32, 48, 56, 64 Kbps ▪ MPEG I Layer II Audio Encoding ISO/IEC 11172-3 <ul style="list-style-type: none"> ▪ 1 channel (Mono), 2 channel (Stereo) ▪ Output Rates: 32 Kbps up to 384 Kbps |
| Management and Control | <ul style="list-style-type: none"> ▪ Full Monitoring and Control of System and Encoding Parameters through Front Panel ▪ Password-Protected Web Browser Interface |
| Physical Dimensions and Power | <ul style="list-style-type: none"> ▪ Dimensions (W x D x H): 435 x 707 x 43 mm (17.1" x 27.8" x 1RU) ▪ Approximate Weight: 14 Kg ▪ Redundant Power Supply, 100-240VAC/50-60Hz, two separated 3-pin IEC Connector ▪ Consumption: 400 Watts |
| Environmental Conditions | <ul style="list-style-type: none"> ▪ Operating Temperature: 0°C to 50°C (32°F to 122°F) ▪ Operating Humidity: 10 to 75% non-Condensing |

Ordering Information

| Ordering Number | Description | Quantity | Ordering Number | Description | Quantity |
|-----------------|-------------------------------|----------|-----------------|--|----------|
| MCE-5BAS | MCE-4050 Base System | 1 | MCE-AAUD | Additional Audio Encoding Option | 1-3 |
| MCE-HDMI | HDMI Input Option | 1 | MCE-AACP | AAC-LC, AAC+ and HE-AAC V2 Audio Encoding Option | 1 |
| MCE-DAIO | Digital Audio Input Option | 1-2 | MCE-FPMO | Front panel Management Option | 1 |
| MCE-ASI | ASI Output Option | 1-2 | MCE-H264 | H.264/AVC Video Encoding Option | 1 |
| MCE-422P | 4:2:2 Profile Encoding Option | 1 | MCE-ATSY | Additional Technical Support Year Option | 1-5 |

Related Products

- Infinity Professional Decoder (**MCD-2050**)
- Re-Multiplexer (**RMX-8050**)
- ASI to/from IP Converter (**IPxASI-1000**)