Single Channel IP 2 QAM UHD 4K Modulator

A compact agile DVB-C A/C QAM channel modulator with integrated multiplexer receiving UDP multicast streams in any Codec/Resolution incl. SD, HD, 4K UHD compatible with h.265, h.264 & MPEG2 codec from multiple Encoder- & DVB IP streamer sources.

- Input: 8x UDP/RTSP*/HLS* Multicast reception (max. 51 Mb/s = DVB-C max. Data)
- Gigabit Ethernet RJ 45 Interface
- Nominal RF Output power ≥120dBµV, Range: 48...863MHz
- 0...20dB adjustable attenuation
- Test RF output – 20dB
- 2x ASI Outputs for cascading or monitoring the Transportstream
- IGMP multicast Query support
- Video-over IP applications like CCTV to DVB-C
- Multiplex RTSP/HLS/UDP to MPEG-TS
- Bandwidth: 1.15MHz...8.05MHz, Symbol Rate up to 7000
- 16, 32, 64, 128, 256QAM modulation modes

BLANKOM IPQAM-801
DVB-C QAM Modulator as addon Channel to existing CATV networks or serving Information-Channels or Digital Signage by Cable-TV.

UHD h.265 (HEVC), h.264 compatible in Distribution of SD, HD and UHD TV channels through the existing CATV Coax network using state-of-art IP to QAM technology from almost any kind of video format input streams.

TV distributions in home entertainment, surveillance control, hotels, digital signage, shops, bars, etc.

Excellent Video and Audio quality.

High reliability.

No regular service and maintenance need during operation.

www.blankom.de

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# Technical Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Description</th>
<th>Unit</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mechanical dimensions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Height</td>
<td>H</td>
<td>53 mm</td>
<td>mm</td>
<td></td>
</tr>
<tr>
<td>Width</td>
<td>W</td>
<td>107 mm</td>
<td>mm</td>
<td></td>
</tr>
<tr>
<td>Depth</td>
<td>D</td>
<td>171 mm</td>
<td>mm</td>
<td></td>
</tr>
<tr>
<td><strong>IP Port</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td>-</td>
<td>1000BASE-T</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connector</td>
<td>-</td>
<td>RJ45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. throughput</td>
<td>-</td>
<td>900 Mbps</td>
<td>Mbps</td>
<td></td>
</tr>
<tr>
<td>Compatible protocol</td>
<td>-</td>
<td>IP V4, RTSP, HLS, UDP</td>
<td></td>
<td><strong>HLS (HTTP Live Streaming)</strong></td>
</tr>
<tr>
<td><strong>RF Output</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impedance</td>
<td>-</td>
<td>75 Ω</td>
<td>Ω</td>
<td></td>
</tr>
<tr>
<td>Connector</td>
<td>-</td>
<td>BNC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>-</td>
<td>48...863 MHz</td>
<td>MHz</td>
<td><strong>Test-Port -20dB</strong></td>
</tr>
<tr>
<td>Output level</td>
<td>-</td>
<td>&gt;120 dBµV</td>
<td>dBµV</td>
<td>Adjustable (0...-20dB)</td>
</tr>
<tr>
<td><strong>ASI Output</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of ASI output</td>
<td>-</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impedance</td>
<td>-</td>
<td>75 Ω</td>
<td>Ω</td>
<td></td>
</tr>
<tr>
<td>Connector</td>
<td>-</td>
<td>BNC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Effective bit rate</td>
<td>-</td>
<td>≤51.6 Mbps</td>
<td>Mbps</td>
<td></td>
</tr>
<tr>
<td><strong>Modulation Specification</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modulation scheme</td>
<td></td>
<td>16...256QAM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symbol Rate</td>
<td>SR</td>
<td>1...7000 kS/s</td>
<td>kS/s</td>
<td></td>
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<tr>
<td>Bandwidth</td>
<td>BW</td>
<td>1.15...8.05 MHz</td>
<td>MHz</td>
<td></td>
</tr>
<tr>
<td>Effective output bit rate</td>
<td></td>
<td>≤ 51.6 Mbps</td>
<td>Mbps</td>
<td><strong>SR=7Mbaud, 256QAM</strong></td>
</tr>
<tr>
<td>Modulation Error Rate</td>
<td>MER</td>
<td>≥40 dB</td>
<td>dB</td>
<td><strong>After equalizer, 64QAM</strong></td>
</tr>
<tr>
<td>Bit Error Rate</td>
<td>BER</td>
<td>≥ 9x 10E-9</td>
<td>dB</td>
<td><strong>After FEC, 64QAM</strong></td>
</tr>
<tr>
<td>Carrier to Noise</td>
<td>C/N</td>
<td>≥ 45 dBµV</td>
<td>dB</td>
<td><strong>SR=7Mbaud, 256QAM</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Symbol</th>
<th>Min.</th>
<th>Max.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply Voltage</td>
<td>V</td>
<td>110</td>
<td>240</td>
<td>V</td>
</tr>
<tr>
<td>Supply Frequency</td>
<td>F</td>
<td>49</td>
<td>51</td>
<td>Hz</td>
</tr>
<tr>
<td>Power Consumption</td>
<td>C</td>
<td>0</td>
<td>+50</td>
<td>W</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>Tw</td>
<td>-25</td>
<td>+55</td>
<td>°C</td>
</tr>
<tr>
<td>Storage Temperature</td>
<td>Ts</td>
<td>0</td>
<td>+55</td>
<td>°C</td>
</tr>
<tr>
<td>Operating Humidity</td>
<td>H</td>
<td>0</td>
<td>45</td>
<td>%</td>
</tr>
</tbody>
</table>

Available as Outdoor version upon request

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Application Example and corresponding Devices:

Designed and tested to operate with the following BLANKOM products:

- DVB-Streamer: IGS-700/900
- Transcoder BTR-6000
- Professional Encoder: EMU 8xxx series
- All our boxed Encoder-Streamer HDE/SDE...

in various resolution and codec compatible up to 4K UHD:

HDE-4K5

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