**Overview:**

A compact and feature-rich COFDM digital video transmitter, specifically designed for high quality wireless link applications. With proven Domo COFDM and H.264 encoder technology at its core enabling High Definition images the small size and ultra low power consumption give maximum operational performance. Designed to offer maximum flexibility, the unit has a variety of video input options including composite, 3G-SDI and HDMI plus true balanced audio.

The transmitter has an integrated control panel with sunlight-readable OLED display covering all major functions and has 16 user-defined presets. A wide range of swappable frequency bands are available from 200MHz to 8.9GHz. Integrated UHF band Camera Control is available as an option.

**Features and Benefits:**

- Ultra-low latency High Profile H.264 SD and HD encoding
- Video formats up to 1080p60 and optional 4:2:2 Chroma sampling
- Industry standard DVB-T modulation for interoperability with existing systems
- Domo Broadcast UMVL modulation for enhanced high frequency / high speed performance
- Controlled via USB or RS-232, and integrated sunlight-readable OLED display
- Designed for sports & events coverage, newsgathering and wireless studio camera applications
- Integrated camera control option with wide range of supported manufactures
- User swappable RF modules and battery plate options
- Very low power consumption for extended field performance: typically 10.0W
- Weighs between just 520g and 870g

**Product Information:**

**Product Includes**

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CA0002</td>
<td>12V DC Power lead Lemo-wire 3m</td>
</tr>
<tr>
<td>CA0343</td>
<td>USB Control Cable</td>
</tr>
<tr>
<td>CA0579</td>
<td>XLR Audio Input Cable</td>
</tr>
<tr>
<td>SA3688</td>
<td>OBTX Support USB Stick</td>
</tr>
</tbody>
</table>

**CCCAM Expansion Includes**

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AP008822</td>
<td>1/4 Wave Antenna SMA 433MHz</td>
</tr>
</tbody>
</table>

**CCCAM Expansion Requires**

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OBTX-CCCAM-ENABLE</td>
<td>Enable Camera control RX upgrade</td>
</tr>
<tr>
<td>OBTX-CCCAM-xUP</td>
<td>At least one control Protocol and cable</td>
</tr>
</tbody>
</table>
Domo – Video, IP and Sensors

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**Technical Specification:**

<table>
<thead>
<tr>
<th>I/O</th>
<th>HDMI</th>
<th>SD/HD/3G-SDI</th>
<th>ASI input</th>
<th>ASI output</th>
<th>Composite/SDI-Video/RS232</th>
<th>Balanced stereo audio</th>
<th>USB control</th>
<th>External power</th>
<th>External PA</th>
<th>Battery pass-through</th>
<th>RF output</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>HDMI</td>
<td>BNC</td>
<td>1.0/2.3</td>
<td>1.0/2.3</td>
<td>7-way O/Lemo (CA0579 2 x XLR3)</td>
<td>5-way O/Lemo (CA0579 2 x Lemo)</td>
<td>6-way O/Lemo (CA0543 type-A USB)</td>
<td>4-way O/Lemo (CA0002 2 x banana)</td>
<td>4-way O/O Lemo</td>
<td>V/AB/PAG plates (optional)</td>
<td>N-type (100mW/50mW/10mW modes)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I/O (with Camera Control)</th>
<th>Camera interface</th>
<th>Tally</th>
<th>USB upgrade</th>
<th>RF input</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10-way circular Hirose</td>
<td>5-way OB Lemo</td>
<td>Micro-B USB</td>
<td>SMA (403-473MHz)</td>
</tr>
</tbody>
</table>

**Accessory Options (sold separately):**

- CA3122: Composite video input cable
- CA3232: Lemo to 9-way D-sub (RS232 data) cable
- OBTX-V-OEM: Additional V-Mount battery plates
- OBTX-AB-OEM: Additional Anton Bauer battery plates
- OBTX-PAG-OEM: Additional PAG battery plates
- OBTX-xxxxx-OEM: Additional RF module
- OBTX-CCCAM-RMA: Factory fit Camera Control RX upgrade
- OBTX-CCCAM-SUP: Sony control protocol and cable
- OBTX-CCCAM-PUP: Panasonic control protocol and cable
- OBTX-CCCAM-TUP: Grass Valley control protocol and cable
- OBTX-CCCAM-HUP: Hitachi control protocol and cable
- OBTX-CCCAM-CAMPAC: Multiple control protocol and cable bundle

**DVB-T Modulation:**

- **DVB-T bandwidth:** 8MHz, 7MHz and 6MHz modes
- **DVB-T FEC:** 1/2, 3/4, 5/6, 7/8
- **DVB-T constellation:** QPSK, 16QAM, 64QAM
- **DVB-T guard interval:** 1/4, 1/8, 1/16, 1/32
- **DVB-T bitrates:** 3.732Mbps to 31.668Mbps

**Narrowband/UMVL Modulation:**

- **NB bandwidth:** 2.5MHz, 1.25MHz and 625kHz modes
- **UMVL bandwidth:** 8MHz, 7MHz and 6MHz modes
- **NB/UMVL FEC:** 1/3, 2/3
- **NB/UMVL constellation:** QPSK, 16QAM, BPSK, 8PSK
- **NB/UMVL guard interval:** 1/8, 1/16
- **NB bitrates:** 144kbps to 4.879Mbps
- **UMVL bitrates:** 1.317kbps to 14.865Mbps

**Camera Control Demodulation:**

- **CC bandwidth:** 12.5kHz, 20kHz and 25kHz modes
- **CC constellation:** QPSK, GMSK
- **CC sensitivity:** -114dBm @ 25kHz bandwidth
- **CC sensitivity:** -111dBm @ 12.5kHz bandwidth

**Video:**

- **SD input format:** PAL, NTSC (with or without pedestal) 720x576i 50Hz, 720x480i 59Hz
- **HD input format:** 1920x1080i 60/59.94/50Hz, 1920x1080p 30/29.97/25/24/23.97Hz, 1280x720p 60/59.94/50Hz
- **3G input format:** 1920x1080p 60/59.94/50Hz (via 3G-SDI level A/B or HDMI)
- **H.264 compression:** AVC/H.264/MPEG-4 Part 10 High profile level 4.0 4:2:0 or 4:2:2 (optional)
- **ASP compression:** ASP/MPEG-4 part 2 with NB modulation and SD only
- **Coding options:** Horizontal scaling of 3/4, 2/3, 1/2, 1/4 Vertical scaling of 1/2, 1/4 Sub-frame rate of 1/2, 1/4, 1/8, 1/24
- **Encoder delay:** 1s to 10ms (mode dependent)
- **Encoder bitrates:** 0.25Mbps to 32Mbps

**Related Documents:**

- 100145: SOLO7 Transmitter Family User Guide
- MW3286: OBTX RF Module Assembly Guide
- MW3308: OBTX V-Mount Battery Plate Assembly Guide
- MW3285: OBTX AB-Mount Battery Plate Assembly Guide
- MW3309: OBTX PAG-Mount Battery Plate Assembly Guide

**Dmo – Video, IP and Sensors**
SOL70BTX
SOL07 Outside Broadcast Transmitter

Technical Specification (con’t):

Audio

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analogue audio input</td>
<td>Balanced analogue stereo pair</td>
</tr>
<tr>
<td></td>
<td>+18dBu max input level (up to 63dB gain)</td>
</tr>
<tr>
<td>Analogue phantom power</td>
<td>Off, 12V or 48V selectable</td>
</tr>
<tr>
<td>Digital audio input</td>
<td>SD/ND/3G-SDI 2 digital stereo pairs</td>
</tr>
<tr>
<td></td>
<td>HDMI 1 digital stereo pair</td>
</tr>
<tr>
<td>Sample rate</td>
<td>32kHz, 48kHz</td>
</tr>
<tr>
<td>Coding modes</td>
<td>4 channels stereo or mono</td>
</tr>
<tr>
<td></td>
<td>MPEG Audio Layer 1 64-448kbps</td>
</tr>
<tr>
<td></td>
<td>MPEG Audio Layer 2 32-384kbps</td>
</tr>
</tbody>
</table>

Other

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>RS232 data input</td>
<td>1k to 115k2, 7/8 bit, no/odd/even parity</td>
</tr>
<tr>
<td>Remote control</td>
<td>RS232 &amp; USB control from GUI application or other device</td>
</tr>
<tr>
<td>Front panel</td>
<td>Built in FCON Field Controller</td>
</tr>
</tbody>
</table>

Encryption

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABS 32-bit</td>
<td>Standard</td>
</tr>
<tr>
<td>AES 128/256-bit</td>
<td>Licensed (subject to export control)</td>
</tr>
</tbody>
</table>

Physical

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>L 170mm (142mm excluding connectors)</td>
</tr>
<tr>
<td></td>
<td>W 97mm (94mm excluding connectors)</td>
</tr>
<tr>
<td></td>
<td>H 35mm (without battery plates)</td>
</tr>
<tr>
<td></td>
<td>H 71mm (with V-lock or PAG plates)</td>
</tr>
<tr>
<td></td>
<td>H 62mm (with Anton Bauer plates)</td>
</tr>
<tr>
<td>Weight</td>
<td>520g to 870g depending on options</td>
</tr>
</tbody>
</table>

Power

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC input</td>
<td>9.2V to 17.8V reverse polarity protected</td>
</tr>
<tr>
<td>Power consumption</td>
<td>Typically 10.0W @ 100mW RF power with additional 2.0W for &gt;6.0GHz</td>
</tr>
<tr>
<td></td>
<td>Additional 0.5W for camera control</td>
</tr>
</tbody>
</table>

Environment

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature range</td>
<td>-10°C to +50°C</td>
</tr>
<tr>
<td>Humidity</td>
<td>Less than 85% non-condensing</td>
</tr>
</tbody>
</table>

Frequency

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>100150</td>
<td>1.00-1.50GHz</td>
</tr>
<tr>
<td>198270</td>
<td>1.98-2.70GHz</td>
</tr>
<tr>
<td>300370</td>
<td>3.00-3.70GHz</td>
</tr>
<tr>
<td>440500</td>
<td>4.40-5.00GHz</td>
</tr>
<tr>
<td>550600</td>
<td>5.50-6.00GHz</td>
</tr>
<tr>
<td>640700</td>
<td>6.40-7.00GHz</td>
</tr>
<tr>
<td>700750</td>
<td>7.00-7.50GHz</td>
</tr>
<tr>
<td>810890</td>
<td>8.10-8.90GHz</td>
</tr>
</tbody>
</table>

Software License Code

<table>
<thead>
<tr>
<th>License Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silver (included)</td>
<td>DVB-T, Ultra Mobile Video Link (UMVL), MPEG-4 H.264 (SD)</td>
</tr>
<tr>
<td>Gold</td>
<td>Silver plus MPEG-4 H.264 (HD), SDI Ancillary Data</td>
</tr>
<tr>
<td>Platinum</td>
<td>Gold plus MPEG-4 H.264 (4:2:2)</td>
</tr>
<tr>
<td>Film Assist</td>
<td>Only Narrowband 2.5MHz, MPEG-4 H.264 (HD)</td>
</tr>
<tr>
<td>AES128TX</td>
<td>AES 128-bit encryption</td>
</tr>
<tr>
<td>AES256TX</td>
<td>AES 256-bit and AES 128-bit encryption</td>
</tr>
</tbody>
</table>

Export of encrypted products is subject to United Kingdom regulatory export controls.

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