

# UC-450-ATSC-T MODULATOR

The UC-450-ATSC-T Modulator is an 8-VSB ATSC-T Modulator. The unit accepts either SMPTE-310M or DVB-ASI signals as its input, modulates it into an 8-VSB 44.0 MHz IF signal, and outputs an RF 8-VSB signal between the frequency range of 110 to 860 MHz.



- **Compliant with ATSC A/53 standard**
- **Double DVB-ASI inputs and SMPTE-310M inputs**
- **RS coding, Data Field interleaver, Pilot Insertion**
- **Trellis Constellation Coding: 8-VSB**
- **Channel Bandwidth: 6MHz**
- **IF agile from 35MHz to 45MHz with 1Hz step.**
- **RF agile VHF and UHF with step 1Hz**
- **Very high modulation performance: VM, SNR, RF stability, shoulder, etc**
- **External 10MHz reference clock inputs**
- **PID filtering and re-mapping**
- **PSI/SI information puck-up, phase and modification**
- **RJ-45 Ethernet interface introduces remote maintenance, supervision and software upgrade.**
- **Constant Temperature Crystal**
- **Remote Control**

|                   |  |   |
|-------------------|--|---|
| <b>Data input</b> | Socket Interface   | 75Ω, BNC<br>Comply with EN 50083 ASI and ATSC SMPTE-310M standard.<br>2 ASI inputs and 2 SMPTE-310M inputs Max bit rate: 19.38Mbps<br>TS Switching: Manuel/Automatic mode |
| <b>IF Output</b>  | Data Format<br>Output Impedance<br>Output Frequency Range<br>Output Level<br>Group Delay<br>Stability of Frequency @ ±3.2MHz<br>IQ Amplitude Imbalance<br>Carrier Suppression<br>Spurious<br>MER | Standard TS stream, 188/204byte<br>50Ω BNC<br>30~45MHz (Adjustable)<br>-5dBn (105dBμV)<br>v±0.2dB<br>±10 ns<br>1 ppm<br>-50dBc<br>≤0.02%<br>≤-55dBc<br><-60dBc<br>>42dBc  |

## UPCOM Technologies Inc.

2033 Gateway Place, 5th Floor, San Jose, California 95110

Phone: 1.408.329.4158 • Fax: 1.408.329.4159 • E-mail: sales@upcom.com

web : www.upcom.com



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## RF Output

|                               |                     |
|-------------------------------|---------------------|
| Output Impedance              | 50Ω NBC             |
| Output Frequency Range        | 110~860MHz          |
| Output Level                  | ≥0dBm (107dBμV)     |
| Monitor Signal Level          | -30+2dBm            |
| Total Frequency Deviation     | ≥0dBm (107dBμV)     |
| Output Suppression            | <-55dBc             |
| Output Level Adjustable Range | ≥16dB               |
|                               | ≥80dBc/Hz (@1Kz)    |
|                               | ≥105dBc/Hz (@100Kz) |
|                               | ≥130dBc/Hz (@100Kz) |

## Signal Encoding and Modulating

|                                  |                          |
|----------------------------------|--------------------------|
| Local Oscillation Phase Noise    | ≥130dBc/Hz (@100Kz)      |
| Bandwidth                        | 6M                       |
| MER                              | ≥36dB(agile); ≥40dB(Fix) |
| Attenuation                      | 0~16dB (0.5dB step)      |
| RS Encoding                      | (207,187)                |
| Trellis Encoding                 | 2/3                      |
| Modulation Mapping Constellation | 8-VSB                    |
| Bandwidth                        | 6M                       |

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