Upcom Technologies' UC-250 ISDB-T is a broadcast level digital modulator compatible with ISDB-T and ISDB-TB standards. It is designed to meet digital terrestrial TV broadcasting applications, from ASI Transport Stream inputs to UHF or VHF modulated signal outputs.

- FULLY COMPLIANT WITH ISDB-T AND ISDB-TB STANDARD
- HIGH MER, RF STABILITY, SHOULDER LEVEL AND LOW PHASE NOISE
- SUPPORT 1K, 2K, 4K FFT MODES
- GUARD INTERVAL: 1/4, 1/8, 1/16, 1/32
- FEC: 1/2, 2/3, 3/4, 5/6, 7/8
- constellation: DQPSK, QPSK, 16QAM, 64QAM
- MFN AND SFN NETWORK OPERATION (IIP PACKETS)
- RF AGILE FROM 50MHz TO 860MHz WITH STEP 1Hz
- OPTION IF AGILE FROM 34MHz TO 70MHz WITH STEP 1Hz
- POWERFUL LINEAR AND NON-LINEAR PRECORRECTION
- SUPPORT CREST FACTOR ADJUSTMENT
- EXTERNAL 1PPS AND 10MHz CLOCK INPUTS
- OPTIONAL PRE-AMPLIFIER
- OPTIONAL ONBOARD GPS
- RS232 CONTROL AND SUPERVISION OR IP WEB BROWSER IN OPTION
- RF AGILE FROM 50MHz TO 860MHz WITH STEP 1Hz

**TS Input:**
Fully compliant with ARIB STB-B31 and TR-B14 standard
2 x ASI inputs:
Support 188/204 packet, Packet mode and Burst mode
Input Transport Stream Packet de-multiplexer
IIP packet management for SFN operating
TS Redundancy: Manuel/Auto, Seamless in SFN mode
Connector type: BNC female, Impedance 75Ohm

**Modulation and channel coding:**
FFT: 1k, 2k, 4k
FEC: 1/2, 2/3, 3/4, 5/6, 7/8
Guard Interval: 1/4, 1/8, 1/16 or 1/32
Constellation: DQPSK, QPSK, 16QAM, 64QAM
Time interleave: 0 to 16
Channel Bandwidth: 6MHz

**RF Output:**
Central frequency: 50MHz to 860MHz
Signal level (Main): 0dBm +/- 2dB with 0dB to -10dB attenuation adjustable by 0.1dB step
Signal stability: +/- 0.5dB, +/-10kHz
Modulation error ratio (MER): >40dB
Shoulder: >50dB
Spurious: 50dB relative to total power
Connector type: N female, Impedance 50 Ohm

**RF Pre-Amplifier Option:**
Ultra linear amplifier for VHF, UHF Bands
Gain 15 Gain Flatness <1dB
Gain Stability <0.1dB

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IF Output Option:
Central frequency: 34MHz to 70MHz, Step 1Hz
Signal level(Main): 0dBm +/-2dB with 0dB to
-10dB attenuation adjustable by 0.1dB step
Signal stability: +/-0.5dB, +/-1kHz
Modulation error ratio(MER): >42dB
Shoulder: >55dB
Spurious: 50dB relative to total power
MFN and SFN network operation (IIP packets)
Connector type: N female, Impedance 50 Ohm

Linear Pre-correction:
Number of Pre correction points: 32
Amplitude pre correction: +/-3dB
Phase pre correction: +/-1us

Adjustable Crest Factor:
The range of Crest Factor: 8-20dB
The crest factor optimization: 1-255

Non linear Pre-correction:

<table>
<thead>
<tr>
<th>Correction</th>
<th>NB point</th>
<th>Abscissa range</th>
<th>Ordinate range</th>
<th>step</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM/AM</td>
<td>16</td>
<td>-12 dB to +12dB</td>
<td>-6dB to +6dB</td>
<td>0.05dB</td>
</tr>
<tr>
<td>AM/PM</td>
<td>16</td>
<td>-12 dB to +12dB</td>
<td>-25° to +25°</td>
<td>0.05dB/0.2°</td>
</tr>
</tbody>
</table>

Test Signal Modes:
PRBS TS Sequence
Sinus tone insertion
Null Symbol Insertion
Central Carrier Cancelled

ISDB-T/TB Network:
SFN: Time offset setting
MFN: BR adaptation, Static delay setting

Clock Reference:
Internal 10MHz
Stability: <+/-5x10^-9(typ), Output
level: 0dBm +/-3dB
External 10MHz
Input level: -7dBm to +2dBm
Input connector type: BNC female, 50 Ohm
External 1pps reference
Input level: TTL level 5 KOhms; Pulse width: 1us
Input connector type: BNC female
Optional onboard GPS

Control and Alarm:
Local control: 6 buttons, LCD screen, LED
Remote control: RS232 or WEB browser
through IP Ethernet RJ-45 in option

Power Supply:
AC 110V+/−15% or 220V+/−10%, 80W
Operating temperature:
0 to 50 degrees
Dimensions:
L=540mm,
W=483mm, H=44mm (1RU)
Weight: Net 7 kg, Gross 10kg