Upcom Technologies’ UC-750 DTV-GF is a VHF/UHF repeater/transmitter specially designed to improve and assure Terrestrial Digital TV coverage where the terrain features may cause gaps in the coverage of main transmission stations. The gap filler re-transmits the DTV RF channel at the same channel, amplified with minimum distortion.

- SUPPORT MAJOR DIGITAL TERRESTRIAL AND MOBILE TV STANDARDS: ISDB-T, ISDB-TB, ATSC, DVB-T/T2, DVB-H/SH, DTMB, CMMB, DAB/T-DMB, FLO
- CHANNEL BANDWIDTH: 6MHz OR 8MHz
- RF INPUT: VHF OR UHF WITH STEP OF 1Hz
- RF INPUT RANGE: -72dBm TO -10dBm
- NOISE FIGURE < 10dB
- INPUT LEVEL AGC SQUELCH
- ADJACENT CHANNEL INTERFERENCE: > 35dB
- RF OUTPUT: VHF OR UHF WITH STEP OF 1Hz
- RF OUTPUT LEVEL: 1W TO 100W
- MAX MER: 34dB TYPICAL, MER LOSS<2dB
- SPECTRUM SHOULDER > 45dB
- TRANSIT DELAY: 5µ
- ECHO CANCELLATION RANGE: 1.5µ TO 448µ
- ECHO CANCELLATION: <40dB
- GAIN MARGIN: -12dB MAX
- POWERFUL LINEAR AND NON-LINEAR PRE-CORRECTION
- DIGITAL SHAPING FILTER PRE-CORRECTION
- RS232 CONTROL AND SUPERVISION OR IP WEB BROWSER IN OPTION
- COMPLIANT WITH ATSC SPECIAL GAP FILLER FEATURES

**Equipment Operational Mode:**
- Iso-Frequency Gap Filler
- Hetero-Frequency Transposer

**ATSC Gap Filler Special Features:**
- Shaping filter delay: 5,6,7,9us
- Shoulder and out of band rejection: >54dB
- Maximum MER: 38dB typical
- Gain margin: -4dB @ MER=27.3dB
- Echo attenuation: >30dB
- Pilot carrier phase noise: < -93 dBC/Hz@ 20KHz
UC-750 DTV-GF
Digital Terrestrial and Mobile TV Gap Filler

RF Input:
Frequency range:
VHF frequency range: 170 MHz to 240 MHz
or UHF frequency range: 470 MHz to 860 MHz
Frequency step: 1Hz
Channel bandwidth: 6MHz or 8MHz
Input level range: -72 dBm to -10 dBm
Typical input level: -55 dBm
Max input level: 0 dBm
AGC squelch: -75 to -10dBm, +/-3dB
Noise figure: <8dB
Doppler filter (max frequency): 10Hz
Adjacent channel interference (QEF): Analogue > 35 dB, Digital >35 dB
Return loss: >13dB
Input connector type: N female, 50ohm

RF Output:
Central frequency:
VHF frequency range: 170 MHz to 240 MHz
or UHF frequency range: 470 MHz to 860 MHz
Frequency step: 1Hz
Output level: 1W to 100W +/-2dB, step 0.1dB
Signal stability: +/- 0.1dB/10degrees
In band ripple: < 1dB, Echo Cancellation off
In band ripple: < 1dB, Echo Cancellation off
Maximum MER: 34dB typical
Shoulder and out of band rejection: >45dB
Spurious: 36dB relative to total power
Return loss: >15dB
Output connector type: N female, 50 Ohm

Gap Filler Performance:
Digital filter shaping and tilt +/-2dB, step 0.2dB
Minimum transit time <5us
Echo cancellation range: 1.5us to 448us
Gain margin: -12dB max
Echo attenuation: >40 dB
MER loss: < 2 dB
Temperature management: RF mute or Power off at critical temperature

Build-in Test Mode:
PRBS TS Sequence
Central Carrier Cancelled mode for noise test
Iso-frequency Antenna coupling test

Control Mode:
Local control: 6 buttons, LCD screen, LED
Remote control: RS232 & RS485 or WEB browser through IP Ethernet RJ-45 in option
User friendly man machine interface

Operating temperature:
0 to 50°, humidity 10% to 80%(Indoor)
-20 to 70°, humidity 10% to 80%(Outdoor)

Pre-correction:
Linear pre-correction: shaping filter
Non linear pre-correction: AM-AM, AM-PM
Non linear Pre-correction:
Single shoulder and double shoulder.

<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>

Physical Conditions:
Power supply: AC 220V +/-15%, 50W-1000W
Operating temperature: 0-50°
Dimension: L=540mm, W=483mm, H=1 RU-6 RU
Weight: Net 7-35 kg, Gross 10-50 kg

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