

# MOD6700

## Professional DTMB Modulator

DTMB

DIBSYS



**MOD6700** broadcast grade modulator has been designed to provide a cost effective solution for Asian network operators, as well as for system integrators facing this new efficient standard. The unit has two serial MPEG TS-ASI inputs, either of these inputs can be used to modulate the DTMB signal. With fully DTMB standard compliant (GB20600-2006), MOD6700 support 2\*100M IP inputs, 2 channels of DTMB signal input, ASI loop out, and RS232 / 485 interface.

Designed to work in Multi Frequency Networks (MFN) and Single Frequency Network (SFN), it is extensively used in the setting up of DTMB digital broadcasting network, and production and test of set-top box. The operation of the MOD6700 is done via the front panel LCD display and controls. The modulator can be easily configured by navigating through a rather intuitive set of menus.

### Features

- Fully complying with GB20600-2006 and GB / T 28436-2012 standard
- 2 ASI in, 2\*IP in, 1 RF in, 10MHz reference clock and 1PPS in
- Supports adaptive linear digital pre-distortion (DPD)
- Supports adaptive non-linear digital pre-distortion (DPD)
- MFN and SFN supported
- Built in GPS module (optional), supporting 100m IP input, Loop out
- Extensive transmitted signal quality measurements (MER, SNR, Spectrum, etc.)
- RF output range: 50~860MHz with 0.1Hz step
- Constant temperature crystal oscillating and excellent frequency stability (reach up to 0.1ppm)
- Monitoring and alarm function
- MLC and ALC control function
- 10MHz monitoring output, Lo monitoring output and RF monitoring output
- No impulse on and off, better protection of transmitter
- NMS, Keyboard and LCD operation

### Application

- DTMB Digital TV Broadcasting
- RF or IF Transmitter integration
- MFN or SFN synchronized transmissions

## TECHNICAL SPECIFICATIONS

### Input

1*DTMB RF input	
RS232 / 485 interface	
2 ASI input	BNC (F), 75 $\Omega$ , hot backup
Dual IP input ports	one for hot backup over UDP/RTP, Unicast/Multicast, 100M
1external GPS clock	BNC (F), 50 $\Omega$ , 10MHz
1PPS input for SFN	BNC (F), 50 $\Omega$ , TTL level

### RF output

Connector	N Type, 50 $\Omega$ Impedance
RF range	50 ~ 860Mhz, 0.1Hz stepping
Output level	-20dbm ~ +0dbm, 0.1db stepping
MER	$\geq$ 50db
Power stability	$\pm$ 0.3dB (24H)
Frequency stability	$\leq$ $1 \times 10^{-7}$ (using built-in frequency reference) $\leq$ $1 \times 10^{-10}$ (using external frequency reference)
Shoulder (offset center frequency $\pm$ 4.2mhz)	$\leq$ -61dBc
Monitoring output	10 MHz clock monitoring output, Lo monitoring output and RF monitoring output

### Modulation

Standard	GB20600-2006 GD/J 067-2015
FFT	1, 3780, 1+Pilot

Constellation	4QAM-NR, 4QAM, 16QAM, 32QAM, 64QAM
frame format	420, 595, 945, 420 rotation, 945 rotation
FEC	0.4, 0.6, 0.8
interleaving depth	240, 720
Bandwidth	6MHz, 7MHz, 8MHz

### Non-linear DPD

over 12db ACPR improvement (normally)

### linear DPD

over 10db non-flatness adjustment(normally)

### Control

LCD display/keyboard  
NMP net management  
Supporting software upgrading through network

### Environment

Consumption	<30W
Power supply	AC 100V ~ 240V
Frequency	50/60Hz
Operation Temperature	-10 $^{\circ}$ C ~ 50 $^{\circ}$ C
Storage Temperature	-15 $^{\circ}$ C ~ 60 $^{\circ}$ C
Relative Humidity	max. 95%
Dimensions	480mm $\times$ 240mm $\times$ 44mm
Weight	2.6kg