

CMMB(STiMi) Signal Generator



CMG2000 >

Overview

CMMB(STiMi) is Mobile Multimedia Broadcasting Standard [Standard No. CMMB GY/T 220.1/200 and GY/T 220.2/2006] developed in China.

CMG2000 is the **all-in-one CMMB signal generator** which is fully compliant with China Mobile Multimedia Broadcasting standard in China. It can composite China MobileTV Test Solution. The RF output is generated by a high performance RF upconverter which covers the frequency range from 50MHz to 870MHz in steps of 1Hz. **CMG2000** is the most flexible solution for design evaluation and Manufacturing test of CMMB Chip, Tuner development or CMMB receiver such as portable receiver, mobile phone which require a live modulated RF signal.

Features

Main Characteristics

- China Mobile Multimedia Broadcasting Signal Generator
- Modulator : CMMB
- China MobileTV/DTV Test Solution support (DMB-TH, ADTB-T : Optional)
- Time-Slot Setting (Max. 40)
- Logical Channel Setting (Max. 40)
- MFN Network mode support
- AWGN (Optional : In preparation)

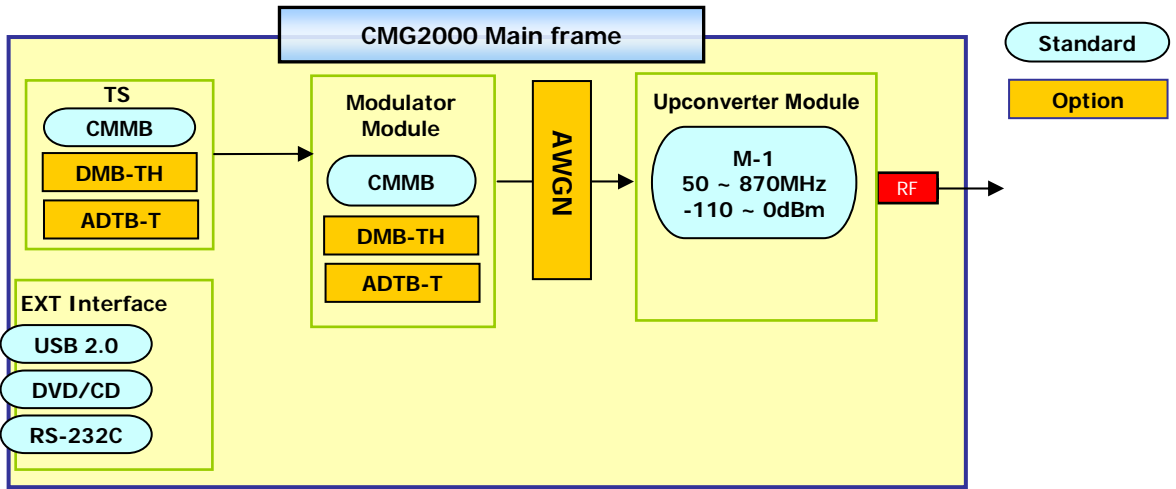
General Characteristics

- RF Upconverter : 50 ~870MHz
- OFDM Modulation
- PRBS Pattern Test (PRBS-9/ -15/ -23)
- AWGN (In preparation)
- Modulation Information
- System Information
- Frequency Information
- Frequency Table support
- TS List

Intended Application

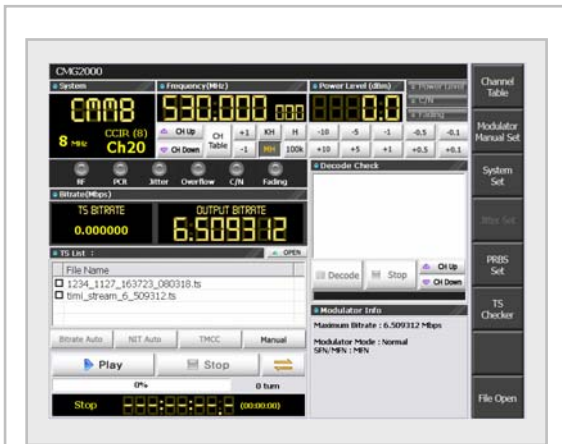
- CMMB receiver Design and Manufacturing Test
- Simulation of CMMB Broadcasting
- Broadcasting Transmission
 - CMMB Chip Development (Tuner/MPEG)
 - CMMB Demonstration & Sales

System Diagram

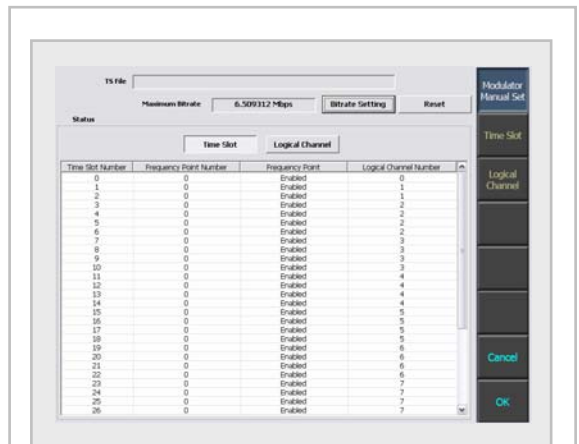


* Frame will be changed if there's additional modulator option

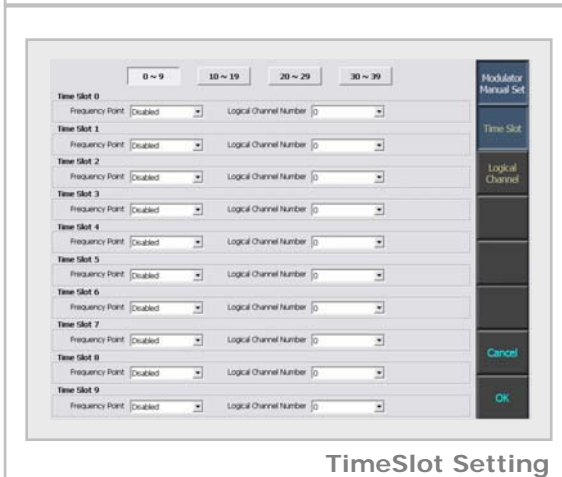
User Interface



Main UI



Modulation Setting



TimeSlot Setting



Logical Channel Setting

CMMB(STiMi) Signal Generator

Specifications

RF Specifications

- Output Connector : N Type
- RF Output Frequency : 50~870 MHz (VHF/UHF)
- RF Frequency Resolution : 1Hz
- Frequency Accuracy : $3 \times 10^{-6} / 25 \text{ }^\circ\text{C}$
- RF Power Level : -110 ~ 0dBm
- RF Level Resolution : 0.1dB steps
- RF Level Accuracy : $\pm 0.5\text{dB}$ relative to the level at 18-33 $^\circ\text{C}$
- RF Impedance : 50 Ω

General Specifications

- Power supply : AC 100 to 250V, 50/60Hz
- Power consumption : Less than 300W
- Operating temperature : 10 to 40 $^\circ\text{C}$
- Operating humidity : 20 to 85% RH (No Condensation)
- Storage temperature : -40 to +70 $^\circ\text{C} / 20 \sim 85\% \text{ RH}$
- Operating environment : Indoor
- Operating altitude : Around 2000m
- Over-voltage category : II
- Pollution degree : 2
- Dimensions : 435(W) x 231.8(H) x 519.7(D) mm
- Weight : Approx.17Kg (Not including options)

OS system

- Embedded OS

User interface system

- 10.4 inch TFT color LCD (800 x 600)
- Touch Screen

External Interface system

- USB Interface : USB HDD, USB Stick
- Remote Control : RS-232C

Modulator Specifications

- CMMB Module
Broadcasting system
- Digital Terrestrial TV : CMMB(STiMi)
Transmission Parameter
- Modulation : OFDM
- Support Mode : 4K
- Constellations : BPSK, QPSK, 16QAM
- Byte Interleave : Mode 1, Mode 2, Mode 3
- RS Coding : RS(240,240);RS(240,224);
RS(240,192);RS(240,176)
- LDPC : 1/2, 3/4 LDPC
- Time Slots No. : Max. 40
- Bandwidth : 8MHz
- Guard Interval : 1/8
- DTMB(DMB-TH) Module (MM-506)
Broadcasting system
- Digital Terrestrial TV : DTMB(DMB-TH)
Transmission Parameter
- Modulation : TDS-OFDM
- Constellations : 4QAM(QPSK), 16, 64QAM
- Guard Interval : PN420, PN945
(Frame Header)
- Coding Rate : 0.4, 0.6, 0.8
- Bandwidth : 5, 6, 7, 8
- Time Interleaver : 240, 720
- DTMB(ADTB-T) Module (MM-506)
Broadcasting system
- Digital Terrestrial TV : ADTB-T
Transmission Parameter
- Constellations : 4QAM NR, 4QAM, 16QAM, 32QAM
- Guard Interval : PN420, PN595, PN945
(Frame Header)
- Bandwidth : 5, 6, 7, 8
- Time Interleaver : 240, 720
- Function Options
• AWGN Module(FM-203) / In Preparation
- C/N range : 0 ~ +45dB
- C/N resolution : 0.1 dB Steps
- Noise Band Width : 0 ~ 10MHz

Ordering Information

Base Model	Description		Notes
CMG2000	CMMB(STiMi) Signal Generator – Built-in CMMB Modulator & RF Upconverter		
Options	Description		Notes
Modulator Option	MM-506	DTMB(DMB-TH, ADTB-T) Module	* Frame will be changed if there's additional option
Function Option	FM-203	AWGN Module (0 ~ +45dBm) * In preparation	
ETC Option	EF-301-300	HDD – 300G	* When a client selects additional option after purchasing product, all units should be returned to the factory.
	EF-303	Option Upgrade	

* All Specifications and Features are subject to be changed without notice

Dealer:
China Instrument Group Limited
Tel : 021-54934861 FAX : 021-54934862
E-mail : billin888@gmail.com