



## EVALUATION SYSTEM

### SOFDM-011\_5 IF/VHF COFDM Modulator Evaluation System

	<b>DVB-T Standards Conformity</b>	
	ETS EN 300 744	ver. 1.4.1 01/2001
	ETS EN 301 701	ver. 1.1.1 08/2000

#### Topics

- MER > 42 dB (44 dB typical)
- 8 MHz Channel (option 6 or 7 )
- ASI / LVDS inputs ( LVDS Clock input/output)
- Digital generated output (either):
  - 36 MHz IF
  - 109 MHz VHF
  - 182 MHz VHF
- 28 bit internal processing
- FEC 1/2 to 7/8
- Guard time 1/4 to 1/32
- 64 QAM, 16 QAM and QPSK uniform modes
- Simplified channel filter
- Embedded network adapter
- Web server interface (option)
- 2k carriers only
- Single 12 v operation

#### GENERAL DESCRIPTION

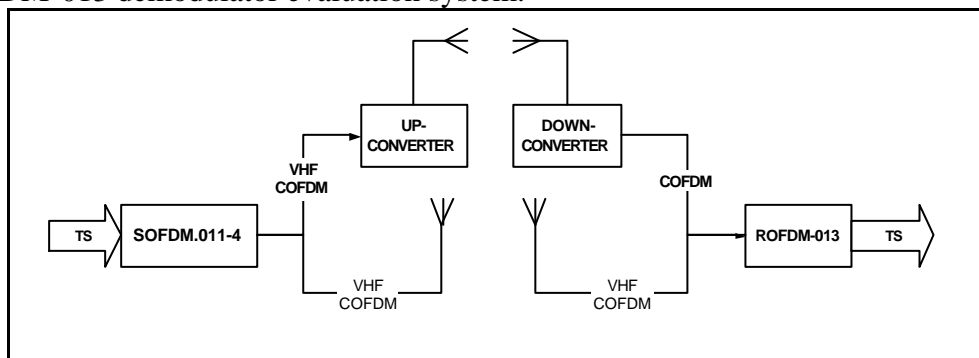
SOFDM-011\_5 is a new generation COFDM modulator evaluation system designed by M.B. International.

It is suitable for digital wireless video link and non- line-of-sight data applications.

Very High Modulation quality, unprecedented Output frequency digitally generated, small size and very low power consumption make it the base for developing custom COFDM Wireless Camera Links.

SOFDM-011\_5 is provided to demonstrate the high quality of M.B. International COFDM solutions.

To test a complete high quality COFDM solution, you can use the companion MMWL-009 or ROFDM-013 demodulator evaluation system.

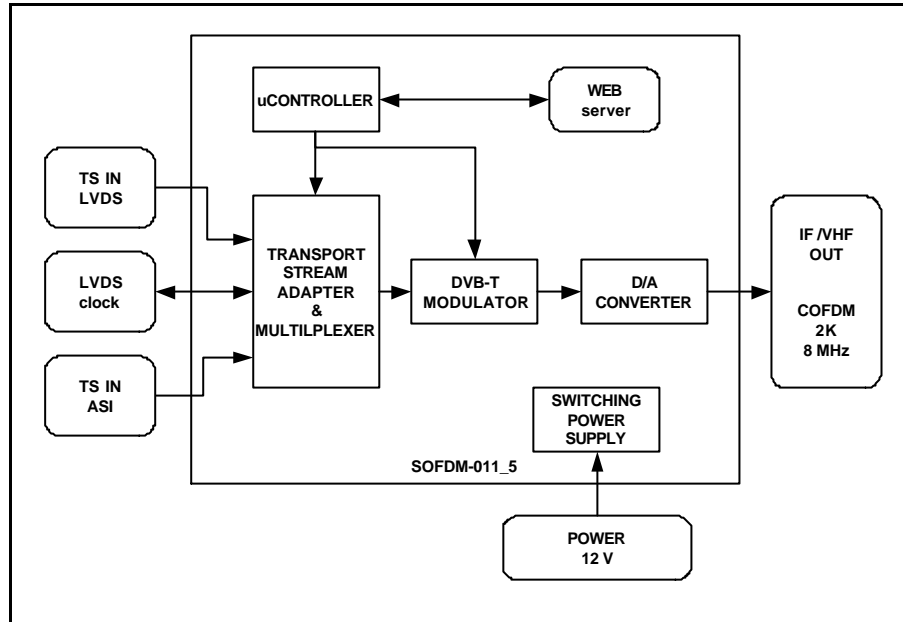




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### SOFDM-011\_5 evaluation board

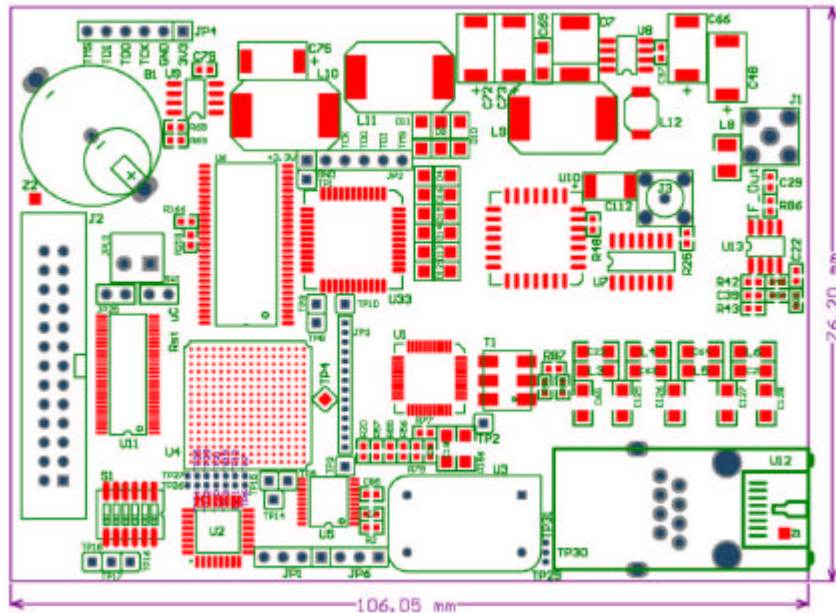
#### Block Diagram



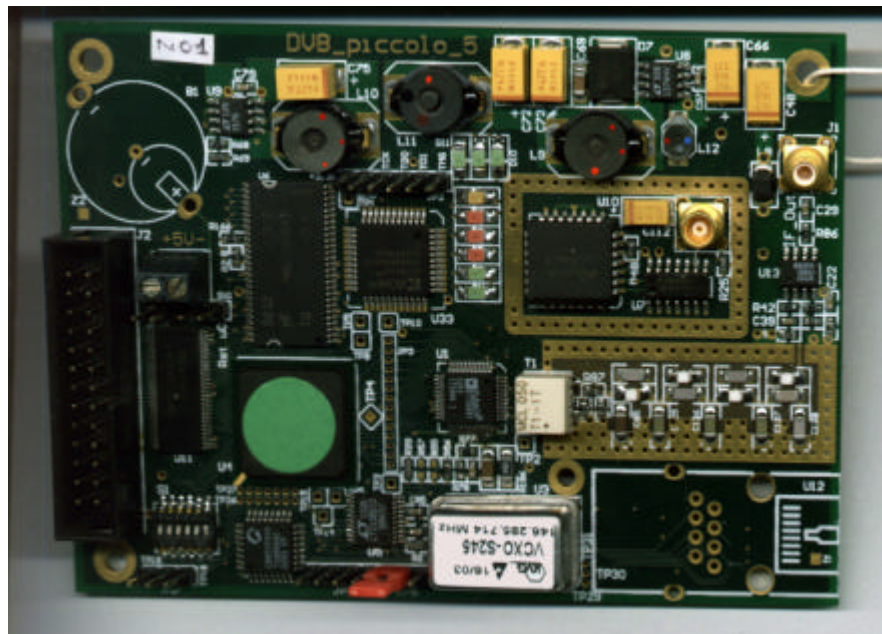


## EVALUATION SYSTEM

### PCB Dimensions



### Actual view





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### SOFDM-011\_5 Features

#### Inputs:

1. Transport Stream SPI (serial parallel interface)
2. Transport Stream ASI
3. 5 Volts. 0.9 Amps Power supply

#### Outputs

1. 2K COFDM, VHF (90 to 130 MHz), 8 MHz bandwidth

#### Interface

1. RS-232 for parameters reading, setup and storage (Windows HyperTerminal)

#### OFDM Performances:

1. Output Level = -16 dBm
2. Channel filter = - 60 dBc @ +/- 5.5 MHz
3. Spurious < - 70 dBc @  $\pm$  10 MHz from center freq.
4. Spurious < - 85 dBc from  $\pm$  10 MHz to  $\pm$  50 MHz from center freq.
5. Aliases: higher than 146 MHz
6. MER : > 42 dB, typical 44 dB
7. COFDM settings: all non hierarchical modes of ETS 300 744 and ETS EN 301 701

#### Other Performances:

1. Single 5 V power supply
2. Total power consumption: less than 3 W

### Evaluation system

The evaluation system is composed of:

1. SOFDM-011\_5 COFDM Modulator board
2. Operation manual

#### Nota Bene:

Dimensions, layout, and performances of the evaluation system are given as reference only;  
MB International retains the right to change them anytime for amelioration purposes.