

## SMA-701

### CATV Adjacent Agile Modulator Bank

SMA-701 Modulator Bank offers a compact CATV Headend with a 19" chassis and 8 slots for analog or digital plug-in modules. It supports the conversion of QPSK/QAM/COFDM signal to the traditional RF carrier such as PAL, NTSC or SECAM. The tuner-saved TS modules share descrambled streams from the master module, which supports Common Interface and could descramble several streams at the same time (Multi-decryption function should be supported by CAM). Migration from analog CATV system to digital could be achieved with different modules in one chassis.



### Main Features

- \* Supports Common Interface and multi-decryption CI CAMs
- \* Combined DVB receiver and Analog TV modulator on each slot
- \* Worldwide Analog TV standards, including A2 and NICAM
- \* Tuner-saved design by TS sharing among slots
- \* Easy configuration through External control unit
- \* 48MHz to 860MHz full band adjacent agile alignment
- \* RF output level: 110dBμV/ch
- \* Spurious less than -60dBc (110dBμV/ch@25°C)
- \* Main Frame supports all future modules, rack mount or wall mount
- \* High price and performance ratio and easy maintainance

### Module Cards

SMA-701MF Main Frame (Power supply, Combiner and Amplifier)

SMA-701CU Control unit

Cassette Video Input	Single Channel			
	DVB-S	DVB-T	DVB-C	Digital TS
PAL D/K	SMA-701PM-03S	SMA-701PM-03T	SMA-701PM-03C	SMA-701RM-03D
PAL B/G	SMA-701PM-13S	SMA-701PM-13T	SMA-701PM-13C	SMA-701RM-13D

Other standards available upon request

- \*SMA-701QAM AM Modulator
- \*SMA-701CM COFDM Modulator
- (\* Coming soon)

\*Specifications are subject to change without notice\*

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[WWW.PBI-CHINA.COM](http://WWW.PBI-CHINA.COM)



地址: 北京市海淀区苏州街75号鼎钧大厦401室  
 邮编: 100080 E-mail: [mkt@pbicn.com](mailto:mkt@pbicn.com)  
 电话: 010-62638833 转 243  
 传真: 010-82610263

Room 401, Bld.Dingjun Dasha, No.75 SuZhou Street,  
 Haidian District, Beijing, China, 100080  
 Tel: +86-10-62638833 Ext.243  
 Fax: +86-10-82610263

## Specifications:

### SMA-701MF:

#### Interface

Slot for modules	8
RF Output port interface	75Ω, F-female
Test Port(-20dB) interface	75Ω, F-female
RF Output Return Loss	≥12dB (VHF)    ≥10dB (UHF)
Output Level	100dBμV/ch
Output Level accuracy	± 3dB (47 to 862MHz; 0 to 45℃)
Harmonics and Spurious	60dBc typ.; 56dBc min.

#### Miscellaneous

Power supply	90~250ACV, 50/60Hz
Power consumption	200Watts Max.
Main Frame Dimensions	434mm*340.5mm*160.5mm
Operation Temperature	0~45℃
Recommended Operation Humidity	20~80% Non-condensed
Storage Temperature	-20~80℃

### SMA-701PM-S:

#### Tuner

RF input	75Ω, F type
RF output	75Ω, F type
Input Frequency Range	950~2150MHz
Input Level	-25~-65dBm
Symbol Rate	2~45Mb/s
Rolling Off Factor	0.20 or 0.35
Punctured Rated	1/2, 2/3, 3/4, 5/6, 6/7, 7/8
Reeds Salomon Decoding	204, 188 T=8 & I=12
LNB Power	13V, 18V Switchable
LNB Switch	0, 22KHz and DiSEqC 1.0

#### CI

CI PCMCIA Module Slot    One PCMCIA type  
Fully support Irdeto, Viaccess, NDS and other Common Interface system

### SMA-701PM-C:

#### Tuner

RF input	75Ω, F type
RF output	75Ω, IEC type
input frequency	40~860MHz
input level	40~85dBμV @ 64QAM
QAM Mode	16, 32, 64, 128, 256QAM
symbol rate	2.5~6.952MSym/s

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邮编: 100080 E-mail: [mkt@pbicn.com](mailto:mkt@pbicn.com)  
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## CI

CI PCMCIA Module Slot One PCMCIA type  
Fully support Irdeto, Viaccess, NDS and other Common Interface system

### SMA-701PM-T:

#### Tuner

RF input	75Ω, F type
RF output	75Ω, F type
Input Frequency Range	174~230MHz, 470~860MHz
Input Level	-25~-65dBm
Symbol Rate	3.6~6.952Mb/s
Used Bandwidth	7MHz (174~230MHz), 8MHz (470~860MHz)
Punctured Rated	1/2, 2/3, 3/4, 5/6, 7/8
Reeds Salomon Decoding	204, 188 T=8 & I=12
Guard interval	1/4,1/8,1/16,1/32
FFT Mode	2k, 8k

## CI

CI PCMCIA Module Slot One PCMCIA type  
Fully support Irdeto, Viaccess, NDS and other Common Interface system

### SMA-701PM/RM series:

#### RF

Video Carrier Frequency Range	48.25~860.25MHz(Adjustable, step by 1MHz)
Power Level Attenuation	0~18dB (Adjustable, step by 1dB)
Picture Carrier Accuracy	≤±5KHz (VHF); ≤±10KHz (UHF)
Audio Carrier Frequency (main)	6.5MHz (D/K,L)
	6.0MHz
	5.5MHz
	4.5MHz
Audio Carrier Frequency Accuracy	±2KHz
Video/Audio Carrier Ratio (main)	12dB/16dB selectable
Audio Carrier Frequency (second)	6.742MHz (D/K)
	6.258MHz
	5.742MHz
	4.724MHz
Video/Audio Carrier Ratio (second)	20dB
Video Modulation index	77.5~97.5%, step by 1% (D/K,B/G,I,M/N)
Audio Modulation deviation peak-peak	40~160KHz, step by 10KHz (B/G,D/K,I)
	20~80KHz, step by 5KHz (M/N)

#### Video

K2T	≤4%
Video S/N Ratio	≥45dB (8ch combined)
Frequency Response	≤±1 dB

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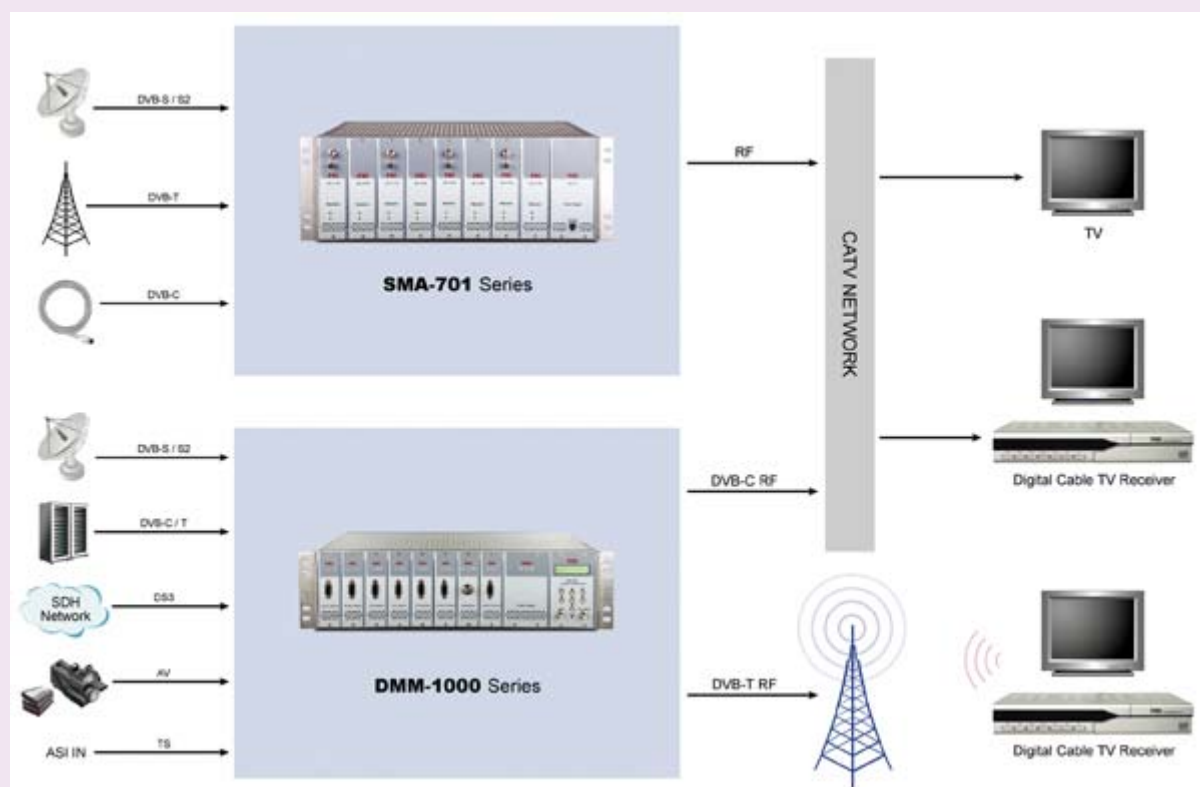
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Differential Gain	≤4%
Differential Phase	≤4°
C/L Delay	≤45ns
<b>Audio</b>	
Pre-emphasis time constant	50μS (B/G,D/K,I) 75μS (M/N)
Total Harmonic Distortion	≤1%
Frequency Response	≤±1.5dB (40Hz~15KHz)



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