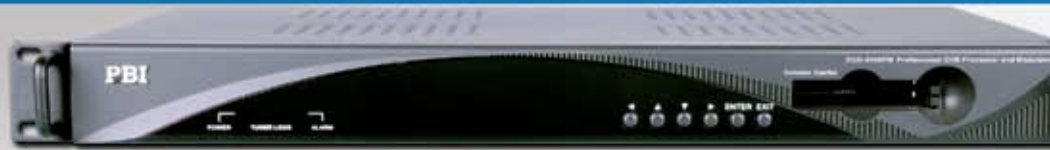


# DCH-4000PM

## Professional DVB Processor and Modulator

### Headend System



As the flagship of PBI digital modulator series, DCH-4000PM provide users not only a QAM or COFDM modulator, but also a powerful and flexible DVB PSI/SI processor. With a variety of options for DVB-S2/S, DVB-T, DVB-C, ASI, TSoIP and DS3 reception, DCH-4000PM can be deployed in most of the digital TV distribution systems. DCH-4000PM has two CI slots for descrambling, and multi-descramble could be achieved by working with a professional CAM module. Via the built-in re-multiplexer, the final TS could be highly customized and then be converted to a new QAM or COFDM RF signal. Furthermore, DCH-4000PM provide a unique backup function on input ports, that the Tuner Input, ASI Input and IP Input work independently but will monitor and backup each other\*. This unique function enables the distribution system stay alive and more reliable in case of one or two of the three input sources have errors or going down. User could take full control and surveillance via Webpage, or HDMS (SNMP based network management software) or via front panel locally.

*Note\*: user can specify the sequence of backup sources, for example, if user set Tuner input as the main source, and then ASI input as the first backup, and IP as the second backup, when the Tuner lost signal, DCH-4000PM will take ASI Input as the source of modulation.*

### Features

- Comply with DVB-C/QAM ITU-J.83, Annex A and B standard
- Build-in re-multiplexer
- RF output options: DVB-C/QAM or DVB-T/COFDM
- CI slots support various Conditional Access systems
- 10/100M Base-T DVB TS over IP input or output (UDP/RTP)
- Multicast or Unicast over IP
- Network management via Webpage or HDMS
- 2K mode for DVB-T/COFDM
- Upgradable through LAN

\* Specifications are subject to change without notice \*

# DCH-4000PM

## Professional DVB Processor and Modulator

## Specifications

### RF Output

Output frequency range	48~860MHz
Output frequency adjustment	Min. step by 10KHz
Output level	95~120dB $\mu$ V
Output level adjustment	Min. step by 1dB
Output impedance	75 $\Omega$ , F-type
Output return loss	12dB min.
Spurious rejection	60dBc min.
Output frequency accuracy	VHF: $\pm$ 5KHz, UHF: $\pm$ 10KHz

### DVB-C QAM Modulation

Constellation	J.83A: 16, 32, 64, 128, 256QAM J.83B: 64 or 256QAM
Symbol rate	2~7.2MS/s
MER	36dB min.
Spectrum inversion	Inverted or Normal selectable

### DVB-T COFDM Modulation

Constellation	QPSK, 16-QAM, 64-QAM
FFT mode	2K
Guard interval	1/4, 1/8, 1/16 or 1/32
FEC code rate	1/2, 2/3, 3/4, 5/6 or 7/8
Bandwidth	6MHz, 7MHz or 8MHz
Effective bit rate	3.732~31.67Mbps
TPS auto-generation	Yes
Spectrum inversion	Inverted or Normal selectable
SFN	not support

### Built-in re-multiplexer

Input PID range	0x0000~0x1FFF
Output PID range	0x0000~0x1FFF
PSI/SI generating	Auto or Manual
PID filter selection	Service name or PID number
Hierarchy	not support

### DVB-S2 8PSK/QPSK Demodulation

Input frequency range	950~2150MHz
Input level	-69~25dBm
Input impedance	75 $\Omega$
Connector	F type, female
Symbol rate	2~45MBps(SCPC or MCPC)
Rolling off factor	0.35 for QPSK 0.35, 0.25, 0.2 for DVB-S2

\* Specifications are subject to change without notice \*

Punctured rate	DVB-S2
	QPSK: 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 8/10
	DVB-S2 8PSK: 3/5, 2/3, 3/4, 5/6, 8/9, 9/10
	DVB-S: 1/2, 2/3, 3/4, 5/6, 6/7, 7/8
LNB power supply	0, 13V, 18V selectable
0/22K	0/22K selectable
DiSEqC	DiSEqC 1.0

### DVB-C QAM Demodulation

Input frequency range	50M~860MHz
Input impedance	75Ω, IEC-female (7/8MHz) or F-female (6MHz)
Symbol rate	1~7MS/s (PAL), 1~6MS/s (NTSC)
Constellation	J.83A: J.83B:
Tuner bandwidth	6MHz/7MHz/8MHz factory option
FEC code rate	1/2, 2/3, 3/4, 5/6 or 7/8; K=7
Input signal level	-15~15dBmV

### DVB-T COFDM Demodulation

Input frequency range	174~230MHz, 470~860MHz
Input impedance	75Ω, IEC-female
Input symbol rate range	4.98~31.67Mbps (8MHz bandwidth)
Constellation	QPSK, 16-QAM, 64-QAM
Tuner bandwidth	6, 7 or 8MHz factory option
Input signal level	-20~-75dBm
FFT mode	2K/8K, auto-detected
Guard interval	1/4, 1/8, 1/16 or 1/32, auto-detected
FEC code rate	1/2, 2/3, 3/4, 5/6 or 7/8, auto-detected

### DS3 Input

Input impedance	75Ω, BNC
Max. input bit rate	44.736Mbps
Loop through output impedance	75Ω, BNC
Max. output bit rate	44.736Mbps
Format	Unframed or framed Framing according to G.804/G.752 (DS3)

### TS over IP I/O

Connector	RJ45, 10/100M
Max. bit rate	70Mbps
Transport protocol	UDP/RTP, support unicast or multicast
Control protocol	IGMPv2

### I/O Interface on Rear Panel

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# DCH-4000PM

## Professional DVB Processor and Modulator

## Specifications

Tuner input/output	1×input, 1×loop through output
RS-232	1×9-pin D-sub male
Ethernet control port	1×RJ45 for Network management
TS over IP input or output	1×RJ45, TS over IP (optional)
ASI input	1×BNC, 75Ω
ASI output	2×BNC, 75Ω(one for back-up)
RF output	1×F-type, 75Ω



### Model List

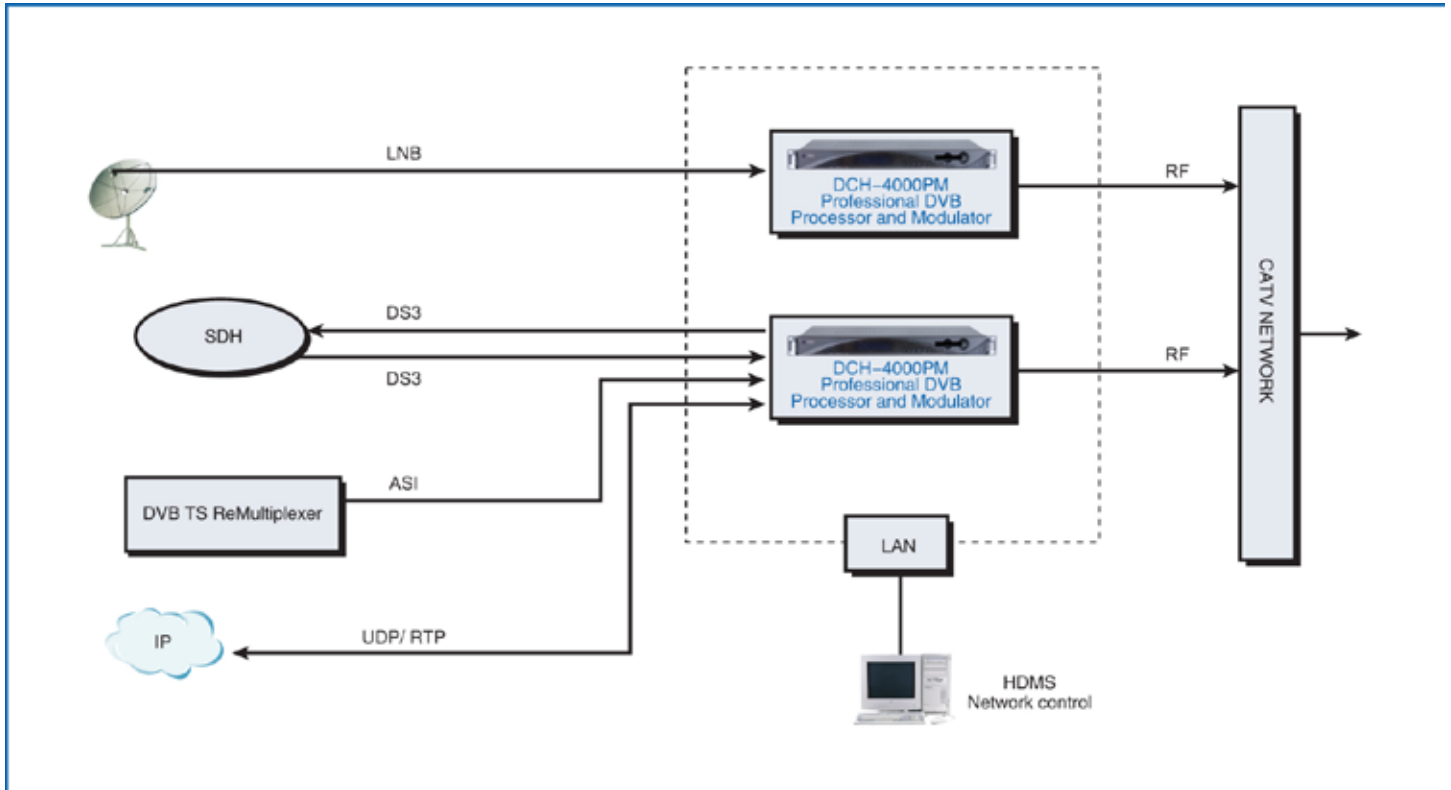
Tuner Input	DVB-S	DVB-S2	DVB-C	DVB-T	DS3
DVB-C/QAM output	DCH-4000PM-SC	DCH-4000PM-S2C	DCH-4000PM-CC	DCH-4000PM-TC	DCH-4000PM-DC
DVB-T/COFDM output	DCH-4000PM-ST	DCH-4000PM-S2T	DCH-4000PM-CT	DCH-4000PM-TT	DCH-4000PM-DT

\* Specifications are subject to change without notice \*

# DCH-4000PM

## Professional DVB Processor and Modulator

## Specifications



\* Specifications are subject to change without notice \*