

## GC-1808 Series

### High-Density Professional Receiver, Multiplexer and Scrambler



### Product Overview

GC-1808 is a high density, versatile professional receiver, multiplexer and scrambler, and was designed to receive up to eight FTA or BISS encrypted SD and HD broadcast streams from satellite (or cable, terrestrial) network in 1RU.

The GC-1808 Series features multiple options, high density and superior performance, provides up to five RF demodulation options, including DVB-S/S2 satellite, DVB-C cable, DTMB, ATSC and ISDB-Tb terrestrial input, each option with a maximum eight channels of inputs simultaneously. It deliver quadruple or better system capacity for operators compared with the professional IRD on the market today.

The GC-1808 series enables service providers to offers a wide range of highly competitive, high-quality and reliable services to subscribers with a lower total cost of ownership (TCO), It can be widely used in DTV central headend system and remote headend systems.

### Main Features

- Up to eight channels of RF demodulation inputs in 1RU
- Multiple RF input options: DVB-S/S2, DVB-C, DTMB, ATSC and ISDB-Tb
- Supports standard DVB-S QPSK, DVB-S2 QPSK, 8PSK demodulation
- Supports optional DVB-S2 16APSK, 32APSK demodulation
- Supports BISS mode 1 decryption option
- Supports TS multiplexing, PID mapping and PSI/SI processing
- Up to four DVB SimulCrypt CA and DVB-CSA scrambling
- Up to 256 scrambling services/programs
- Supports 100/1000Mbps Ethernet and dual DVB-ASI outputs
- Supports up to 14 MPTS or 246 SPTS outputs over MPEG TS-over-UDP/RTP
- Able to process a maximum of 16 output transport streams and 512 programs
- Easy-to-use Web/SNMP-based management

## Technical Specifications

### RF Input Options

#### Standard Satellite Input Option

Number of Inputs	8 x L-Band Input (with Loop Out each)
Connector Type	F-Type (Female, 75Ω)
Standards	DVB-S (EN300421) DVB-S2(EN302307)
Demodulation	DVB-S: QPSK DVB-S2: QPSK/8PSK
Frequency Range	950MHz to 2150MHz
Input Signal Level	-65 to -25dBm
LNB Power Output	0V/+DC 13V/18V, I <sub>max</sub> =400mA

#### DVB-S2 16APSK/32APSK Satellite Input Option

Number of Inputs	8 x L-Band Input (with Loop Out each)
Connector Type	F-Type (Female, 75Ω)
Standards	DVB-S (EN300421) DVB-S2(EN302307)
Demodulation	DVB-S: QPSK DVB-S2: QPSK/8PSK/ <b>16APSK/32APSK</b>
Frequency Range	950MHz to 2150MHz
Input Signal Level	-65 to -25dBm
LNB Power Output	0V/+DC 13V/18V, I <sub>max</sub> =400mA

#### Cable Input Option

Number of Inputs	8 x RF Input (with Loop Out each)
Connector Type	F-Type (Female, 75Ω)
Standards	DVB-C (EN300429)
Constellations	16/32/64/128/256 QAM
Frequency Range	50MHz to 860MHz
Input Signal Level	-20 to +20dBm (64QAM)

#### DTMB Terrestrial Input Option

Number of Inputs	8 x RF Input (with Loop Out each)
Connector Type	F-Type (Female, 75Ω)
Standards	DTMB (GB20600-2006)
Constellations	4QAM, 4QAM-NR, 16/32/64 QAM
Bandwidth	6/8 MHz
Frequency Range	54 to 860MHz
Input Signal Level	>-84dBm

#### ATSC Terrestrial Input Option

Number of Inputs	8 x RF Input (with Loop Out each)
Connector Type	F-Type (Female, 75Ω)
Standards	ATSC A-53
Constellations	8VSB, 16VSB
Bandwidth	6MHz
Frequency Range	100 to 900MHz

#### ISDB-T Terrestrial Input Option

Number of Inputs	8 x RF Input (with Loop Out each)
Connector Type	F-Type (Female, 75Ω)
Standards	ISDB-T/Tb (ARIB STB B-31)
Constellations	16QAM, 64QAM
Bandwidth	6/7/8MHz
Frequency Range	VHF: 174-216 MHz, UHF: 470-860 MHz

Input Signal Level	>-81dBm
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### BISS Decryption Option

BISS Modes	Mode 0, Mode 1
Decryption Capability	Up to 100 Session Words(SWs)/programs

### DVB-ASI Output

Numbers of ASI	2 x ASI Output
Connector Type	BNC (Female, 75Ω)
Data Format	188/204 Bytes MPEG-TS packet length
Bit Rate	1.5 to 100Mbps each

### IP Output

Numbers of Output	1 x 100/1000 Base-T Ethernet
Connector	RJ-45
TS Format	7 x 188Byte
IP Encapsulation	MPEG TS-over-UDP/RTP
MEPG TS Mode	MPTS or SPTS
Number of Output TS	14 SPTS or 246 MPTS
Addressing	Unicast or Multicast
Supported Protocol	UDP, RTP, ARP, ICMP, IGMP

### TS Multiplexing

Capacity of Multiplexing	Up to 24 TS and 512 programs
Operation Mode	TS Pass through or Multiplexing
PCR	Auto correction
PSI	PSI auto-generation, manual insertion
PID	Remapping, filtering and pass-through
PSI/SI Standards	ISO/IEC 13818-1, DVB SI(ESI EN300468)
Real-time Statistics	TS rate, program rate, PID rate
Others	Smart search of programs

### TS Scrambling Option

Capacity of Scrambling	Up to 256 programs
Scrambling Algorithm	Comply with DVB-CSA
Numbers of CAS	Up to four DVB SimulCrypt CA(s)
CAS Interface Protocol	TCP/UDP (via NM interface)
EMM Bandwidth	Up to 3 Mbps
Scrambling Level	Program-level

### Network Management

Interface	1 x 10/100 Base-T Ethernet
Connector	RJ-45
Management	Web and SNMP

### Miscellaneous

Front Panel	3.5" LCD with 6 x Control Buttons for 2-line alphanumeric display and settings
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	3 x Dual color LED, for status indications of power, work and Alarm
Rear Panel	1 x Power Supply Receptacle (AC Input) 1 x Power switch

### Power Supply

Input Voltage	90 - 250 VAC, 50/60Hz
Power Consumption	70W(Maximum)

### Environmental

Operating Temperature	0°C to 45°C(32°F to 113°F)
Storage Temperature	-20°C to 80°C(-4°F to 176°F)
Operating Humidity	90%, non-condensing

### Mechanical

Product Dimensions (W x H x D)	483mm x 44.5mm x 400mm 19" x 1.73" (1 RU) x 15.8"
Product Weight	5Kg (11 lbs)

## Rear Panel View



## Ordering Information

### Hardware Options

Model Number	Descriptions
GC-1808M-S	8 x DVB-S/S2 QPSK/8PSK L-band Satellite input, 2 x ASI Output, 1 x 100/1000Base-T Output
GC-1808R-S	8 x DVB-S/S2 QPSK/8PSK/16APSK/32APSK L-band Satellite input, 2 x ASI Output, 1 x 100/1000Base-T Output
GC-1808M-C	8 x DVB-C Cable RF input, 2 x ASI Output, 1 x 100/1000Base-T Output
GC-1808M-D	8 x DTMB Terrestrial RF input, 2 x ASI Output, 1 x 100/1000Base-T Output
GC-1808M-A	8 x ATSC Terrestrial RF input, 2 x ASI Output, 1 x 100/1000Base-T Output
GC-1808M-I	8 x ISDB-T Terrestrial RF input, 2 x ASI Output, 1 x 100/1000Base-T Output

### License Options

License Codes	Descriptions
1808-BISS	Enable BISS mode 0, 1 decryption
1808-CA1	Enable scrambling function and one DVB Private Crypt CA
1808-CA2	Enable scrambling function and two DVB SimulCrypt CA(s)
1808-CA3	Enable scrambling function and three DVB SimulCrypt CA(s)
1808-CA4	Enable scrambling function and four DVB SimulCrypt CA(s)

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## For More Information

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