

## GC-1818

### 4-Ch Professional Receiver and Descrambler



#### Product Overview

GC-1818 is a multi-channel, high performance professional receiver launched by GOSPELL, and was designed to demodulate and descramble up to four scrambled program streams from satellite (or cable, terrestrial) RF network and (or) Gigabit Ethernet network and local ASI.

In order to cater for demands of interoperability of different operators and ever-growing data rate of television services, GC-1818 is equipped with four DVB-CI complied Common Interfaces to meet the demands of descrambling for different scrambled programs using different DVB SimulCrypt CA(s), and supports up to 280Mbps of de-scrambling output bit rate for high definition and standard definition TV programs. Compared to conventional traditional single-channel or dual-channel professional IRD, GC-1818 can deliver double or better capacity of de-scrambling for operators in 1RU only.

GC-1818 supports Web browser and SNMP management for local and remote management and maintenance, which can significantly reduce management time and operating expense (OPEX) for operators. It enables operators to provide a wide range of highly costeffective, high performance and high-quality services to subscribers with lower total cost of ownership (TCO).

#### Main Features

- Supports DVB-S/S2 (or DVB-C/DVB-T/DTMB) RF receiving & demodulation, TS descrambling
- Supports 6MHz, 7MHz, 8MHz channel bandwidth
- Supports up to four CAMs and can operate at independent and (or) cascading mode
- Up to 72Mbps of descrambling bit rate each CAM, meeting different bandwidth requirements from SD to HD
- Supports 280Mbps of maximum de-scrambling output bit rate and 32 TV programs simultaneously
- Real-time bit rate statistics and program information analysis
- Standard common interface comply with EN 50221, supporting most major CA systems
- Supports TS-over-UDP input & output via Gigabit Ethernet and ASI outputs
- Supports Web and SNMP management and maintenance

- SPTS and MPTS are available
- Front panel control and LCD display

## Technical Specifications

### RF Input Options

#### Satellite Input Option

Number of Inputs	4 x RF Input, 4 x RF Loop Out
Connector Type	F-Type (Female, 75Ω)
Standards	DVB-S/S2 (EN 300 421/EN 302 307)
Constellations	DVB-S: QPSK DVB-S2: QPSK/8PSK
Frequency Range	950MHz to 2150MHz
Symbol Rate	QPSK: 5.0 to 45Msym/s 8PSK: 10 to 31Msym/s
Input Signal Level	-65 to -25dBm
LNB Power Output	0V/+DC 13V/18V, I <sub>max</sub> =400mA

#### Cable Input Option

Number of Inputs	2 x RF Input, 2 x RF Loop Out
Connector Type	F-Type (Female, 75Ω)
Standards	DVB-C (EN 300 429)
Constellations	16/32/64/128/256 QAM
Frequency Range	30 to 860MHz
Input Signal Level	-20 to +20 dBm (64QAM)

#### Terrestrial (DVB-T) Input Option

Number of Inputs	1 x RF Input, 1 x RF Loop Out
Connector Type	F-Type (Female, 75Ω)
Standards	DVB-T (EN 300 744)
Constellations	QPSK, 16/64 QAM
Frequency Range	51 to 858 MHz
Input Signal Level	-87 to -20 dBm

#### Terrestrial (DTMB) Input Option

Number of Inputs	1 x RF Input, 1 x RF Loop Out
Connector Type	F-Type (Female, 75Ω)
Standards	DTMB (GB20600-2006)
Constellations	QPSK, 4/16/32/64 QAM, 4QAM-NR
Frequency Range	51 to 858 MHz
Input Signal Level	-87 to -20 dBm

### ASI Transport Stream Input

Numbers of Interface	4 x ASI Input
Connector Type	BNC (Female, 75Ω)
Data Format	188/204 Bytes MPEG-TS packet length
Bit Rate	1.5 to 100 Mbps each

### MPEG TS-over-IP Input & Output

Numbers of Output	1 x 100/1000 Base-T Ethernet
Connector	RJ-45
MPEG TS Format	7 x 188Byte
IP Encapsulation	MPEG TS-over-UDP/IP
MPEG TS	MPTS or SPTS
Maximum Number of TS Input/Output	Input: 4 TS Output: 4 TS
Addressing	Unicast or Multicast
Supported Protocol	UDP, ARP, ICMP, IGMP

### DVB-CI & TS Descrambling

Numbers of DVB-CI	4 x CI Slots (front panel)
Interface Type	PCMCIA Type II
CI Standard	Comply with EN 50221
Descrambling Mode	Independent and(or) cascading
Rate of Descrambling	72Mbps per CAM, Maximum 280Mbps
Capability of Descrambling	32 programs simultaneously
Supported CA Category	DVB SimulCrypt and Multi-Crypt

### ASI Transport Stream Output

Numbers of Interface	4 x ASI
Connector Type	BNC (Female, 75Ω)
Operation Mode	Can be configured to pass through output, descrambling output or matrix output depending on different settings
Output Mode	Independent or redundant output
Data Format	188/204 Bytes MPEG-TS packet length
Bit Rate	Up to 100Mbps per output (72Mbps after descrambling)

### Network Management

Interface	1 x 100/1000 Base-T Ethernet, RJ-45
Connector	RJ-45
Management	Web browser and SNMP management

### Miscellaneous

Front Panel	3.5" LCD with 7 x Control Buttons for 2-line information display and settings 3 x Dual color LED, for status indications of power, work and Alarm
Rear Panel	1 x RS-232 (DB-9) (CPU status Monitoring) 1 x Power Supply Receptacle (AC Input) 1 x Power switch

### Power Supply

Input Voltage	110 - 240 VAC, 50/60Hz
Power Consumption	50W(Maximum)

### Environmental

Operating Temperature	0°C to 45°C(32°F to 113°F)
Storage Temperature	-20 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 300mm 19" x 1.73" (1 RU) x 11.8"
Product Weight	Approx. 5.0Kg (11.0 lbs)

## Rear Panel View (Sample Config.)



GC-1818-S Rear Panel

## Ordering Information

### Hardware Options

Hardware Codes	Descriptions
GC-1818-S	Professional Satellite IRD with four DVB-CI slots, 4 x DVB-S/S2 RF input, 4 x RF Loop Out, 4 x ASI input, 4 x ASI Output, 1 x 100/1000Base-T Ethernet input & output
GC-1818-C	Professional Cable IRD with four DVB-CI slots, 2 x DVB-C RF input, 2 x RF Loop Out, 4 x ASI input, 4 x ASI Output, 1 x 100/1000Base-T Ethernet input & output
GC-1818-T	Professional Terrestrial IRD with four DVB-CI slots, 1 x DVB-T RF input, 1 x RF Loop Out, 4 x ASI input, 4 x ASI Output, 1 x 100/1000Base-T Ethernet input & output
GC-1818-D	Professional Terrestrial IRD with four DVB-CI slots, 1 x DTMB RF input, 1 x RF Loop Out, 4 x ASI input, 4 x ASI Output, 1 x 100/1000Base-T Ethernet input & output

## For More Information

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