

## GC-1815

### Professional Receiver, Descrambler and Decoder



### Product Overview

GC-1815 is the latest professional IRD launched by GOSPELL, and was designed to demodulate the scrambled broadcast streams from satellite (or cable, terrestrial) network, IP network and local headend featured with DVB-ASI.

In order to cater for demands of interoperability of different operators broadcast services, GC-1815 is equipped with two 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 140Mbps of de-scrambling output bit rates for SD, HD and Full HD MPEG-2, MPEG-4 AVC, AVS and AVS+ broadcast services. It supports various decoding output interfaces, composite video, unbalanced stereo audio, HDMI and 3G-SDI outputs, It can be widely used for broadcast distribution and contribution.

### Main Features

- DVB-S/S2 (or DVB-C, DTMB) RF demodulation, TS descrambling
- Universal MPEG-2, MPEG-4 AVC SD/HD/FHD, AVS and AVS+ video decoding
- MPEG-1 Layer 2, DRA2.0 audio decoding, optional AAC decoding
- Dual DVB-CI slots, supporting up to 16 descrambling of TV services
- Up to 72Mbps of descrambling bit rate each CAM
- Standard common interface complied with EN 50221, supporting most major CA systems
- Supports various decoding outputs: composite video, unbalanced audio, HDMI and 3G-SDI
- Outputs resolutions: 480i (NTSC), 576i (PAL), 1080i, 720P, 1080P
- MPEG TS-over-UDP/RTP inputs and outputs, supporting SPTS and MPTS
- Dual ASI inputs and outputs
- Supports Web and SNMP-based management

## Technical Specifications

### RF Input (Hardware Options)

#### Satellite Input Option

Number of Inputs	1 x L-band Input (with L-band Loop Out)
Connector Type	F-Type (Female, 75Ω)
Standards	DVB-S (EN300421) DVB-S2(EN302307)
Constellations	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

#### Cable Input Option

Number of Inputs	1 x RF Input (with RF Loop Out)
Connector Type	F-Type (Female, 75Ω)
Standards	DVB-C (EN 300 429)
Constellations	16/32/64/128/256 QAM
Frequency Range	51 to 858MHz
Input Signal Level	-20 to +20dBm (64QAM)

#### Terrestrial Input Option

Number of Inputs	1 x RF Input (with RF Loop Out)
Connector Type	F-Type (Female, 75Ω)
Standards	DTMB (GB20600-2006)
Constellations	4QAM, 4QAM-NR, 16/32/64 QAM
Carrier Mode	SCPC and MCPC
FEC Mode	0.4/0.6/0.8
Frequency Range	54 to 860MHz
Input Signal Level	>-84dBm

### ASI Input

Numbers of Interface	2 x ASI
Connector Type	BNC (Female, 75Ω)
Operation Mode	Independent Input
Data Format	188/204 Bytes
Bit Rate	1.5 to 100 Mbps each

### ASI Output

Numbers of Interface	2 x ASI
Connector Type	BNC (Female, 75Ω)
Operation Mode	Independent or duplicate outputs
Data Format	188 Bytes
Bit Rate	Up to 100Mbps output (72Mbps after descrambling)

### IP Input & Output

IP Interface	1 x 100/1000 Base-T Ethernet(RJ-45)
MPEG TS Format	7 x 188 Bytes
IP Encapsulation	MPEG TS-over-UDP/RTP
MPEG TS Mode	MPTS or SPTS
Operation Mode	TS Inputs and multiplexing outputs
Number of TS	Input: 128(max.) Output: 4

Addressing	Unicast or Multicast
Protocol	UDP, RTP, ARP, IGMP, ICMP

### Operation Mode of TS Input/Output

RF and ASI Input	Alternatively
ASI and IP Output	Simultaneously (with same TS)

### DVB-CI & TS Descrambling

Numbers of DVB-CI	2 x CI Slots (in front panel)
Interface Type	PCMCIA Type II
CI Standard	Comply with EN 50221
Rate of Descrambling	72Mbps per CAM
Performance	Up to 16 programs simultaneously
Supported CA Category	DVB SimulCrypt and MultiCrypt

### Decoding Output (Hardware Options)

#### Analog Video Decoding Output

Video Format	1 x CVBS
Connector	BNC female, 75Ω
Video Resolution	480i, 576i

#### Analog Audio Decoding Output

Audio Format	Analog Unbalanced
Interface	Stereo pair (R & L) 2 x BNC female, 600Ω

#### HDMI Decoding Output

Numbers of Interface	1 x HDMI 1.3 (Type A receptacle) Compliant with S/PDIF(IEC90658)
Video Resolution	480i, 576i, 1080i, 720P, 1080P

#### SDI Decoding Output (Optional)

Numbers of Interface	2 x 3G-SDI (BNC female, 75Ω)
Interface Standards	Comply with : SMPTE 259M(SD-SDI) SMPTE 292M(HD-SDI) SMPTE 424M(3G-SDI)
Operation Mode	Duplicated outputs
Audio	Embedded Audio
Video Resolution	480i, 576i, 1080i, 720P, 1080P

### Video & Audio Decoding (License Option)

#### Video Decoding

Decoding Formats	MPEG-2 SD: MP@ML MPEG-2 HD: MP@HL MPEG-4 AVC SD: MP@L3.0 MPEG-4 AVC HD: HP@L4.0 MPEG-4 AVC FHD: HP@L4.2 AVS, AVS+
Resolution & Frame Rate	SD: 720 x 576i@25fps 720 x 480i@29.97fps HD: 1920 x 1080i@25/29.97fps 1280 x 720p@50/59.94fps FHD: 1920 x 1080P@50/59.94fps

Aspect Ratio	4:3 or 16:9
<b>Audio Decoding</b>	
Decoding Standards	MPEG-1 Layer 2, DRA2.0 Optional: AAC
Operation Mode	Stereo or Mono
Supported Sample Rate	32 kHz, 44.1 kHz, 48 kHz
Audio Decoding Rate	64kbps to 384 kbps

### Network Management

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

### Miscellaneous

Front Panel	3.5" LCD with 6 x Control Button for 2-lines alphanumeric display and parameter settings
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	3 x Dual color LED, for status indications of power, work and Alarm
	1 x Serial console port(RJ-45)
Rear Panel	1 x Power Supply Input
	1 x Power switch

### Power Supply

Input Voltage	110 - 240 VAC, 50/60Hz
Power Consumption	30W (Typ.)

### 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 400mm 19" x 1.73" (1 RU) x 15.8"
Product Weight	5.0Kg (11.0 lbs)

## Rear Panel View



## Ordering Information

### Hardware Options

Hardware Codes	Descriptions
GC-1815B-S	Professional Satellite IRD with 1 x L-band (DVB-S/S2) input, 2 x ASI input, 2 x ASI output, 1 x 100/1000Base-T input & output, 1 x CVBS output, 1 x Unbalanced Stereo Pair(R&L) output, 1 x HDMI output
GC-1815B-C	Professional Cable IRD with 1 x RF (DVB-C) input, 2 x ASI input, 2 x ASI output, 1 x 100/1000Base-T input & output, 1 x CVBS output, 1 x Unbalanced Stereo Pair(R&L) output, 1 x HDMI output
GC-1815B-T	Professional DTMB Terrestrial IRD with 1 x RF (DTMB) input, 2 x ASI input, 2 x ASI output, 1 x 100/1000Base-T input & output, 1 x CVBS output, 1 x Unbalanced Stereo Pair(R&L) output, 1 x HDMI output
1815B-2D	2 x 3G-SDI output

### License Option

License Code	Descriptions
LC-1815B-AAC	Enable one channel of AAC stereo audio decoding output

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## For More Information

Please visit our website [ww.comcast-sa.com](http://ww.comcast-sa.com) or contact your local sales representative:

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