INTERNATIONAL DATACASTING

STAR G2 Pro Audio Receiver

Offering live professional audio decoding and file playout, the STAR G2 Pro Audio Receiver is a professional DVB-S/S2 audio receiver with an integrated advertisement and content playout system.

Applications

- Professional radio networks
- Live audio broadcasting (IP and PES)
- Ad playout system and satellite receiver in a single box

Advanced Features

- **AAC HE/LC**
- **Very Low Symbol Rate**
- **Audio Limiter & Pre-emphasis**
- **Professional Media Recording (Opt.)**
- **Advanced Content Management Module (Opt.)**
  - Production Manager support
  - In-band content delivery & storage
  - Advertisement insertion (copy split)
  - Audio file/playlist playback
  - Event driven or scheduled programming and channel changes
  - Fade control between live and file based programming

Standard Features

- AAC HE/LC
- Very Low Symbol Rate
- Two or Four stereo audio decoders
- DVB-S or DVB-S2
- MPEG Layer 2&3
- IP and PES audio decoding
- Balanced analog/AES outputs
- Headphone jack
- 10 Form-A relays per decoder
- Programmable alarm relays
- 2 PAD/ASYNC outputs per decoder
- Remotely manageable over satellite and/or terrestrial networks
- Programmable backup audio sources from IP streams and user defined files
- Event Manager support • Net Manager support
- Ethernet TS over IP input & output
- ASI input or output

Audio Flexibility

The **STAR-2 G2** is supplied with two audio decoders and the **STAR -4 G2** is supplied with four audio decoders. STAR G2 receivers are ideal for deployment at co-located radio stations or transmitter sites. Each audio decoder is independent of the other allowing maximum flexibility in data rates, codecs and sample rates: MPEG Layer 2 for existing DVB compatibility or new High-Efficiency Advanced Audio Coding (AAC HE) for the best audio performance at the lowest bit rate.

Advanced Content Management Module

The Advanced Content Management Module (ACMM) allows commercial/program insertion on any decoder. IDC's Production Manager™ is used at the headend to deliver advertisement and programming content to the receiver in-band via satellite. Production Manager permits seamless real-time triggering of ad/programming insertion on a receiver by receiver basis which can be scheduled or event driven. A wide variety of playlist features are supported which include percentage based ad insertion, rotations, and channel changes. The STAR G2 is also capable of performing sophisticated fading operations such as cross-fading or mixing between live and file content.

Content Storage

A memory card is provided with each receiver licensed with the Advanced Content Management Module. It provides store-and-forward data storage and enables the full suite of ACMM features.

Enhanced Monitoring and Control

A browser-based status and control GUI allows satellite carrier frequency, data rates, port authorization, audio configuration, and other operating functions to be set locally or remotely. The receiver has three fully programmable alarm relays that are capable of monitoring carrier lock, RF levels, audio silence, PID(s), PSI and TS inputs. Receivers can also be managed, controlled and upgraded in-band via satellite using IDC's Net Manager.

Professional Inputs and Outputs

The STAR G2 receivers provide a full suite of inputs and outputs to meet the needs of professional broadcasters. The receiver supports DVB S/S2 L-Band and IP inputs. Each output decoder has balanced analog and AES outputs, 10 relays, 2 async data ports (for PAD/Meta/RDS data), ASI input or output.

Professional Media Recording

The Professional Media Recording (PMR) option allows the local user to define a recording and playback based on a reoccurring schedule or individual one time event. This functionality is an ideal solution for the broadcasting problems that arise due to time zone and overlapping programming conflicts.

TECHNICAL SPECIFICATIONS

Features	DESCRIPTION	TYPE
TS/IP Input & Output	MPTS and SPTS TS over IP input & MPTS over IP output	Included
AAC Decoding	MPEG-4 AAC HE/LC for bandwidth efficient audio delivery	Included
Very Low Symbol Rate	Symbol rates as low as 128 kSym/s are supported for space segment savings	Included
Audio Limiter	Limits audio output level for direct-to-transmitter deployments	Included
Professional Media Recording	Record and Playback of audio programming allowing time shifting and programming repeat use cases	Licensed
Advanced Content Management Module	ACMM supports IDC's Production Manager content management system, audio file/playlist playback, event based ad/programming insertion, fade control, in-band content delivery, SD memory card for local storage provided	Licensed

STAR-2 G2

STAR-4 G2

SATELLITE

Standards Compliance	ETS 300421 (DVB-S) / ETSI EN 302 307 (DVB-S2)
RF Frequency Range	950 to 2,150 MHz
Input Level	-80 dBm to -30 dBm
AFC Range	± 10% Symbol Rate up to ± 2 MHz
VSWR	> 10 dB
Input Connector	F-female, 75Ω
Output Connector	F-female, 75Ω
Symbol Rate DVB-S/S2	128 kBaud – 45 MBaud
FEC DVB-S	1/2, 2/3, 3/4, 5/6, 7/8
FEC DVB-S2 QPSK	1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
FEC DVB-S2 8PSK	3/5, 2/3, 3/4, 5/6, 8/9, 9/10
FEC DVB-S2 16APSK	2/3, 3/4, 4/5, 5/6, 8/9, 9/10
Frame Length	Long, Normal, Short
LNB	13/18 V selectable, Universal LNB, Max. 450 mA

ASI

ASI In/Out	ASI In or Out - Factory selectable, default ASI input

AUDIO SPECIFICATIONS

Compression	MPEG Layer 2 (ISO/IEC 11172-3 & 13818-3) Live/File MPEG Layer 3 (ISO/IEC 11172-3 & 13818-3) File MPEG 4 AAC LC, LD & HE (ISO/IEC 14496-3) Live/File option
Level Reference	-9 dBFS pk (= ref at balanced output of 6 dBu)
Frequency Response	30 Hz to 17.5 kHz (Analog)< 0.5 dB 10 Hz to 18.2 kHz (Digital) <0.5 dB
Signal to Noise @ 6dBu	> 80 dB
THD (IEC)	-0.04%
Analogue Audio Output	DB-9M Balanced Output, < 30Ω
Analogue Audio Level	6 dBu(rms) reference, 21 dBu(pp) max.
Digital Output	DB-9M Balanced Output, AES 3 / EBU (all outputs upconverted to 48 kHz)
Monitoring Headphone	6.35mm (1/4") Headphone Jack

NUMBER OF AUDIO DECODERS

STAR-2 G2	2
STAR-4 G2	4

CONDITIONAL ACCESS

BISS-1	Can be set via GUI or in-band using Net Manager

DATA PORT

Number of Async Ports	2 per audio decoder (1.2 to 38.4 kb/s)
Port Type	RS-232, No parity, 8 bits, 1 stop bit, DB-15M
Data Format	IRT/DVB Standard TR 101 154 Private data Event Manager meta data J.52

RELAYS

40 Form-A, NO	10 per audio decoder, DB-15M

ALARM CONTACTS

3 Form-C ,NO & NC	Programmable (RF lock, BER, C/N, Eb/No, In TS, PSI, PID, L, R, L+R) DB-9F

COMM PORT

Console Port	RS232, DB-9F (test port)

ETHERNET PORTS

M&C LAN	IEEE 802.3, RJ45, 10/100 Mb/s (auto sensing) HTTP, SNMP
DATA LAN	IEEE 802.3, RJ45, 100/1000 Mb/s (auto sensing) TS over IP

STORAGE

SD Card Interface	32 GB supplied with ACMM (option)

POWER REQUIREMENTS

Supply Voltage	85 to 264 VAC, 50/60 Hz, max. 30W
Power Connection	IEC panel-mount plug filter with fuse
Safety and EMC	According to CE regulations

PHYSICAL PARAMETERS

Chassis	1 RU rackmount
Dimensions (H, W, D)	4.5 cm x 48 cm x 30 cm (1.75" x 19" x 11.8")
Weight	3 kg (6.6 lbs.)

ENVIRONMENTAL CONDITIONS

Operating Temperature	0° to 50° C (32° to 122° F)
Storage Temperature	0° to 50° C (32° to 122° F)

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