

# STAR-TWO G1 Pro Audio Receiver

## Professional Satellite Receiver for Radio Distribution Networks

The STAR-TWO G1 Pro Audio receiver is designed specifically for the distribution of audio programming over satellite to radio broadcasting networks.

### Applications

- Professional satellite radio distribution networks

### Features

- DVB-S/S2 Demodulation with Low Symbol Rate support
- MPEG Audio Decoding - Layer 2,3 and AAC support
- Standards-Based
- High Availability, Low Power, Fanless Operation
- 1 or 2 Audio Decoders per 1 RU Device
- Analog and Digital Audio Outputs
- Async Data Outputs
- General Purpose Outputs (GPO)
- Headphone Jack
- Program Backup - stored file payout on loss of satellite signal
- Programmable Alarms via relays or SNMP messages
- In-Band NMS Control from head end using NetManager
- Web-Browser Interface for local or remote control over IP networks
- Transport stream over IP output
- Option to add transport stream over IP input

### High Availability DVB/MPEG Audio Receiver

STAR-TWO G1 Pro Audio is an high reliability, professional satellite receiver designed specifically for radio distribution applications. Based around the latest DVB satellite modulation and MPEG audio compression standards, the STAR-TWO G1's highly integrated, low power, fanless architecture is designed to maximize network uptime.

### DVB-S2 Modulation

STAR-TWO G1 supports ultra high efficiency, standards-based DVB-S2 as well as DVB-S satellite demodulation. Both MCPC and SCPC delivery modes are supported, down to rates as low as 128 kBaud.

### MPEG Audio Compression

The programmable audio decoder within STAR-TWO G1 supports a wide range of open standard MPEG audio codecs. MPEG Layer 2, Layer 3, and AAC are supported as standard.

### Reduced Satellite Transmission Costs

Combining DVB-S2 satellite demodulation with MPEG-4 AAC audio decoding can reduce annual satellite bandwidth costs dramatically when compared to networks based on legacy audio products. Depending on the size of the network, the yearly satellite bandwidth savings can quickly offset the cost of upgrading older networks to the STAR-TWO G1 platform.

### High Density

STAR-TWO G1 is available with one or two decoders. The base unit supports the decoding of a single audio pair which can be expanded to support an additional decoder, for a total of two decoders in the field using a software upgrade key or at time of manufacture.

### Program Backup

Certain STAR TWO G1 Pro Audio models can be programmed to play stored audio files from an on-board SD card when the incoming signal is not available, ensuring radio transmission continuity even when the satellite link is not available.

### Broad Array of Software Licensable Features

Several advanced features available for the STAR-TWO G1 Pro Audio, such as the audio limiter, 50/75 microSec Pre-emphasis, and TS over IP input software options. They can be activated using a license key at any time, whenever the extra functionality is required.

### ABR Network Replacement

IDC has designed the STAR-TWO G1 to be the modern replacement to its market-leading ABR platform, which is still being used to deliver content to tens of thousands of transmitter sites around the world. STAR-TWO G1 updates the ABR's twenty year old satellite modulation and audio compression technologies with modern, open standard alternatives, while retaining the ABR's legendary levels of reliability. It also improves on the ABR's density, offering up to three stereo channels per rack unit instead of one.

### Long Term Investment Protection

Radio network operators need to be sure that the infrastructure investments they make can be relied upon to support their business for many years to come. Our twenty year history in professional radio demonstrates both IDC's ability to engineer long lasting, reliable audio receiver products, and our proud commitment to this market. Continuing in this long tradition, IDC has designed the STAR-TWO G1 Pro Audio to support our customers' satellite distribution needs well in to the future.

## TECHNICAL SPECIFICATIONS



DESCRIPTION	1 channel version	2 channel version
Audio Decoders	1	2
Serial Data	1x RS-232	2x RS-232
Front Panel Headphone and LEDs	✓	✓
Backup Audio SD card slot	✓	✓
GPO	8 GPO	8 GPO
AAC Decoding	✓	✓
Transport stream over IP output	✓	✓
Audio Limiter & Pre-Emphasis (50 & 75 microSec)	✓	✓
Transport stream over IP input	Optional	Optional

SATELLITE INPUT	
<b>Standards Compliance</b>	ETS 300421 (DVB-S) ETSI EN 302 307 (DVB-S2)
<b>RF Frequency Range</b>	950 to 2,150 MHz
<b>Input Level</b>	-80 dBm to -30 dBm
<b>AFC Range</b>	± 10% Symbol Rate up to ± 2 MHz
<b>VSWR</b>	> 10 dB
<b>Input Connector</b>	F-Type female, 75Ω
<b>Output Connector</b>	F-Type female, 75Ω
<b>LNB Voltage Supply</b>	13/18 Volts selectable, Universal LNB, ≤ 450 mA
<b>Symbol Rate DVB-S/S2</b>	128 kBaud - 45 MBaud
<b>FEC DVB-S</b>	1/2, 2/3, 3/4, 5/6, 7/8
<b>FEC DVB-S2 QPSK</b>	1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10
<b>FEC DVB-S2 8PSK</b>	3/5, 2/3, 3/4, 5/6, 8/9, 9/10
<b>FEC DVB-S2 16APSK</b>	2/3, 3/4, 4/5, 5/6, 8/9, 9/10
AUDIO SPECIFICATIONS	
<b>MPEG Decoder</b>	MPEG Layer 2, MPEG Layer 3, AAC
<b>MPEG Layer 2/3</b>	32, 48, 64, 80, 96, 112, 128, 144, 160, 192, 224, 256, 320, 384 kb/s (at 48, 44.1 & 32 kHz)
<b>AAC LC</b>	32, 48, 64, 80, 96, 112, 128, 144, 160, 192, 224, 256, 320 kb/s (at 48, 44.1 & 32 kHz)
<b>AAC HE v1</b>	32, 48, 64, 80, 96, 112, 128 kb/s (at 48, 44.1 & 32 kHz)
<b>AAC HE v2</b>	32, 48 (at 48 & 32 kHz)
<b>Volume Settings (reference)</b>	-20 to +12 dB
<b>Digital Level Reference</b>	-9 dBFS (100%)
<b>Analogue Audio Output</b>	XLR, < 30Ω
<b>Digital Output</b>	AES 3/EBU, XLR, 110Ω (all outputs upconverted to 48 kHz)

DATA PORT	
<b>Number of Ports</b>	1 or 2
<b>Port Type</b>	RS-232, No parity, 8 bits, 1 stop bit, DE-9F
<b>Data Format</b>	2 types of private data 2 types of ancillary data (J.52 and IRT/DVB Standard TR 101 154)
<b>Ethernet Data Port</b>	MPEG TS over IP
IP MANAGEMENT PORT	
<b>Protocol</b>	TCP/IP
<b>Port Type</b>	Ethernet RJ45, 10/100 Mb/s
<b>Communication Type</b>	HTTP and SNMP
ALARM CONTACTS	
<b>Number of Relays</b>	3 (status/alarm)
<b>Contacts</b>	Form-C mechanical
GENERAL PURPOSE OUTPUT (GPO) CONTACTS	
<b>Contacts</b>	8 switched outputs with one common
POWER REQUIREMENTS	
<b>Supply Voltage</b>	100 to 240 VAC, 50/60 Hz
<b>Power Connection</b>	IEC panel-mount/fuse 2.5 AT
<b>Safety and EMC</b>	According to CE regulations
PHYSICAL PARAMETERS	
<b>Chassis</b>	1 RU rackmount
<b>Dimensions (H, W, D)</b>	4.5 cm x 48 cm x 30 cm (1.75" x 19" x 11.8")
<b>Weight</b>	5 kg (11 lbs.)
ENVIRONMENTAL CONDITIONS	
<b>Operating Temperature</b>	5° to 45° C (41° to 113° F)
<b>Storage Temperature</b>	-5° to 65° C (23 to 149° F)

International Datacasting Corporation is a technology provider for the world's premiere broadcasters in radio, television, data and digital cinema. IDC's products and solutions are in demand for radio and television networks, targeted ad insertion, digital cinema, 3D live events, VOD, and IPTV. IDC is headquartered in Ottawa, Canada, has installations in over 100 countries, and a strong world-wide network of value-added partners and distributors. For more information visit: [www.datacast.com](http://www.datacast.com).

HEADQUARTERS: 50 Frank Nighbor Place, Kanata, ON Canada K2V 1B9 Tel: +1 613.596.4120

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