INTERNATIONAL DATACASTING

STAR Pro Audio™ Receiver

Professional Satellite Receiver for Radio Distribution Networks

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

Applications

- Professional satellite radio distribution networks

Features

- Standards-Based
- High Availability, Low Power, Fanless Operation
- DVB-S/S2 Demodulation with optional Low Symbol Rate support
- MPEG Audio Decoding - Layer 2 and 3 with optional AAC support
- Up to 3 Audio Decodes per 1 RU Device
- Transport Stream over IP Input with optional ASI Input support (some models)
- Analog and Digital Audio Outputs
- Async Data Outputs (up to 3 per unit)
- Relay Outputs (up to 8 per unit)
- Headphone Jack (some models)
- Program Backup - stored file playout on loss of satellite signal
- Programmable Alarms via relays or SNMP messages
- In-Band NMS Control from headend
- Web-Browser Interface for local or remote control over IP networks

High Availability DVB/MPEG Audio Receiver

STAR Pro Audio is an ultra 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's highly integrated, low power, fanless architecture is designed to maximize network uptime.

DVB-S2 Modulation

STAR 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 100 kSymbol/s.

MPEG Audio Compression

The programmable audio decoder within STAR supports a wide range of open standard MPEG audio codecs. MPEG Layer 2 and Layer 3 are supported as standard, and MPEG-4 AAC is available as a licensable option.

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 platform.

High Density

STAR is available in three different decoder configurations: **STAR One** supporting the decoding of a single audio pair; **STAR Two** supporting two pairs and optional ASI input; and **STAR Three** supporting three pairs. Supporting multiple decoders in one chassis reduces cost for radio networks delivering more than one channel to each transmitter site.

Program Backup

Certain STAR 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

Many of the features available for the STAR Pro Audio, including very low symbol rate support and AAC decoding, are 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 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 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 Pro Audio to support our customers' satellite distribution needs well in to the future.

TECHNICAL SPECIFICATIONS—STAR Pro Audio™ Receivers

STAR One

STAR Two

STAR Three

DESCRIPTION	STAR One	STAR Two	STAR Two ASI	STAR Three
Audio Decoders	1	2	2	3
RS-232/GPO	2 RS-232, 8 GPO	2 RS-232, 8 GPO	2 RS-232, 8 GPO	3 RS-232
Front Panel Headphone and LEDs		✓	✓	✓
Backup Audio SD card slot		✓	✓	✓
ASI Input			✓	
SOFTWARE OPTIONS				
AAC Decoding	✓	✓	✓	✓
Audio Limiter	✓	✓	✓	✓
Very Low Symbol Rate (100 kS/s)	✓	✓	✓	
TS over IP Ethernet		✓	✓	

SATELLITE INPUT	
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
VSWR	> 10 dB
Input Connector	F-Type female
Output Connector	F-Type female
Impedance	75Ω
LNB Voltage Supply	13/18 Volts selectable, Universal LNB, ≤ 450 mA
Symbol Rate DVB-S/S2	256 kS/s - 45 MS/s (standard) 100 kS/s - 45 MS/s (very low symbol rate option)
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
AUDIO SPECIFICATIONS	
MPEG Decoder	MPEG Layer 2, MPEG Layer 3, AAC (cost option)
MPEG Layer 2/3	32, 48, 64, 80, 96, 112, 128, 144, 160, 192, 224, 256, 320, 384 kb/s (at 48, 44.1 & 32 kHz)
AAC LC	32, 48, 64, 80, 96, 112, 128, 144, 160, 192, 224, 256, 320 kb/s (at 48, 44.1 & 32 kHz)
AAC HE v1	32, 48, 64, 80, 96, 112, 128 kb/s (at 48, 44.1 & 32 kHz)
AAC HE v2	32, 48 (at 48 & 32 kHz)
Volume Settings (reference)	-20 to +12 dB
Digital Level Reference	-9 dBFS (100%)
Analogue Audio Out	XLR, 30Ω
Digital AES/EBU Out	XLR, 110Ω

DATA PORT	
Number of Ports	Up to 3 (depending on model)
Port Type	RS-232, N-8-1
Data Format	2 types of private data 2 types of ancillary data (J.52 and IRT/DVB Standard TR 101 154)
Ethernet Data Port	MPEG TS over IP
IP MANAGEMENT PORT	
Protocol	TCP/IP
Port Type	Ethernet RJ45, 10/100 Mbit/s
Communication Type	HTTP and SNMP
ALARM CONTACTS	
Number of Relays	3 (status/alarm)
Contacts	Charge over (N.O. and N.C.)
RELAY CONTACTS	
Contacts	8 switched outputs
POWER REQUIREMENTS	
Supply Voltage	100 to 240 VAC, 50/60 Hz
Power Connection	IEC panel-mount/fuse 2.5 AT
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	5 kg (11 lbs.)
ENVIRONMENTAL CONDITIONS	
Operating Temperature	5° to 45° C (41° to 113° F)
Storage Temperature	-5° to 65° C (23 to 149° F)

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