



SUPERFLEX

FlexRoute IP

PRO AUDIO SUITE

FOR **PROFESSIONAL** RADIO BROADCAST NETWORKS

INTERNATIONAL
DATACASTING

WE DELIVER FULL SOLUTIONS

FLEXROUTE IP PRO AUDIO SUITE

The FlexRoute IP Pro Audio Suite is the latest addition to IDC's portfolio of advanced satellite solutions for the professional audio broadcast industry. Based on the latest state-of-the-art DVB technology, the Pro Audio Suite powers both Store & Forward (S&F) and live streaming audio distribution for professional radio networks.

For more than a decade IDC has been a leader in digital audio networks with its FlexRoute and MPEG Pro lines. IDC has also been a pioneer in the emerging field of IP multicasting and DVB-based content distribution with its proven SuperFlex DVB/IP and Datacast XD product lines.

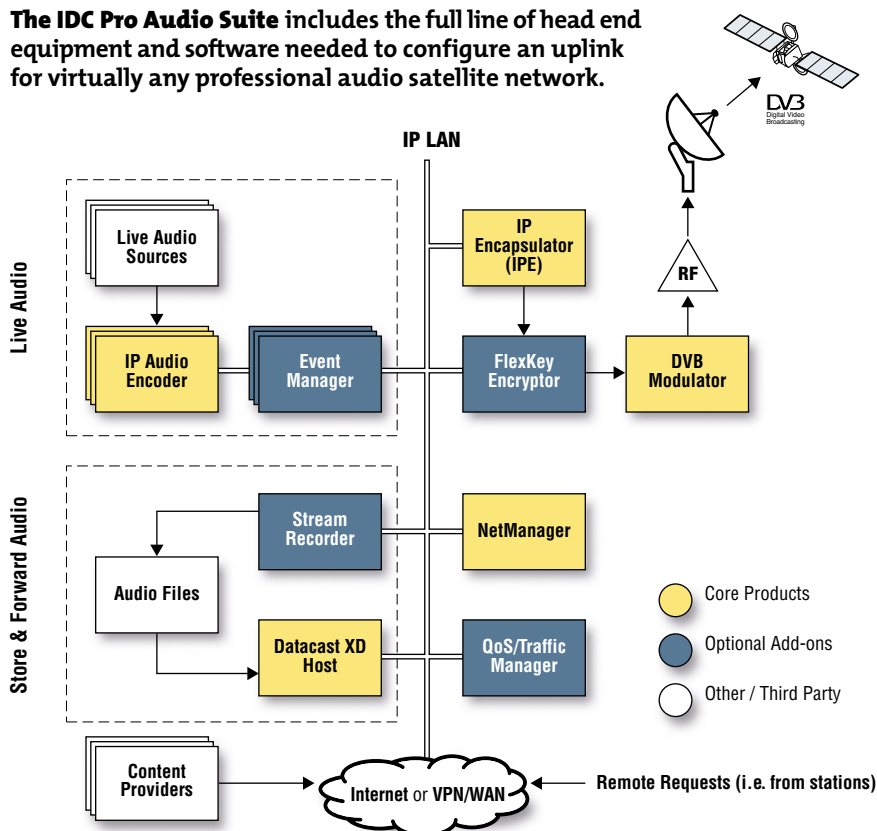
The Pro Audio Suite combines these areas of expertise into a next generation end-to-end solution for digital audio networks.

DVB (Digital Video Broadcasting) is an open-standard for video and audio broadcasting, that takes audio broadcasting far beyond the traditional SCPC/2CPC and even MCPC limitations. DVB enables more than 8,000 virtual Program ID (PID) channels per carrier with each of those PIDs accommodating multiple services.

IDC's FlexRoute IP Pro Audio Suite includes a full line of proven head end/uplink equipment, receivers, network management, content management and distribution software – everything needed to implement a highly reliable and easy to operate DVB satellite network for virtually any professional audio application.

The broadcasting business is changing—streaming audio, Store & Forward, podcasting, MP3s—the business of distributing audio is undergoing a revolution. IDC's Pro Audio Suite was designed to meet this challenge.

The IDC Pro Audio Suite includes the full line of head end equipment and software needed to configure an uplink for virtually any professional audio satellite network.



Highlights

- ▶ **Based on the practical** operational experience and success of IDC's field proven FlexRoute digital audio product line with tens of thousands of installations worldwide.
- ▶ **Provides excellent** performance and a wide range of coding standards are available:
 - MPEG-1 & 2 Layers 2 and 3 (MP3)
 - MPEG-4 AAC
 - apt-X™
- ▶ **Features state-of-the-art** DVB/IP technology for:
 - Open standards
 - True Multiple Channel Per Carrier (MCPC) operation
 - Bit rate agile—carrier speeds selectable from 128 ks/sec to 45 Ms/sec
 - Future-proof IP LAN connectivity & applications
 - Several conditional access and encryption options
 - Easy integration with terrestrial IP networks
- ▶ **Combines Store and Forward** (S&F) and/or live audio in a single network.
- ▶ **HD Radio-ready**, with IP connectivity, metadata, PAD and RDS.
- ▶ **Ideal for professional radio** networks, background music and in-store advertising.



IDC head end/uplink equipment (redundant configuration)

Everything for the uplink – reliable, versatile, scalable

IDC's Pro Audio Suite head end takes full advantage of LAN (Local Area Network) based IP connectivity to provide a highly flexible and modular system architecture. The system features a set of core head end components (some of which are common with our SuperFlex DVB-IP product line) plus optional add-on components which makes it relatively simple to cost-effectively configure a state-of-the-art system. We can upgrade an existing proprietary network, add onto an existing DVB multimedia network, or provide a completely new network.

Core head end products include:

Audio Encoder – captures studio and other live source audio via standard analog and digital input interfaces and generates a very high quality digital audio IP stream in any one of a number of user-selectable standard protocols (e.g. MPEG-1 & 2 Layer 2 & 3, MPEG-4 AAC and apt-X™)

IP Encapsulator (IPE) – takes both streaming audio and file-based content via an IP LAN (an industry standard ASI input is available as an option) and combines them into a single DVB compliant ASI output stream. The IPE is available in a variety of transmission speeds to provide the bandwidth needed to implement any number of services on a standard satellite transponder.

DVB Modulator – converts the ASI output stream of the IPE into a fully compliant DVB IF output ready for transmission via standard RF transmission systems. The modulator is extremely bit-rate agile – from kilobits per second to megabits per second – allowing network operators to easily reconfigure network data speeds as requirements change.

Datacast XD Host – is IDC's Content Management & Distribution system. It's made up of core software components with optional add-on modules. The integrated modules combine to implement highly reliable Store and Forward file transfer systems and streaming for radio networks. Datacast XD provides IP level Forward Error Correction (FEC) and encryption, automated scheduling, confirmed delivery reporting, remote site client management and database logging. It also comes with a built-in Web Services Descriptive Language (WSDL) interface for ease of automation and integration with other monitoring and control systems (e.g. via .NET/XML commands).

NetManager Network Management System (NMS) – is IDC's proven in-band (over the satellite) solution for managing satellite receivers. It features a browser based Graphical User Interface (GUI) for operator-friendly local and remote operation. The receivers can also be managed via third party systems using browser

interfaces and built-in industry standard Simple Network Management Protocol (SNMP) interfaces.

Add features & functionality with these options:

Event Manager – receives a live audio stream and adds embedded time synchronized auxiliary data such as metadata, cueing information and other program associated data (PAD) for use by broadcast stations. Also allows user adjustable IP level FEC where needed. Inserts RDS data and digital radio metadata as well as channel guide information into the audio bit stream.

Stream Recorder – captures multiple live IP audio streams and records them in an industry standard file format. Enables the archiving and later retrieval of live programming by the network operator as well as access to previously recorded content via the Internet and/or virtual private networks.

FlexKey Encryptor – provides high quality 128-bit encryption of user selected content of the DVB ASI stream. IDC also integrates third party encryption and Conditional Access Systems (CAS), (e.g. Irdeto CypherCast).

QoS Traffic Manager – allows the user to preset bandwidth for guaranteed and/or opportunistic levels of service.



Need to upgrade?

Current FLEXROUTE or MPEG Pro Users

IDC offers an attractive upgrade path for customers with legacy systems. Contact us to find out how we can help you take advantage of new technology to reduce costs and increase performance.

Switching From Another System

IDC provides multi-service next generation solutions to keep your broadcast audio network operational and up-to-date.

Let IDC show you how.

Typical installation of IDC head end equipment for a large scale multi channel network.

Pro Audio receivers – adaptable, interoperable, interchangeable

IDC's Pro Audio Suite includes a complete family of DVB satellite receivers designed specifically for the implementation of virtually any digital audio broadcast application. Select one product for a traditional network replacement or mix and match to meet specific needs.



SR2000pro – ideal for professional radio networks requiring the highest quality **live streaming audio**. Comes complete with **dual stereo or quad mono balanced audio outputs, digital output relay closures**, an **Ethernet port** for IP LAN connectivity and an Async RS-232 serial interface for legacy networks. Includes a **front panel LCD display** for setup and monitoring and a standard 1RU high 19-inch rack mountable form factor.



SFX2100 – ideal for hybrid Store and Forward with live streaming to a local LAN. Comes complete with a highly reliable hard drive and a full suite of embedded software, including the Datacast XD client for files and streams, an Apache Web Server, Samba file sharing, and playlist – driven multimedia players. Live and recorded audio and video available via unbalanced analog outputs and also as IP multicast on either or both Ethernet ports. Async RS-232 and Sync RS-422 interfaces are provided for legacy networks. Comes in standard 1RU high desktop and 19-inch rack mountable form factor.

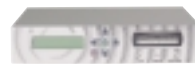


SFX2100 Pro Audio – combines the best features of the SR2000pro and the SFX2100, providing both a **Store & Forward** and streaming solution in a single integrated

unit. Comes complete with the same software suite as the SFX2100, including Datacast XD. It has two Ethernet ports, Sync and Async outputs, **balanced analog and digital outputs** for audio and **optional relay closures**. Includes a **front panel LCD display** for setup and monitoring, and a standard 1RU high desktop and 19-inch rack mountable form factor.



SFX2000pro – combines a SR2000pro and the motherboard processor of the SFX2100 in a single integrated unit. The SR2000pro portion acts independently and is **used as a live streaming receiver** but also **provides multimedia content to the processor via its Ethernet port** – allowing users to load their own operating systems and application software on the processor for customized applications. Comes in standard 1RU high desktop and 19-inch rack mountable form factor.

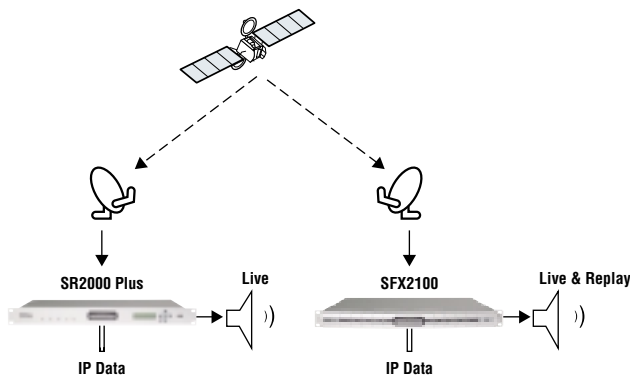
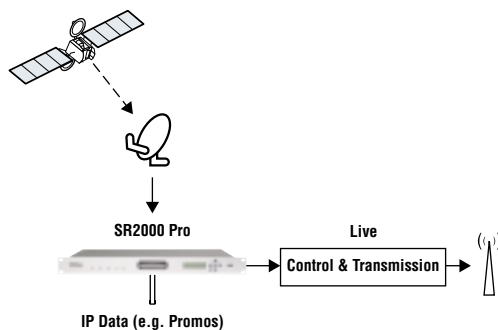
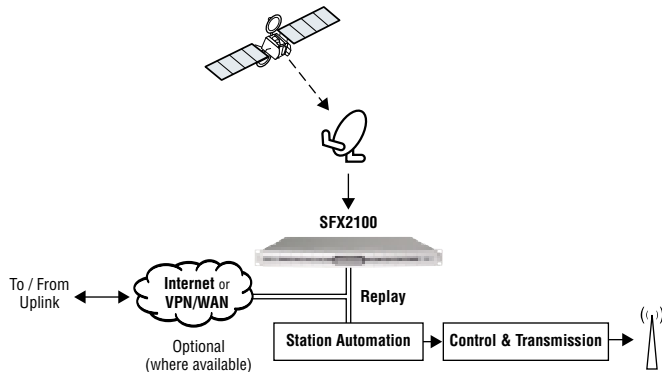
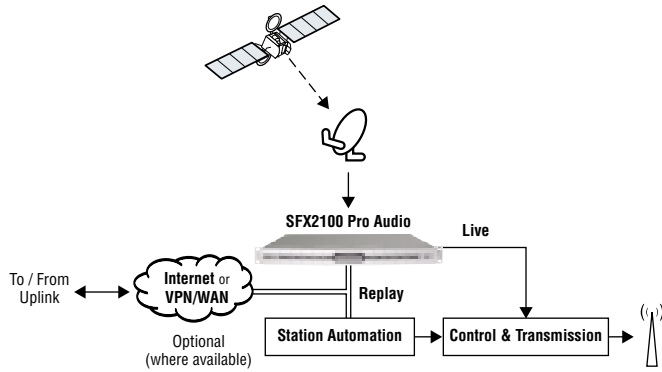


SR2000plus – ideal for **live streaming audio**, for background music and **IP edge receiver applications** – including live streaming to a LAN. Comes with **unbalanced audio outputs** (dual stereo or quad mono), an Ethernet port for IP LAN connectivity and an Async RS-232 serial interface for legacy networks. This compact and **easy-to-install design**, includes a **front panel LCD display** for setup and monitoring and comes in a standard 1RU high desktop form factor with two units that fit side by side in a standard 19-inch rack.

Select the right receiver for your application

Receiver Models	Balanced Audio O/P	Unbalanced Audio O/P	IP Ethernet Ports	Sync RS-422 Serial I/F	Async RS-232 Serial I/F	Front Panel LCD M&C	MPEG Layer 2	MPEG Layer 3	MPEG-4 AAC	apt-X™	Relays/discretes GPIO	DVB MPEG-2 PES Audio	Live Streaming Audio	Store and Forward	Internal Hard Drive	Datacast XD Client	NetManager Control	SNMP M&C	Browser M&C
SR2000 Pro	✓		✓		✓	✓	✓	✓			✓	✓	✓				✓	✓	✓
SFX2100		✓	✓	✓	✓	○	✓	✓	✓	✓	○		✓	✓	✓	✓	✓	✓	✓
SFX2100 Pro Audio	✓		✓	✓	✓	✓	✓	✓	✓	✓	○		✓	✓	✓	✓	✓	✓	✓
SFX2000 Pro	✓		✓		✓	✓	✓	✓			○	✓	✓	○	✓	○	✓	✓	✓
SR2000 Plus		✓	✓		✓	✓	✓	✓				✓	✓				✓	✓	✓

✓ Standard ○ Optional



Digital audio applications – limited only by the imagination

Live plus Store & Forward – use IDC's SFX2100 Pro Audio receiver to provide both Store and Forward and live streaming functionality in a single rack-mounted unit, saving space and offering the best value in a combined package. For networks that start out with only traditional live broadcasts, this provides a future-proof growth option as the network expands and new business models and revenue sources are added. Powered by IDC's Datacast XD.

Store & Forward – deliver digitized files (audio files, program information, web content and associated data) to the SFX2100 and use it as a multimedia server appliance using Datacast XD to provide content on demand to multiple users via the LAN. The SFX2100 can also be configured to automatically FTP content to external users such as station automation systems and editing systems. Live and stored multimedia content can also be multicast (streamed) directly onto the LAN. Users can request specific programming and other content from a variety of sources over the Internet or via other VPN/WAN connectivity including VSAT satellite.

Live – deliver live streaming broadcast directly to radio stations for local broadcast on AM, FM, digital radio or cable networks. The SR2000pro comes complete with balanced analog audio and digital outputs on industry standard connectors and also includes user controllable relay closures for ease of controlling local actions such as recorders, local ad insertions and other events. Can be combined and co-located with an SFX2100 for large network applications.

In-store and background radio – IDC's products are also cost-effective for in-store and background music applications. The SR2000plus is IDC's lowest cost receiver with two stereo pairs or four mono channels of audio available in a single small unit, plus an IP output port for disseminating digital content (e.g. training videos, sample MP3 files) on the same carrier. The SFX2100 offers the additional flexibility of providing playlist-driven live and stored content – even video! The SFX2100 also allows multimedia content stored on its hard drive to be accessed using standard browsers via the built-in Apache web server.

International Datacasting – Experienced & Uniquely Qualified

International Datacasting Corporation designs, and manufactures a full line of technologically advanced products for sophisticated networks distributing multimedia content either via satellite or terrestrially.

With installations in over 75 countries, IDC has been one of the pioneers in the industry since 1984 – one of the first to design and manufacture Dolby, apt-X™ and MPEG-2 digital audio systems under the trade names RadioNet, MPEG Pro and FlexRoute. IDC also has extensive experience with the development, manufacture and operation of DVB-S systems and was one of the first in the industry

to adopt the DVB open standards and bring to market a full product line of head end equipment and receivers under the trade names SuperFlex and Datacast XD.

A leading provider in turnkey systems integration – IDC is your one stop shop for satellite digital audio networks. IDC's IP-multicasting solutions and content distribution technologies are in demand for applications such as: enterprise networks, distance learning, digital signage, digital cinema and next generation digital multimedia data and radio broadcasting.

A global company, IDC exports their products and services through an established network of distributors, dealers and value added resellers in every major region around the world. Visit the web site to find a qualified distributor near you.

IDC is headquartered in Ottawa, Canada, which includes R&D, manufacturing, project management and corporate offices, all operated under an audited ISO 9000 Quality Management System. In addition to its standard product line for satellite communications, IDC also provides custom design and engineering to tailor end-to-end solutions to meet specific customer needs. IDC's highly skilled worldwide Customer Care Team is available to service customers 24/7.



SEE PRODUCT DATASHEETS FOR DETAILED TECHNICAL SPECIFICATIONS AND LATEST FEATURES.

Corporate Headquarters

2680 Queensview Drive,
Ottawa, Ontario CANADA K2B 8H6
Tel: 613-596-4120 Fax: 613-596-4863
Email: sales@intldata.ca
www.intldata.ca

**INTERNATIONAL
DATACASTING**

WE DELIVER FULL SOLUTIONS