

# SUPERFLEX™

The IDC SUPERFLEX family of products — true end-to-end solutions for the distribution of broadband multimedia content via satellite

HEAD END | RECEIVERS | MANAGEMENT & CONTROL | CONTENT DISTRIBUTION

## SFX PRO VIDEO SERIES

DVB/IP DIGITAL VIDEO RECEIVER/DECODER

### Applications:

- HDTV Distribution
- IPTV
- Digital cinema
- News gathering
- Digital signage
- TV distribution

### Features:

- DVB-S, DVB-S2, Ethernet or ASI input
- High Definition
- Standard Definition
- Digital video/audio outputs
  - HD-SDI & SDI
  - HDMI
  - Embedded audio
  - SPDIF multichannel audio
  - AES/EBU
- MPEG2, and MPEG4 AVC Video
- Supports IP and Transport Stream Video
- AC-3, AAC, MPEG audio
- HDD for content storage
- Datacast XD included
- NetManager addressable
- Up to 250 PIDs



The SFX Pro Video series of satellite receiver/decoders are DVB-S/DVB-S2 compliant and designed to receive and decode HD, high definition and SD, standard definition video with associated audio. The receivers provide the power and flexibility required to address the demanding requirements of IPTV, news, sports and movie broadcasters in large and small networks where cost effective digital interconnectivity and quality is important. This receiver is compatible with PES transport, IP transport, ASI transport or IP-on-Ethernet transport of the video and audio streams. Several decryption options are available to protect the content

SFX Pro Video series include:

#### Professional Video Decoding

The receiver/decoder can decode HD or SD video encoded with MPEG2 and MPEG4 AVC, H.264 with SDI, HD-SDI, HDMI and composite outputs as NTSC or PAL.

#### Leading Edge Audio Decoding

Audio codecs are included for Dolby AC-3, MPEG4 AAC-LC, MPEG Layer I, II & III and more to ensure high performance mono, stereo and multi-channel sound available embedded in the SDI/HD-SDI, separately as SPDIF, or AES/EBU and balanced analog Wide Variety of Inputs L-band DVB-S or DVB-S2 with PES or IP transport, ASI Hot-Link and IP-on-ethernet input interfaces ensure ease of interfacing.

#### Flexible Configurations

Choose from DVB-S or DVB-S2. Several versions of receivers offer symbol rates as low as

100ks/s and as high as 45MS/s. For details see the table on the reverse.

#### Datacast XD Included

The Datacast XD Content Distribution and Management software client is included inside every receiver/decoder to facilitate the downloading of files to the hard drive.

#### Conditional Access to Protect Content

A good security strategy utilizes multiple layers of protection. The SFX Pro Video receivers include multiple options for security. Decryption capabilities are included in every receiver to ensure the security of the content. Datacast XD is used to secure IP streams and file based content.

FlexKey can secure the transport stream. Irdeto's IP security system Gigacrypt can secure the IP streams.



## VIDEO/AUDIO CAPABILITIES

<b>Video Decoder:</b>	MPEG-4 AVC/H.264 (up to 20 mb/s) MPEG-2 MP@HL (up to 72 Mb/s) 4:2:2 output onscreen display
<b>Video Resolutions:</b>	1080 i 60 1080 i 59.94 1080 i 50 720 p 60 720 p 59.94 720 p 50 PAL NTSC
<b>Multi-standard Decoder:</b>	CABAC & CAVLC decoding intra/inter prediction modes/block I, P, and B picture types
<b>Audio Decoder:</b>	AC-3 MPEG Layer I, II and III
<b>Still Image Decoder:</b>	JPEG, PNG, GIF, RLE
<b>Video Outputs:</b>	HD-SDI, SD-SDI HDMI Composite (NTSC or Pal)
<b>Audio Output:</b>	within HD-SDI/SD-SDI SPDIF Multichannel (optional) Balanced Analog Audio AES/EBU
<b>Inputs:</b>	Satellite ASI Hotlink IP on LAN

## RF INPUT

<b>Frequency Range:</b>	950 to 2150 MHz
<b>Frequency Tuning Steps:</b>	Synthesized 1 Hz steps
<b>AFC Range (drift tracking):</b>	±2 MHz maximum
<b>Maximum Input Level:</b>	-35 to 65 dBm
<b>Connector:</b>	Type-F, female
<b>Impedance:</b>	75 ohms, unbalanced
<b>LNB DC Power:</b>	+18 VDC maximum (horizontal polarity), or +13 VDC at 500 mA (vertical polarity) center conductor positive, short circuit protected.
<b>LNB Requirement:</b>	DRO type for high data rates, stability ±2 MHz maximum PLL type for low data rates, stability ±25 kHz maximum

## DVB-S MODE

<b>Symbol Rate:</b>	See table
<b>FEC Type:</b>	DVB concatenated, Viterbi Reed-Solomon 204/188
<b>Modulation:</b>	QPSK 1/2, 2/3, 3/4, 5/6, 7/8
<b>Alpha Factor:</b>	0.35

## DVB-S2 MODE

<b>Symbol Rate:</b>	See table
<b>FEC Type:</b>	concatenated, LDPC & BCH QPSK 1/4, 1/3, 2/5, 1/2, 3/5, 2/3, 3/4, 4/5, 5/6, 8/9, 9/10(1/4, 1/3, 2/5 for SFXx102 models only) (9/10 for normal blocks only) 8PSK 3/5, 2/3, 3/4, 5/6, 8/9 9/10 (9/10 for normal blocks only) 16APSK 2/3, 3/4, 4/5, 5/6, 8/9, 9/10 (9/10 for normal blocks only)

<b>Alpha Factor:</b>	0.20, 0.25, 0.35
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## FRONT PANEL INDICATORS

<b>LCD display:</b>	Provides metrics and setup menus
<b>Lock LED:</b>	Indicates locked or unlocked status of RF demodulator
<b>Status LED:</b>	Indicates normal operation or fault and status of LNB
<b>Control LED:</b>	Indicates authorization and data activity of the NetManager control channel and the ASYNC port

## REAR PANEL CONNECTORS/INDICATORS

<b>2 Net Ports</b>	
<b>Connector Type:</b>	RJ-45 Ethernet
<b>Electrical Interface:</b>	one 10/100/1000 Base-T and one 10/100 Base-T
<b>IP Data:</b>	Greater than 150 Mb/s output (Configuration dependent) IGMP, SNMP and ICMP Async Port/Terminal Port
<b>Connector Type:</b>	DE-9S
<b>Electrical Interface:</b>	RS-232
<b>Asynchronous Rate:</b>	Terminal Interface at 9.6 kb/s or data at 300 b/s to 115.2 kb/s

## POWER REQUIREMENTS

<b>Supply Voltage:</b>	100 to 240 VAC, +6%, -10%, 50 or 60 Hz
<b>Power Consumption:</b>	40 Watts maximum

## PHYSICAL PARAMETERS

<b>Chassis:</b>	1U rackmount (Desktop kit available)
<b>Dimensions:</b>	1.75 in H x 19 in W x 14 in D (4.5 cm H x 48 cm W x 36 cm D)
<b>Weight:</b>	Approximately 12 lbs (5.4 kg)

## ENVIRONMENTAL CONDITIONS

<b>Operating Temperature:</b>	0 °C to +50 °C
<b>Storage Temperature:</b>	-20 °C to +70 °C
<b>Humidity:</b>	Maximum 90% relative, non-condensing

SFX Demodulator Options	
01 Series SFX3101F/R/B	DVB-S QPSK: 1 to 45 Ms/s DVB-S2 QPSK/8PSK: 1 to 30 Ms/s Normal blocks 64, 800 bits only
02 Series SFX3102F/R/B	DVB-S QPSK: 128 ks/s to 45 Ms/s DVB-S2 QPSK/8PSK/16APSK: 0.1 to 45 Ms/s Normal blocks 64, 800 bits Short blocks 16, 200 bits ACM/VCM optional

Decryption Options	
F series SFX310xF	IDC FlexKey offering 128-bit AES
R series SFX310xR	Irdeto Cyphercast or Gigacrypt
B series SFX310xB	Common Interface CAS

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