Digital Sat TV MultiCrypt Reception Equipment

It is the solution to see DVB-S channels on analog TVs.

DVB-S signal input

Reception of encrypted Sat-TV programs

Analog signal Output

SRC-111 Transmodulator

Main features

• Reception of encrypted Sat-TV programs.
  Standard DVB-S / MPEG-2 (EN 300 421).

• Receiving Modules with Common Interface (EN 50221). The encrypted TV programmes transmitted on QPSK channels are de-encrypted and presented on conventional VHF/UHF channels (any TV system or Colour system).

• An SRC headend includes:

  - As many SRC Receiving Modules as de-encrypted TV programmes to be distributed. At each module, one CAM (Conditional Access Module) containing the Operator's Smart Card must fit the front panel slot.

  - One HPA Amplifier that amplifies the sum of the receivers' output TV channels. One or more CFP Power Supplies.

  - One or more Rack-Frames or wall-fixing Base-Plates. The base-plates can be joined horizontally.

  - Usually, housing units for the base-plates.

  - If the headend is large, one or more AMX-400 combiners.

The SRC headends provide a TV multichannel signal whose level is appropriate to feed the distribution network. With an SRC installed in the headend, the end user does not require a Set Top Box or any additional devices to view the de-encrypted digital TV programs being distributed. An extension input at the HPA amplifier allows easy coupling of the wideband 47-862 MHz signal provided by another existing headend.
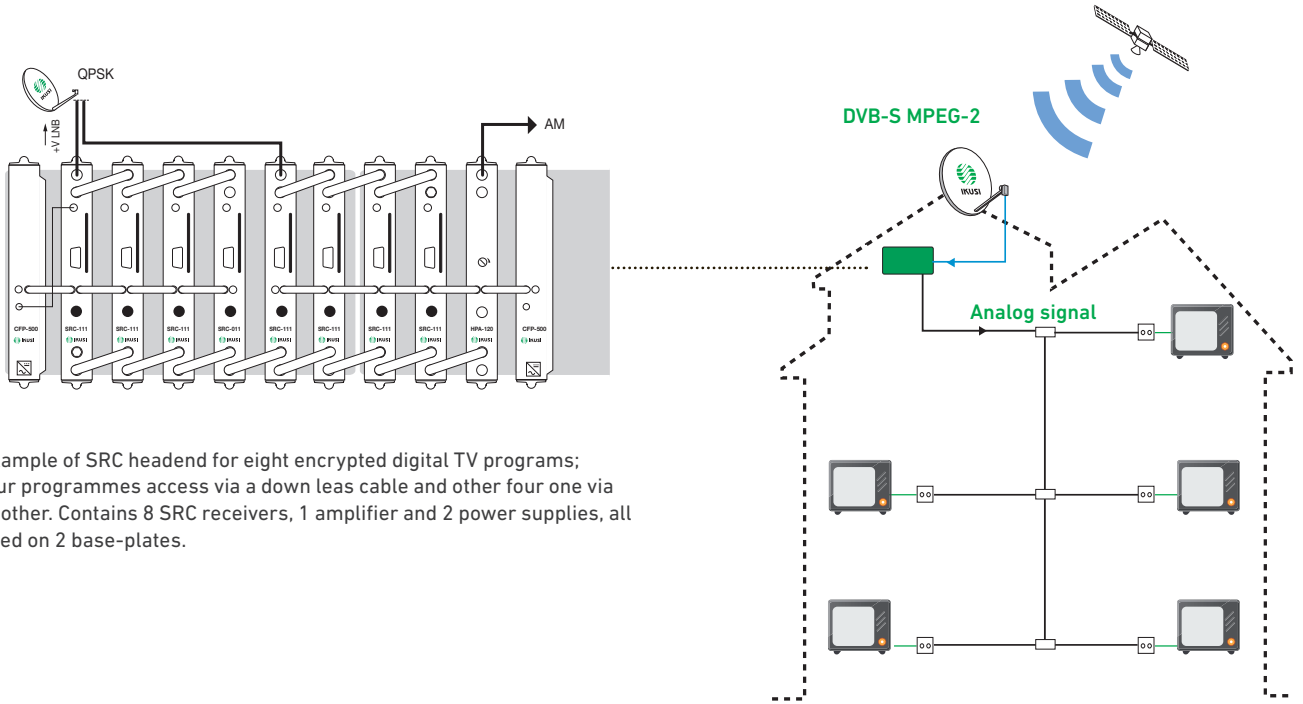
An SRC receiving module with CAM+Operator's smart card inserted, carries out a complete channel processing from the input to the input:

- tunes a DVB-S Sat-IF digital channel in the 950-2150 MHz band,

- selects an encrypted TV programme from the multiplex being received, and

- de-encryptes and presents it on a conventional TV channel that is selectable throughout the 45-862 MHz.

MODEL		SRC-111
REF.		4096
Output TV-channel spectrum		VSB (Vestigial Side Band)
Remote mode		Yes
Output channel TV system		B / G
Audio operation mode		Mono [1]
Output channel colour system		PAL , SECAM , NTSC
Selectable output channel located between:	MHz	45 – 862
Input section (QPSK)		
Inpt frequency	MHz	950 – 2150
Input level	dBµV	44 ... 84
Input loop-through gain	dB	0 (±1)
AFC pull-in range	MHz	±5
Input symbol rate	MS/s	2 ... 45
MPEG-2 decoding		
Video decoding		Main Profile @ Main level
Audio decoding		Layer II
Teletext - subtitles insertion		Yes
Image format conversion		16:9 a 4:3 Pan&Scan and 16:9 a 4:3 Letter-box
External V/A loop		
Video and L/R audio output levels	Vpp	1.0 (video) 0 ... 2.0 (audio)
Video and L/R audio input levels	Vpp	0.9 ... 1.1 (video) 0.5 ... 1.0 (audio)

V & A re-modulation section		
Adjustable video modulation depth	%	80 to 90
Adjustable audio peak deviation	kHz	±10 to ±50
Output section (TV channel)		
Adjustable output level	dBµV	65 to 80
Output loop-through loss	dB	1.1
Adjustable carrier level ratio	dB	12 / 16
Group delay precorrection		Yes
Weighted SNR	dB	> 60
Spurious in band	dBc	< -60
Broadband noise (ΔB=5 MHz)	dBc	< -75
General		
Supply voltage	VDC	+12
Max consumption (CAM included)	mA	680
Operating temperature	ºC	0 ... +45
Input RF connector type		(2x) female F
Output RF connector type		(2x) female F
DC connector type		banana socket
CAM entrance		Slot
Programming interface		RS-232 / DB-9
Video/audio loop connector type		mini-DIN (6-way)
IKUSUP bus connector		(2x) 4-pin socket
Dimensions	mm	230 x 195 x 32

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Application example

QPSK

BN/LNB +V

AM

CFP-500 SRC-111 SRC-111 SRC-111 SRC-011 SRC-111 SRC-111 SRC-111 SRC-111 HPA-120 CFP-500

DVB-S MPEG-2

Analog signal

Example of SRC headend for eight encrypted digital TV programs; four programmes access via a down leas cable and other four one via another. Contains 8 SRC receivers, 1 amplifier and 2 power supplies, all fixed on 2 base-plates.

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