

# Satellite IF-IF Conversion Equipment

## SPC010

REF. 3846

## SPC030

REF. 3844



Data Sheet



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- Frequency conversion of Sat-IF channels coming from different satellites or polarizations.
- Establishment of a new frequency plan where all the converted channels are transmitted on a single cable.
- Use with digital channels.
- Conversion of one or three channels.

	SPC-010	SPC-030
Number of Sat-IF channels converted	1	3
Input mode	Loop-through	Loop through or two independent inputs

### Input section

Input frequency	MHz	950 – 2150	
Input level	dBm	-60 – -20	
Input symbol rate	MS/s	6 – 45	
Maximum level difference between input signals	dB	-	25
Noise figure	dB	< 10	
Input loop-through gain	dB	0 (±2)	

### Output section

Output frequency	MHz	950 – 2150	
Output response flatness	dB	< 3	
Adjustable output level	dBm	-38 to -23 (symbol rates: 22 and 27,5 MS/s)	
Output loop-through loss	dB	1 (typ.), 1,8 (max.)	
Spurious in band	dB	< -35	

### General

Supply voltage	Vdc	+12	
Consumption	mA	210	520
Operating temperature	°C	0 – +45	
Input RF connector type		(2x) female F	
Output RF connector type		(2x) female F	
DC connector type		banana socket	
Programming interface		RS-232/DB-9	
Dimensions	mm	230 x 195 x 32	

Each module is packed with:

- 2 F plug bridges, 64 mm length, for input tap line and output coupling line.
- 1 DC plug bridge, 53 mm length, for connection of +12 Vdc voltage.



## SPC HEADENDS

- Frequency conversion of Sat-IF channels coming from different satellites or polarizations in order to establish a new frequency plan where all the converted channels are transmitted on a single cable.
- Use with digital channels. Range includes two types of converters:
  - SPC-010 Single Converter. Conversion of one channel. Input loop-through which facilitates interconnection of several modules to convert many channels transported by a down-lead cable.
  - SPC-030 Triple Converter. Conversion of three channels. Input mode configurable:
    - a) Loop-through, which facilitates interconnection of several modules to convert many channels transported by a down-lead cable
    - b) Two independent inputs, for converting one channel transported by a down-lead cable and two channels transported by another.
- An SPC headend includes:
  - Single and/or triple SPC Converters, as required.
  - One HPA-920 Sat-IF Combiner/Amplifier.
  - One or more CFP Power Supplies.
  - One or more Rack Frames or wall mounting Base Plates. The base plates can be joined horizontally.
  - Housing units for the base plates if required.

## SIMPLE CABLING OF SPC HEADENDS

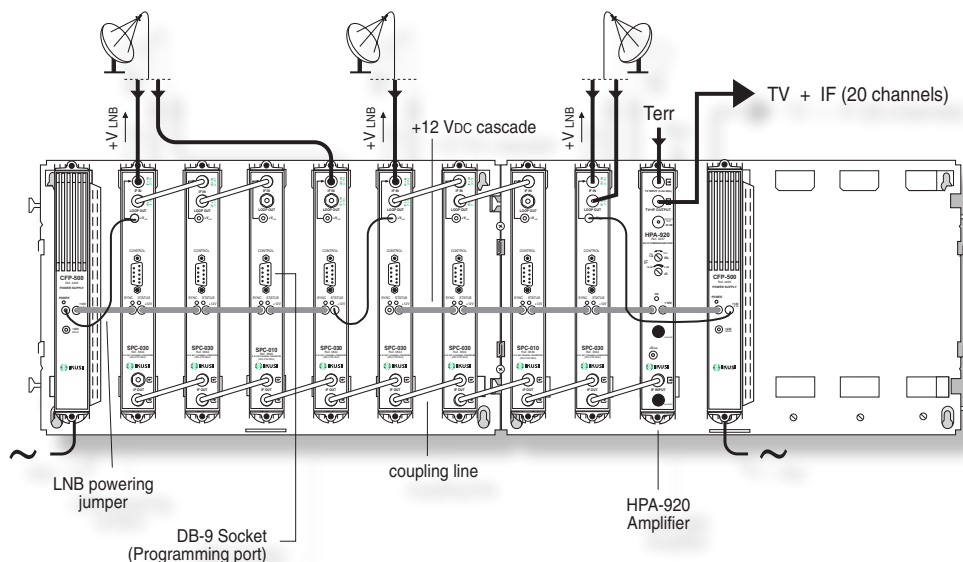
Single and triple converters that are used for same-polarization channels must be grouped together, the down-lead cable being connected to the input port of the first module. In triple converters being configured with 2 independent inputs, each one of the two down-lead cables must be connected to the corresponding port (upper port for 2-channel conversion and lower port for 1-channel conversion). On the output side of the headend a coupling line combines the converted channels and feeds the HPA-920 Sat-IF Combiner/Amplifier.

The converters have two DC banana sockets that allow to build the +12 Vdc cascade. A third banana socket is available to provide power for the attached LNB.

Programming of the converters involves the following settings:

- Central Input Frequencies (1 MHz increments)
- Symbol Rates (6 to 45 MS/s, 1 MS/s increments)
- Central Output Frequencies (1 MHz increments)
- RF Output Levels
- Only for SPC-030 model: Input Configuration (loop-through or 2 independent inputs)

Programming connection using the SPI-300 programming unit is individual — module by module.



— Example of «SPC» headend for conversion and amplification of 20 satellite channels.