



SDC2000/RDS

## SDC2000-RDS

### FEATURES

- Integrated RDS coder; standard EBU service (PI, PS, PTY TP, TA, AF, M/S, PIN, RT, EON, TDC, IH)
- Integrated Digital Coder Stereo
- Support of S/PDIF, AES/EBU (from 32 to 96 KHz of sampling frequencies) and EIAJ CP340/1201 data formats
- Acquisition of Digital and Analogue signals
- High performance thanks to DSP technology
- Directly interface to the keyboard for an easy

#### /SFN option

(Specifically designed for Isfrequency applications):

- Delay line (for all inputs: Left, Right, MPX, AES/EBU).
- GPS Integrated.

*DSP-based High Performance Digital Stereo  
& RDS coder  
for SDC2000-RDS coder*

- High performances Stereo Coder: Stereo Separation > 65 dB and S/N ratio > 80 dB.
- Balanced audio inputs with high level of Common Mode Rejection Ratio (CMRR > 70 dB, from 20 Hz to 15 kHz), filtered from the RF interference and protected against Fast Transient Events
- Ground subdivision system (Audio and Chassis) optimized to avoid Ground-Loops phenomena
- Two buffered MPX outputs, each with independent level, allow to keep an optimum Stereo Separation with loads as low as 50 Ohm.
- **SDC2000-RDS** can deal with digital AES/EBU coded input, or even with standard analog "Left" e "Right" signals, that are converted into digital format (A/D)
- **SDC2000-RDS** generates the stereo composite "MPX" directly in digital form, using as input the *digital* Left and Right inputs; this guarantees:
  - Maximum S/N and fidelity in the stereo signal
  - Maximum stereo separation in the whole frequency range
- The **SDC2000-RDS/SFN** (with /SFN option) handles all the functions needed to work in real SFN configurations synchro of RF carrier delay time as delay line on all the inputs (Left, Right, MPX and AES/EBU).
- The **SDC2000-RDS/SFN** allows 1ppm of carrier synchronization by the built-in GPS source.



# Technical Specifications

## Analogue Audio Input

Preliminary Version

Conversion	24bit
Connector	XLR electronically balanced
Impedance	600/10K – software selectable
Input level	Software adjustable
Maximum Input Level	6/18/30 dBu

## Digital Audio Input

Connector	XLR Balanced + optical toslink
Data Formats	AES/EBU – S/PDIF – EIAJ-340
Sampling frequencies	≅ 48 KHz

## Digital Audio Output

Connector	PIN – RCA Unbalanced
Data format	S/PDIF
Sampling frequencies	96 KHz

## MPX Output

D/A convert	24 bit
Pilot tone	19 KHz ±0,5 Hz
Pilot level	Adjustable
Pilot phase	Adjustable
Attenuation with 38 KHz	
Carrier suppressed	min. -90 dB
Two MPX outputs level	Adjustable
Stereo separation	65 dB from 30 Hz to 15 KHz
NoiseOutput MPX	-90 dBu
Preemphasys	50/75 microsec.
Preemphasys linearity	from 30 Hz to 15 KHz ±0,1 dB
Low pass filter 15 KHz	ripple from 30 Hz to 15 KHz ±0,1 dB
Low pass filter	
attenuation 19 KHz	-90 dB
Clipper	Left and Right channels
Clipper	MPX composite
AGC	Left and Right channels

## RDS

Specification

Cenelec 50067 (PI: Program Identification, PS: Program Service, PTY: Program Type, TP: Traffic Program Identification, TA: Traffic Announcement, AF: Alternative Frequencies, M/S: Music/Speech, PIN: Program Item Number, RT: Radio Text, EON: Enhanced Other Networks, TDC: Transparent Data Channel, IH: In-house Application)

Sub-carrier frequencies  
Synchronization  
RDS Phase Adjust

57 KHz ±1,5 Hz  
Internal or external  
Set at steps 0,33 degrees to 360 degrees

## Elaboration

A/D conversion	24 bit
D/A conversion	24 bit
DSP elaboration	32 bit

## Connectors

Serial Interface	RS232 (DB9 female connector to link the coder with external devices).
Keyboard Interface	5-pin Mini-DIN to connect directly the coder to a standard keyboard.
Remote inputs	TP: Traffic Program Identification, TA: Traffic Announcement, M/S: Music/Speech.

## \SFN (Optional)

Carrier synchronization	GPS stability
Pilot tone synchronization	19Khz GPS stability
Suppressed carrier	38Khz GPS stability
Pilot Tone Phase 19Khz	set at steps 0,1 degree to ±12 degree
GPS system	Built-in

Other specifications are therefore subject to change without notice.