Audio & RDS Equipments

> digital stereo & RDS coder systems

SDC3001
SDC3002

MULTICODER
Advanced Stereo & RDS Coder
SDC3001
USB
RS232
R.V.R.

TRDS3001 front view

Features

> **PRIMARY APPLICATION:** are a high-performance digital stereo encoder and RDS. The use of digital technology based on DSP, allows to reach an excellent quality/price ratio in addition to the functions and characteristics of products more expensive. The RDS encoder is designed to support all popular services provided by UECP SPB490 including dynamic services like TMC, TDC, IH, EWS and RT+, and it uses fully digital technology to guarantee a very high quality of modulation and spectral purity.

> **ADVANCED FEATURES:** It integrates a predictive limiter and AGC for analog and digital L&R inputs; I.T.U. loudness control systems with adjustable level; 3-way rescue changeover with operating times adjustment; RDS carrier cancellation system on MPX input. Moreover, the **SDC3002** version integrates PI code verification and pilot level for MPX input; RDS decoder for selective editing of data in transit. Optionally can be equipped with LAN connection with LAN connection with the WEB server, SNMP agent and

alarms via e-mail or with the WEB server, SNMP agent, alarms via e-mail.

> **TECHNICAL FEATURES:** are fully digital and it uses only high quality components like A/D and D/A converters at 24 bit high dynamic range and numerical processing at 32 bit floating points. Using the WINRDS+ software you can assign station and apparatus codes in order to be able to selectively remote program such as satellite, LAN or Internet. The firmware can be updated via serial port without the necessity of hardware settings and without interruption of service.

> **INPUT/OUTPUT INTERFACE:** the **SDC3002** version integrate an advanced BYPASS system between (MPX or AUX with bandwith up to 100kHz) input and outputs, that ensure the service also in the event of failures.

> **HARDWARE FEATURES:** the system housed in lightweight and rugged stainless steel rack cases having the dimension of 1 HE.

Caratteristiche

> **PRIMARY APPLICATION:** sono codificatori stereo digitale ed RDS ad alte prestazioni. L'utilizzo di tecnologia digitale basata su DSP, permette di raggiungere un eccellente rapporto qualità/prezzo oltre a funzioni e caratteristiche tipiche di prodotti molto più costosi. Il codificatore RDS è progettato per supportare tutti i servizi più diffusi previsti dal protocollo UECP SPB490, compresi i servizi dinamici TMC, TDC, IH, EWS e RT+, ed utilizza tecnologia totalmente digitale in grado di garantire una qualità di modulazione ed una purezza spettrale elevatissime.

> **ADVANCED FEATURES:** integra un limiter predittivo e AGC per gli ingressi L&R analogici e digitali; sistemi di controllo loudness I.T.U. con livello regolabile; scambiatore di soccorso a 3 vie con regolazione dei tempi di intervento; sistema di cancellazione portante RDS su ingresso MPX. Inoltre la versione **SDC3002** integra verifica codice PI e livello pilota su MPX; decoder RDS per modifica selettiva dati in transito.Opzionalmente possono essere dotati di connessione LAN con WEB server,

agent SNMP ed allarmi via e-mail oppure con WEB server, agent SNMP, allarmi via e-mail.

> **TECHNICAL FEATURES:** sono completamente digitali ed utilizza esclusivamente componenti di alta qualità come convertitori A/D e D/A a 24 bit ad alta dinamica ed elaborazioni numeriche a 32 bit in virgola mobile.Utilizzando il software WINRDS+ è possibile assegnare dei codici di stazione e di apparato al fine di poter programmare selettivamente in remoto ad esempio via satellite, lan o internet. Il firmware è aggiornabile tramite porta seriale senza la necessità di settaggi hardware e senza interruzione del servizio.

> **INPUT/OUTPUT INTERFACE:** la versione **SDC3002** integra un sistema evoluto di BYPASS fra ingresso (MPX o AUX con banda passante fino a 100kHz) e uscite, e garantisce il servizio anche in caso di avarie.

> **HARDWARE FEATURES:** il sistema è realizzato in un contenitore rack in acciaio inox incredibilmente leggero e robusto in dimensioni di 1 HE.

Technical specifications

Parameter		SDC3001 SDC3002 Value
GENERALS		
Overall Dimensions	L x H x W	483 x 44 x 280 mm
Weight		4 kg
Operating Temperature		From -10 °C to + 50 °C
Operating Humidity		95% non condensing
A/D & D/A conversion		24 bit (dynamic range 112 dB for A/D and 123 dB for D/A)
DSP elaboration		32 bit, floating point – double ALU -200MHz
Sampling Rate		Analog Inp.47,5KHz–Out.190KHz–Limiter 190KHz–Clipper 760KHz
Preemphasis		0/50/75 microsec.
Clipper & AGC		Right and Left channel, composite MPX input
RDS function	EN50067	PTY,PTYN,TA,TP,MS,DI,PI,PS,AF,PIN,EON,RT,TDC,TMC,EWS,IH,CT, RT+
	Command formats	UECP - SPB490 Ver.7.05
	Frequency	57 KHz ±0,6 Hz (Internal Reference)
	Phase	Adjustable up to 360° in 0.33° steps
/SFN option	Delay	Fixed, adjustable up to 10mS in 50nS steps
	Synchronisation	GPS stability ±200nS
	Pilot tone phase	Adjustable in 0.1-degree increments within a range of ±12 degrees
POWER REQUIREMENTS		
AC Power Input	AC Supply Voltage	115 / 230 VAC ±10%
	Connector	VDE IEC Standard
INPUTS		
Left & Right	Connector	XLR balanced (female), 600 / 10k Ω impedance
	Input level	Adjustable from –12 to +12 dBu in 0.1 dB steps (from 0 to +22 dBu on request)
MPX & AUX	Connector	BNC unbalanced (female), 5k Ω impedance
	Input level	Adjustable from -12 to +12 dBu in 0.1 dB steps (from 0 to +22 dBu on request)
	Bandwith	10Hz – 57kHz +/-0,02dB 10Hz – 100kHz +/-0,02dB
SCA	Connector	BNC (female), 10k Ω impedance
	Maximum input level	Adjustable from +8 to +20 dBu in 0.1 dB steps
AES/EBU	Connector	XLR balanced (male), 110 Ω impedance
	Sampling Rate	From 32 to 192 KHz
TOSLINK	Connector	EIAJ optical
OUTPUTS		
1, 2 & 3	Connector	BNC balanced (male)
	Pilot Tone	19 KHz ±0.2 Hz
	Pilot level	Adjustable from -8 to -32 dBu in 0.1 dB steps
	Pilot phase	Adjustable within a ± 12° range in 0.1° steps
	Stereo separation	70 dB, 30 Hz to 15 kHz
	MPX output noise	-94 dBu
S/P DIF	Connector	Cinch – RCA coaxial, 75 Ω impedance
CONNECTORS		
RS232 serial port	Connector	2x DB9 (female) + 1 USB (from 1200 to 115200 Baud 8,N,1)
REMOTE input	Connector	DB9 (male): 3 Input + 3 Output
Ethernet	Connector	RJ45 (female): WEB & SNMP v1.0 (Optional)

All pictures are RVR's property and they are only indicative and not binding. The pictures can be modified without notice.
These are general specifications. They show typical values and are subject to change without notice.

CE 99/5/CE   Revision: 11/16

Ordering Information

Code -Codice	Description - Descrizione
Versions for SDC3001 & SDC3002 – Versioni per SDC3001 & SDC3002	
SDC3001	Stereo Multicoder & Radio Data System encoder. *Multicoder Stereo & Encoder RDS (Radio Data System).*
SDC3002	Stereo Multicoder & Radio Data System encoder with MPX by-pass function. *Multicoder Stereo & Encoder RDS (Radio Data System) con funzione by-pass per MPX.*
Options for SDC3001 & SDC3002 – Opzioni per SDC3001 & SDC3002	
/SFN-SDC3	Isofrequency, synchronization with external GPS Receiver. *Isofrequenza, sincronizzazione con ricevitore GPS esterno.*
/WEB-SDC3	Ethernet telemetry option with WEB server, SNMP agent and alarms via e-mail. *Opzione di telemetria ethernet con WEB server, agent SNMP e allarmi via e-mail.*

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