

exciters



PTX 150 DDS

D D S

Digital exciters

Direct Digital
Synthesis



Features/Caratteristiche

The quality of digital transmission at a competitive price.

The latest use of **DSP technology** complying with all **EC, FCC and CCIR** standards.

High performance **built-in digital stereo coder**, **ITU professional limiter** and **on board RDS**.

Completely microprocessor controlled, easy to program via menu or RS232, all main parameters displayed on LCD screen.

AES/EBU, L&R, Mono and MPX inputs, auxiliary inputs for **SCA / RDS** signals. Totally manufactured with **SMD technology** for superior operating security.

Perfectly **interfaceable with all RVR telemetry systems** to guarantee simple remote control of operating parameters.

80 to 260 V **multi-voltage universal power feeder** with no selection requirements.

Compact: only 2 rack units, crush-proof and light, crush-proof and light, stainless steel chassis.

Tutta la qualita' di trasmissione digitale ad un prezzo competitivo.

La piu' moderna utilizzazione della **tecnologia DSP** pienamente rispondenti a tutte le norme **EC, FCC ed CCIR**.

Stereo coder digitale integrato ad elevate prestazioni, **limitatore** professionale ITU e **RDS on board**.

Completamente controllati da microprocessore, facilmente programmabile da menu' o via RS232, lettura su display LCD di tutti i parametri principali.

Ingressi AES/EBU, L&R, Mono ed MPX, ingressi ausiliari per segnali **SCA / RDS**. Costruito totalmente in **tecnologia SMD** per una elevata sicurezza di esercizio.

Perfettamente **interfacciabile con tutti i sistemi di telemetria RVR** per un facile controllo remoto dei parametri di funzionamento.

Alimentatore universale multitemensione da 80 a 260 V senza necessita' di selezione.

Compatto, indeformabile e leggero, solo 2 unita' rack, chassis in inox.

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Technical specifications PTX-DDS

Parameters	Conditions	U.M.	PTX 150 DDS Value
GENERALS			
Frequency range		MHz	87.5 ÷ 108
Frequency programmability	From software, with 10 kHz steps (optional 1 kHz steps) QIRT and JPN on request		From software, with 10 kHz steps (optional 1 kHz steps)
Rated output power	Continuously variable by software from 0 to maximum	W	150
Modulation type			Direct Digital Synthesis
Operational Mode			Mono, Stereo, Multiplex
Ambient working temperature	Whithout condensin	°C	0 to + 50 (operational -10)
Frequency stability	WT from -10° C to 50° C	ppm	±1
Modulation capability	Meets or exceeds all FCC and CCIR rules (special version 300 kHz)	kHz	150 Stereo, 200 Mono/MPX
Pre-emphasis mode	Selectable by software	µ S	0, 25, 50 (CCIR), 75 (FCC)
Spurious & harmonic suppression		dBc	<75 (80 typical)
Asynchronous AM S/N ratio	Referred to 100% AM, with no de-emphasis	dB	> 60 (typical 65)
Synchronous AM S/N ratio	Referred to 100% AM, FM deviation 75 kHz by 400Hz sine, without de-emphasis	dB	≥ 50 (typical 60)
MONO OPERATION			
	RMS @ ± 75 kHz peak, HPF 20Hz - LPF 23 kHz, 50µ S de-emphasis	dB	>90 (Input Module)
S/N FM Ratio	Qpk @ ± 75 kHz peak, CCIR weighted, 50µ S de-emphasis	dB	>73
	Qpk @ ± 40 kHz peak, CCIR weighted, 50µ S de-emphasis	dB	≥66 (typical 70)
Frequency Response	30Hz ÷ 15kHz	dB	better than ± 0.5 dB (typical ± 0.2)
Total Harmonic Distortion	THD+N 30Hz ÷ 15kHz	%	< 0.005 (Input Module)
Intermodulation Distortion	Measured with a 1 KHz and 1.3 KHz tones, 1:1ratio, at FM 75 kHz	%	< 0.02
Transient intermodulation distortion	Measured with a 3.18 kHz square wave and a 15 kHz sine wave at 75 kHz FM	%	< 0.1 (typical 0.05)
MPX OPERATION			
Composite S/N FM Ratio	RMS @ ± 75 kHz peak, HPF 20Hz - no LPF, 50 µS de-emphasis	dB	>90 (Input Module)
Frequency Response	30Hz ÷ 53kHz / 53kHz ÷ 100kHz	dB	± 0.2 / ± 0.5
Total Harmonic Distortion	THD+N 30Hz ÷ 53kHz	%	< 0.005 (Input Module)
	THD+N 53kHz ÷ 100kHz	%	< 0.1
Intermodulation distortion	Measured with a 1 KHz and 1.3 KHz tones, 1:1, modulation at FM 75 kHz	%	< 0.05
Transient intermodulation distortion	Measured with a 3.18 kHz square wave and a 15 kHz sine wave at 75 kHz FM	%	< 0.1 (typical 0.05)
Stereo separation	30Hz ÷ 53kHz	dB	> 60 (typical 65)
STEREO OPERATION			
Stereo S/N FM Ratio	RMS @ ± 75 kHz peak, HPF 20Hz - LPF 23 kHz, 50 µ S de-emphasis, L & R demodulated	dB	>90 (Input Module)
	Qpk @ ± 75 kHz peak, CCIR weighted, 50 µ S de-emphasis, L & R demodulated	dB	> 75
	Qpk @ ± 40 kHz peak, CCIR weighted, 50 µ S de-emphasis, L & R demodulated	dB	> 66 (typical 70)
Frequency Response	30Hz ÷ 15kHz	dB	± 0.5
Total Harmonic Distortion	THD+N 30Hz ÷ 15kHz	%	< 0.005 (Input Module)
Intermodulation distortion	Measured with 1 KHz and 1.3 KHz tones, 1:1 ratio, modulation at FM 75 kHz	%	≤ 0.03
Transient intermodulation distortion	Measured with a 3.18 kHz square wave and a 15 kHz sine wave at 75 kHz FM	%	< 0.1 (typical 0.05)
Stereo separation		dB	> 60 (typical 65)
SCA OPERATION			
Frequency response	40kHz ÷ 100kHz	dB	± 0.5
AUDIO INPUTS			
Left / MPX balanced	XLR Female		balanced or externally unbalanced
	Impedance / Input Level, Adjustment Range (1 dB step variable by software)	Ohm/dBu	10 k or 600 / - 13 to +14
Right	XLR Female		balanced or externally unbalanced
	Impedance (Selectable by software) / Input Level, Adjustment Range	Ohm/dBu	10 k or 600 / - 13 to +14
MPX unbalanced	BNC Female		unbalanced
	Impedance (selectable by internal jumper)/Input Level, Adjustment Range (1 dB step variable by software)	Ohm/dBu	10 k or 50 / -13 to +14
SCA / RDS	BNC Female		unbalanced
	Impedance/Input Level, Adjustment Range (externally adjustable +and -20 dB internal Jumper)	Ohm/dBu	10 k / -3 to +15

These are general specifications. They show typical values and are subject to change without notice.

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Parameters	Conditions	U.M.	PTX 150 DDS Value
OUTPUTS			
RF Output	N Female	Ohm	50
RF monitor	BNC Female / Output Level (referred to the RF output level)	dB	approx. -30
Pilot output	BNC Female / Impedance / level	Ohm / V	> 4,7 k / 1
MPX monitor output	BNC Female / Impedance / level	Ohm/dBu	>600 / 0
AUXILIARY CONNECTIONS			
Type			Interlock / Ext ref. 10 MHz / RS232 / RS485 Serial Interface / Remote and Telemetry interface
POWER REQUIREMENTS			
AC Power Input	AC Supply Voltage	VAC	115 - 125 - 230 - 250
	AC Apparent / Active Power Consumption	VA / W	220 / 150
	Power Factor		0,68
DC Power Input	DC Supply Voltage / Current	V DC/ A DC	24/ 5
MECHANICAL DIMENSIONS			
Physical Dimensions	Front panel width	mm (")	483 (19")
	Front panel height	mm (")	88 (3 1/2") 2HE
	Overall depth	mm (")	400 (15,7")
Weight		kg	13
OPTIONS			
Input 10 MHz	reference frequency for PLL synchronizing purpose	code	/10MHz
24V backup input	batterie input	code	/03
Telemetry interface	parallel telemetry board	code	/08
TELEMETRY / TELECONTROL			
Remote connector inputs	Analogical level / Digital level		FWD fold
Remote connector outputs	ON / OFF level		Power good 1
Auxiliary Remote Connector			I2Cbus
Optional Telemetry 1 inputs	Analogical level		8 input for P.A. telemetry purpose
Optional Telemetry 1 outputs	ON / OFF / ON level		2 relay for general telecontrol purpose
Optional Telemetry 2 inputs	pulse		RF ON
Optional Telemetry 2 outputs	ON / OFF level		RF OFF
TELEMETRY-TELECONTROL SW			
RVR Telecon 32	proprietary RVR		Yes
VARIOUS			
Cooling / acoustic noise		/ dBA	Forced, with internal fan / < 56
STANDARD COMPLIANCE			
Safety			EN60215:1989
EMC / Spectrum Optimization			EN 301 489-11 V1,2,1 / ETS 300 447

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