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DIGITAL TRANSMITTERS

1250 W (DVB)
2000 W (ATSC)

Screen Service

PRINCIPALI CARATTERISTICHE:
> Rispondente alle specifiche ETS 300 744 (DVB) e A53 (ATSC).
> Tutte le modalità DVB-T e DVB-H a 2k, 4k e 8k uniformi, gerarchiche e non.
> Adattatore SFN integrato.
> De-jitter sul segnale in ingresso prima della trasmissione.
> Up-converter agile integrato.
> Ingressi ASI e LVDS.
> Compensazione automatica del ritardo di rete (SFN).
> Aggancio a segnale di riferimento GPS.
> Virtual Elastic Store.
> Decodificatore MIP per configurazione automatica.
> Offset di precisione automatico.
> Eccellente apertura dell'occhio.
> Intervallo di guardia fino a 1/32.
> BER = 0.
> Opzione "dual-mode" (PAL/DVB - NTSC/ATSC).
> In modalità DVB-H:
Modo native o in-depth interleaving. Time-slicing per High e Low priority stream. MPE FEC per High e Low priority stream.
> Costruzione modulare.
> Raffreddamento forzato.

MAIN FEATURES:
> Complies with ETS 300 744 (DVB) and A53 (ATSC) specifications.
> All uniform, hierarchical and non-hierarchical 2k, 4k and 8k DVB-T and DVB-H modes.
> Integrated SFN adapter.
> De-jitter on input signal prior to transmission.
> Agile integrated up-converter.
> ASI and LVDS inputs.
> Automatic network delay compensation (SFN).
> GPS reference signal lock.
> Virtual Elastic Store.
> MIP decoder for automatic configuration.
> Automatic precision offset.
> Excellent eye aperture.
> Guard interval up to 1/32.
> BER = 0.
> Dual mode option (PAL/DVB - NTSC/ATSC).
> In DVB-H modes:
Native or in-depth interleaving modes. Time-slicing for High and Low priority stream. MPE FEC for High and Low priority stream.
> Modular construction.
> Forced air cooling.

CARACTERÍSTICAS PRINCIPALES:
> Cumple con las normas ETS 300 744 (DVB) y A53 (ATSC).
> Todos los modos DVB-T y DVB-H de 2k, 4k y 8k uniformes, jerárquicos o no.
> Adaptador SFN integrado.
> "De-jitter" en la señal de entrada antes de la transmisión.
> Up-converter ágil integrado.
> Entradas ASI y LVDS.
> Compensación automática del retraso de red (SFN).
> Enganche a la señal de referencia GPS.
> "Virtual Elastic Store".
> Decodificador MIP para configuración automática.
> Offset de precisión automático.
> Excelente apertura del ojo.
> Intervalo de guardia hasta 1/32.
> BER = 0.
> Opción "dual-mode" (PAL/DVB - NTSC/ATSC).
> En modo DVB-H:
Modo native o in-depth interleaving. Time-slicing para High y Low priority stream. MPE FEC para High y Low priority stream.
> Construcción modular.
> Ventilación forzada.

DBT/DTT 502UB
UHF Transmitter
with Dual Driver option

I trasmettitori televisivi di questa serie sono disponibili in diverse versioni per le bande di frequenza VHF I, VHF III e UHF ed in diverse configurazioni che permettono l'installazione ed il funzionamento in siti con differenti caratteristiche e condizioni ambientali.
L'amplificatore finale è composto da distinti amplificatori funzionanti autonomamente e combinati tra loro così da garantire la piena ridondanza degli stadi.
Ogni singolo amplificatore è, a sua volta, internamente ridondante ed alimentato autonomamente per assicurare un'elevata affidabilità ed una praticità nelle operazioni di manutenzione.
Circuiti a microprocessore, svolgono continui controlli e forniscono la visualizzazione, tramite un pannello di controllo locale o una porta TCP/IP con web server integrato, di tutti i parametri di funzionamento dell'apparato oltre a trasmettere gli stessi ai connettori posteriori per l'interfacciamento remoto.
L'alta efficienza dei circuiti di alimentazione garantisce bassi consumi ed un elevato livello di MTBF.
L'eccitatore di terza generazione, disponibile sia in standard DVB che ATSC con un'ampia gamma di opzioni, e le alte performance di questi trasmettitori digitali assicurano ottime prestazioni ed aprono nuove prospettive per la realizzazione di sistemi e reti DVB-T e ATSC sia in modalità SFN che MFN.

DBT/DTT 502UB
UHF Transmitter

DBT/DTT 502UB
UHF Transmitter
with Dual Driver option

DBT/DTT 512TB
VHF Transmitter

DBT/DTT 502UM
UHF Transmitter

DBT/DTT 512TB
VHF Transmitter with Dual Driver option

MODEL-SPECIFIC DATA

Model DBT, DTT *	Output band	Dimensions	Number of amplifiers	Digital output power (rms) without filter (Shoulders -36 dB @ F_0 ± 4.3 MHz) DVB-T	ATSC	Nominal analog output power (p.s.) with dual mode option
512FB	VHF I	1 x 42 RU	4	1250 W	2000 W	5 kW
512TB	VHF III	1 x 42 RU	4	1250 W	2000 W	5 kW
502UB	UHF	1 x 30 RU	2	1250 W	2000 W	5 kW
502UM	UHF	1 x 40 RU	4	1250 W	2000 W	5 kW

* DBT Series = Digital DVB-T transmitters
DTT Series = Digital ATSC transmitters

Specifications and characteristics are subject to change without notice.

The television transmitters belonging to this series are available in different versions for the VHF I, VHF III and UHF frequency bands and in different configurations that permit installation and operation in sites with different characteristics and environmental conditions.
The final amplifier consists of distinct amplifiers operating autonomously and combined in such a way as to guarantee full redundancy of the stages. Each individual amplifier is, in turn, internally redundant and powered independently to ensure high reliability and practicality in maintenance operations.
Microprocessor circuits carry out continuous control checks and provide for the visualization of all operating parameters on local control panels or by means of a TCP/IP port with integrated Web server. The same data is transmitted to rear-mounted connectors for remote interfacing.
The great efficiency of power supply circuits guarantees low power consumption and a high degree of MTBF.
The third generation exciters, available in both DVB and ATSC standards with their wide array of options, and the excellent quality of these digital transmitters ensure high performance capability and open up new prospects for the realization of DVB-T and ATSC networks in both SFN and MFN applications.

Los transmisores de televisión de esta serie están disponibles en distintas versiones para bandas de frecuencia VHF I, VHF III y UHF y con diversas configuraciones, que permiten su instalación y funcionamiento en entornos de diferentes características y condiciones ambientales.
El amplificador final está constituido por distintos amplificadores que funcionan autónomamente y combinados entre sí de manera que se garantiza una plena redundancia. Cada uno de los amplificadores es, a su vez, internamente redundante y está alimentado autónomamente para garantizar una gran confiabilidad y funcionalidad en las operaciones de mantenimiento.
Circuitos de microprocesador realizan continuos controles y permiten visualizar, por medio de un panel de control local o un puerto TCP/IP con servidor web integrado, todos los parámetros de funcionamiento del aparato así como transmitir los mismos a los conectores traseros para la conexión con interfaz remota.
La gran eficiencia de los circuitos de alimentación garantiza consumos bajos y un nivel elevado de MTBF.
El excitador de tercera generación, disponible tanto con estándar DVB como ATSC con una amplia gama de opciones, y el alto rendimiento de estos transmisores digitales garantizan óptimas prestaciones y abren nuevas perspectivas para la realización de sistemas y redes DVB-T y ATSC tanto en modo SFN como MFN.

DIGITAL TRANSMITTERS
1250 W (DVB)
2000 W (ATSC)

TECHNICAL CHARACTERISTICS

COFDM MODULATOR (DVB-T / DVB-H)	
Serial data input	4 x BNC 75 Ω: 4 x ASI or 2 x ASI + 2 x SDI for dual mode option
Parallel data input	LVDS, Sub-D 25, 100 Ω
Input signal	MPEG2 transport stream
Input data rate	3.73 to 31.67 Mbits/s (according to selected BW and mode)
Modulation	QPSK, 16QAM, 64QAM
Bandwidth	5, 6, 7 or 8 MHz
Transport packet length	188 bytes - 204 bytes (SPI)
IFFT	2k, 4k and 8k
Guard intervals	1/4, 1/8, 1/16, 1/32
Code rates	1/2, 2/3, 3/4, 5/6, 7/8
Precision offset	Integrated (Exact 1 Hz steps @ all BW)
Frequency reference input	10 MHz, BNC 50 Ω
Time reference input	1 PPS, BNC 50 Ω
SFN function	Integrated
Network delay compensation	Manual or automatic
Hierarchical mode	All modes supported
BER	Zero over five hours period before RS decoding, typical
MER	> 47 dB typ.
Eye aperture on vector constellation w/o I.F. filter	> 32 dB
Virtual elastic store function to prevent data overflow	Integrated
Spectrum inversion	Supported
Test functions	Carrier packet removal, CW, PRBS
PCR restamping	Included
Del. Null Packet mode	Included

SOFTWARE-ADJUSTABLE PARAMETERS IN ANALOG MODE (DUAL MODE OPTION)
Video modulation level, sync level, video group delay, audio modulation levels, audio pre-emphasis, audio carriers level, sound modes (mono single carrier, mono dual carriers, stereo, dual sound)

ATSC MODULATOR	
Serial data input	4 x BNC 75 Ω: ASI, SMPTE-310M, SDI for dual mode option (according to customer's request)
Parallel data input	LVDS, Sub-D 25, 100 Ω
Input data rate	Up to 19.39 Mbits/s
Channel bandwidth	6 MHz
Modulation	8VSB (16VSB optional)
Trellis coding	2/3
Symbol rate	10.762 Msymbol/sec.
Bandwidth efficiency	3 Bits/symbol
Digital/analog converter	14 bits
Precision offset	Integrated, 1 Hz steps or 0.999000999 Hz for NTSC operation with dual mode option
Frequency reference input	10 MHz, BNC 50 Ω
Time reference input	1 PPS, BNC 50 Ω
Reed-Solomon encoder	207/187/10
SFN function	Included (proprietary)
Digital pre-correction	Included
Adaptive digital pre-correction	Optional
Test functions	PRBS, CW
PCR restamping	Included for ASI input
Del. Null Packet mode	Included for ASI input

SOFTWARE-ADJUSTABLE PARAMETERS IN ANALOG MODE (DUAL MODE OPTION)
Video white level, video pedestal level, video group delay, sync level, audio modulation level, audio pre-emphasis, audio carrier level.

GENERAL	
Integrated GPS receiver	Optional
Output connector	1+5/8" EIA
Output impedance	50 Ω
Working class	AB
Protections	Overpower Adjustable exciter power limiter VSWR Overvoltage Overcurrent Overtemperature RF fold-back on HI-VSWR (optional)
Frequency stability	1 ppm or locked to external reference
Harmonics (with output filter)	-60 dB or better
Spurious emissions (with output filter)	-60 dB or better
External control and monitoring interfaces	logic and analog signal outputs, enable input, RS 485 TCP/IP (optional) with web based Java interface and Telnet access via Ethernet SNMP (optional)
Cooling	Forced air
Operating temperature	-10°C to +45°C
Maximum relative humidity	90%, non condensing
Maximum operating altitude	2500 m a.s.l. (> 2500 m on request)
Mains power supply	220 / 400 V AC ±15% 3-phase

Screen Service

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