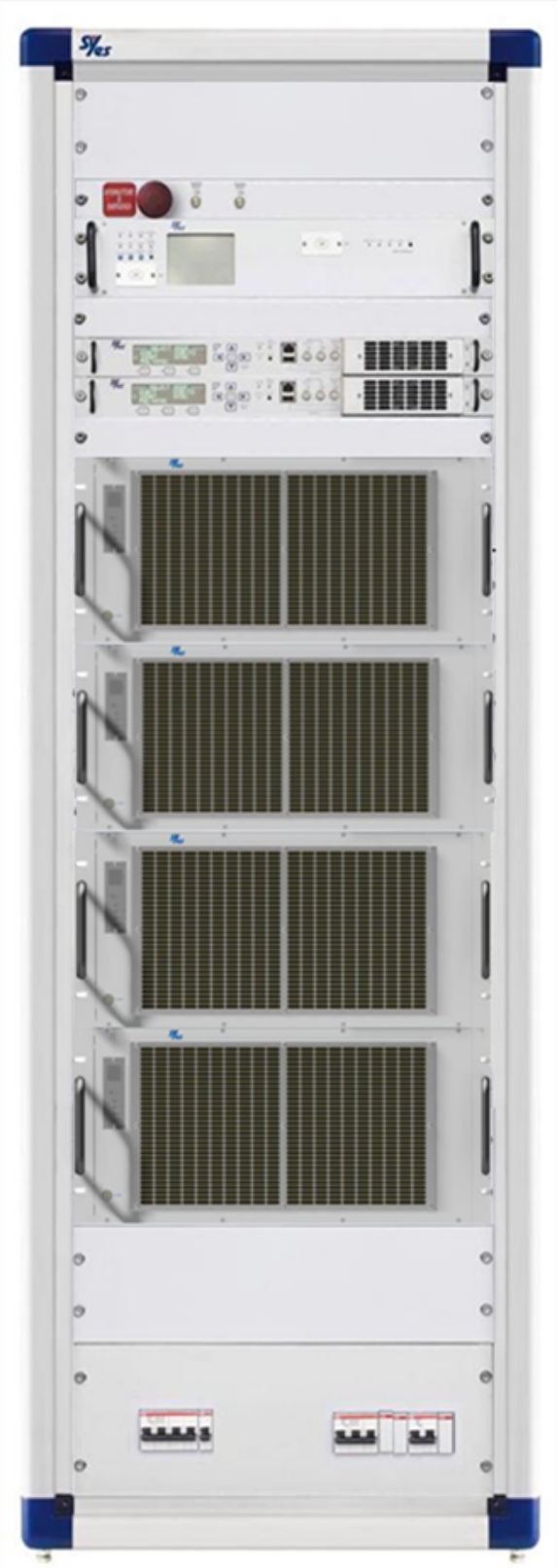
SLIM5-04-BI-SD-PCM



5,000 W rms ATSC and 10,000 W p.s. 42RU solution composed by one PCM BI driver and one **SLIM-5 BI amplifier**.
The SLIM5-04-BI-SD-PCM (Band first – Banda Primera – VHF-I), it's a TV Transmitter, Transposer and Repeater.
The SLIM5-04-BI-SD-PCM is the air cooled power transmitter solution from SLIM family.

Key facts:

- Multimode platform – same hardware: System driver, low power transmitter, heterodyne transposer, regenerative transmitter, translator.
- Multistandard Transmitter (Analog and Digital software defined)
- 2x INPUT= SAT (S2 with CAMSlot), Ethernet, ASI= Hitless switch
- Regenerative and SFN Gapfiller functionalty
- Freq. agile with static or adaptive pre-correction
- BUILT in GPS receiver
- Easy to use: web graphic interface GUI response.

The Air Cooled transmitters line = SLIM Line offers air cooled TV transmitters, with one or more amplifier modules. The product lineup covers from low to high power levels, featuring excellent signal quality and compact size. The SLIM models are available also as repeaters of the off-air signal, with a wide choice of operation settings, or as re-transmitter, with satellite or Ethernet input. SLIM line is one of the "best Seller" of Syes, some of SLIM model are actually operating since 90'. Slim line represents the state of the art of the low-medium RF transmitter technology. SLIM always count on PCM driver (PCM Line), the unique investment exciter thanks to its capability to modulate in all Digital standard, TV and Radio as the TV analog too.

Transmitter configurations are based on single or multiple identical amplifier units (PA), SLIM type. The equipment layout depends on the desired output power level and operational requirements. The PA(s) are directly fed by the exciter. The choice of redundancy configurations can include dual drive (exciter std-by), passive reserve (1+1 or n+1) and more others. The equipment parts are suitable to be assembled in a cabinet, 19"rack std., typically containing also the RF output filter. Single-PA – single-drive models are typically supplied as loose 19"modules. For redundancy configurations and/or multi-channel transmission, important space savings are allowed by the "N-in-one" configurations, with N transmitters in a single cabinet. Cooling is by forced air, with redundant blowers for each module and hot air extraction from the cabinet top. Equipment operation is supervised by the SyES designed control unit.

REVIEW DATA			
RF frequency range (output)		VHF Band I (47MHz-80MHz)	
RF	Output power	5,000 Wrms ATSC	10,000 W p.s.
	Spurious / Harmonics	EN 302-296-2	
	Shoulders/MER	>40dB / >35 dB	n.a.
Mains	Voltage	208/400 Vac ±15% @ 47 to 63 Hz (three phase – autorange p.s.) 110/230 Vac ±15% @ 47 to 63 Hz (single phase – autorange p.s.)	
	Power consumption	27,000 W	n.a.
Cooling system /Air flow rate m3/h		forced air / 800 m3/h	
Size	Width/Height/ Depth	482 mm / 264 mm / 500 mm	
Weight		240 kg	
DIGITAL MODULATION			
DVB-T	ref. standards	ETS 300 744 / EN 50083-9 / TR 101 190 / TR 101 891	
	RF channel width	6 MHz, 7 MHz, 8 MHz	
DVB-T2	ref. standards	EN 302 755, TS 102 831, T2-MI	
	Streams	Single stream (System A) or up to 8-PLPs (System B)	
	RF channel width	6 MHz, 7 MHz, 8 MHz	
ISDB-T SBTVD	ref. standards	N.A.	
	Multiple segment operation	N.A.	
	RF channel width	N.A.	
ATSC 8VSB	Standards	ATSC DOC.A/53	
	Modulation mode	8-VSB	
	Channel spacing	6 MHz	
DTMB	Standard	DTMB (GB20200/2006)	
	Symbol rate / Modulation	Symbol rate: 7.56Msps / TDS-OFDM	
	Channel bandwidth	8 MHz or 6 MHz	
Inputs		2xASI (BNC f, 75W) – seamless/hitless switching (SFN) / BTS / SMPTE / T2 MI / AA/VV	
IP input		2xGBE (ProMPEG Cop3) – Electrical + 1XSFP GBE – Opt./Elec.*	
ANALOGUE MODULATION			
TV System		PAL std. B/G, H, K, I, I1, M, N – NTSC std. M – SECAM D/K	
Ref. Standard		ITU-R BT.470-6	
Audio system		MONO/ IRT	
Video input	Level	1V $_{pp}$ (0.5 to 2 V)(DC component level in the range -5 to 5 V)	
	Ret. loss	better than -30 dB (0 to 6 MHz) (75 W)	
	Connector	1xBNC female, 75 W	
Audio input	Level	6 dBm ± 6 dB (Df= 25 to 50 kHz)	
	Ret. loss	better than -30 dB (40 Hz to 15 kHz) (600 W, bal.)	
	Connector	DB9 with patch cable for 2xXLR female, 600 W (IRT config. : 2 inputs)	

RF input	RFin frequency range	46 to 861 MHz	
	Input level	-10dBm to -60dBm	-20dBm to -70dBm (QEF reception)
	Input ret. loss	better than -16 dB	
	RF in connector	N female, 50 W	
Echo Canceller	residual echo suppression	up to more than 30 dB (30dB are obtained at 0dB input echo)	n.a.
Noise figure		max 10 dB	max 8 dB
immunity to other chan	N+1	OFDM/OFDM > 30 dB	
	others	OFDM/OFDM > 40 dB	
SATELLITE TRANSPOSER			
SatTV standard		DVB-S — DVB-S2 – EN300421	
Frequency range		950 – 2150 MHz	
Signal level		-65 to -25 dBm	
Connector – Cond. Access		SMA f – CAM slot	
LNB control		available, through RF input PS, polarity / band selection: by standard 13/18VDC and 22kHz signalling	
MONITORING			
RF Monitoring Connectors		FWD/REF: SMA female , 50 W	
Local Control		front panel (keys/display/USB port) / standard web browser	
Remote Control	Netw. Mgmt.	web browser / SNMP agent – upgrade also through ASI TS (OTA)	
	Direct signalling	IEC 60864-1	
TIME & REFERENCE			
Built-in ref.	Frequency	10 MHz OCXO	
	Stability	time: max $\pm 10^{-7}$ /year – temperature: max $\pm 2.5\ 10^{-8}$ (-20° to 70°C)	
Ext. ref.	Frequency	10 MHz – 1pps	
	Level	1 V_{pp} (0.7 to 1.4 V)	
VCO tuning step		1 Hz	
ENVIRONMENTAL			
Operating temp. range		0° to 50°C*	
Max rel. air humidity		95% @ 30°C, no condensation	
Max altitude		4000 m a.s.l.	
Immunity	bursts		
	surges		
Safety		EN 60215 (IEC 215)	