

HPS2000TR | FM TRANSLATOR

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Professional High-Power FM Translation. Curated by BW.
Introducing the HPS2000TR, the compact 2kW translator in our new High Power Series.

To expand our offering beyond 1kW, **we've partnered with one of Europe's leading high-power transmitter manufacturers.** The BW High Power Series combines advanced FPGA-based digital modulation with a high-efficiency RF architecture, delivering exceptional audio performance, outstanding reliability and up to 78% efficiency.

Designed specifically for professional FM translator applications, the HPS2000TR is fully frequency agile with no tuning required and incorporates intelligent protection against temperature, current, DC voltage and reflected power to maximise uptime.

Multiple audio interfaces, including analogue L/R, MPX, AES/EBU and optional MPX over IP, provide complete installation flexibility, whilst the integrated Dynamic RDS encoder, 5-band processing, GPS synchronisation for SFN options and comprehensive remote monitoring via SNMP, TCP/IP and Web GUI make the High Power Series suitable for everything from commercial stations to regional broadcast networks.

Its compact 2U air-cooled design, hot-pluggable power supply and integrated digital FM exciter simplify installation and maintenance whilst delivering dependable performance in demanding broadcast environments.

Why choose the HPS2000TR?

- FPGA-based digital FM modulation
- RF efficiency up to 78%
- Compact 2U air-cooled design
- Full frequency agile operation (76÷108 MHz)
- Built-in Dynamic RDS encoder available
- 5-band audio processing available
- Analogue L/R, MPX, AES/EBU & MPX over IP inputs
- Web GUI, SNMP & TCP/IP remote control
- Hot-pluggable power supply
- Automatic VSWR & thermal protection
- Modular architecture for simplified servicing
- Optional 1 PPS & 10 MHz external synchronisation reference (SFN)
- Designed for continuous 24/7 broadcast operation



SPECIFICATION

Working bandwidth:	76 ÷ 108 MHz (66÷73 MHz available)
Frequency stability:	< ± 1 Hz when 10 MHz ext. Reference absent (with No modulation). < ± 0,1 Hz in presence of 10 MHz ext. Reference (with No modulation). In absence of the 10MHz external reference the modulator automatically swap to the internal one
Output power:	2000 W adjustable
Output connector:	7/16 DIN Female, 50 Ohm
Harmonics Attenuation:	≥80dB
Frequency Deviation:	Δf ± 75 KHz ... ± 100 KHz (max.).
MPX Input:	band 40 KHz ... 100 KHz impedance > 2KΩ o 600Ω Input level adjustable from -12dBu up to +12dBu @ 0,1 dB steps (Sensitivity tunable by web pages)
MONO Input:	40 Hz ... 15 KHz impedance > 2KΩ o 600Ω pre-emphasis 0/50/75µs, input adjustable on the L or R input (locally or remotely). Level from -12dBu ... up to +12dBu @ 0,1 dB steps (Sensitivity tunable by web pages).
AUDIO AUX Input:	from 21 KHz ... up to 100 KHz with adjustable input -12 dB ... 3dB @ 0,1 dB steps for a Δf ± 10 KHz (Sensitivity tunable by web pages).
L and R Inputs:	Built-in stereo encoder. impedance > 2KΩ o 600Ω pre-emphasis 0/50/75 µs (locally or remotely). Input level from -12dBu up to +12dBu @ 0,1 dB steps for Δf ± 75 KHz. Clipper Δf: Clipper profile: OFF – normal – hard –ideal (remotely by the web pages).
MPX over IP (optical or electrical)	GBE input / SFP connector on rear panel
AES3/EBU Input:	AES 192 (AES EBU3) Input Impedance 110 ohm Sensitivity from 0dBfs up to – 24dBfs @ 0.1 dB steps
RDS:	Built-in dynamic RDS encoder
RDS Input:	External encoder Input or UECP Input (RS232)
Amplitude/frequency:	<< 0.1 dB (40 Hz – 100 KHz)
Total Harmonic Distortion +Noise:	(Measured with Δf ± 75 kHz) 0.03% @ 400Hz
AM Noise: (MPX Input)	≤ - 60dB ref. amplitude modulation 100% of the carrier
Synchronous AM: (MPX Input)	With f = 400 Hz and Δf ± 75 KHz ≤ - 50 dB ref. amplitude modulation 100% of the carrier.
S/N:	Stereo/mono > 80 dB (f=400 Hz with Δf ± 75 kHz)
Linear Crosstalk: (L/R Input)	< - 72 dB (40 Hz - 15 kHz) (Measured with Δf ± 75 kHz)
Max Altitude	4.600 m a.s.l. (higher altitudes kit on request)
Working temperature range	-10÷50°C
Max relative humidity	95% @ 35°C non condensing

Option to upgrade to Hi-selectivity FM Repeater