

# Blue Plus 5000 DDS

## TRANSMISOR DE FM



### Key Features

- Frequency Agile Broadband 87.5-108 MHz (66 - 73 MHz Band available)
- Modular and compact design: up to 5kW in one chassis 4 RU.
- Intrinsically redundant, hot pluggable power supply
- FPGA processor based technology for Crystal Clear Digital Modulation.
- Overall efficiency more than 75%
- Supports analogue, digital, MPX, AES EBU inputs
- Supports IP input
- RF Input for Repeater /transceiver operation
- Optional DVB-S/S2 and DVB-T/T2 Input
- Optional ASI Input and feed from on-board COFDM demodulator
- Features Dynamic RDS coding embedded
- Ultra High signal to noise ratio, extremely low distortion.
- User friendly GUI.
- Remote control via can bus, serial port, SNMP web pages



## TECHNICAL FEATURES

Working bandwidth:	87,5 + 108 MHz (66+73 MHz available)
Frequency stability:	< $\pm 1$ Hz when 10 MHz ext. Reference absent (with No modulation). < $\pm 0,1$ 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:	5000 W adjustable in the range 400W to 6000W
Output connector	7/8 Flange, 50 Ohm
Harmonics Attenuation:	$\geq 80$ dB
Frequency Deviation:	$\Delta f \pm 75$ KHz ... $\pm 100$ KHz (max.).
MPX Input:	band 40 Hz ... 100 KHz impedance > 2K $\Omega$ o 600 $\Omega$ Input level adjustable from -12dBu up to +12dBu @ 0,1 dB steps (Sensitivity tunable by web pages).
MONO Input: (L input is the default input, it can be set by the web pages on L or R input)	40 Hz ... 15 KHz impedance > 2K $\Omega$ o 600 $\Omega$ pre-emphasis 0/50/75 $\mu$ s, input adjustable on the L or R input (locally or remotely). Level from - 2dBu ... 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 $\Delta f \pm 10$ KHz (Sensitivity tunable by web pages).
L and R Inputs:	Built-in stereo encoder. impedance > 2K $\Omega$ o 600 $\Omega$ pre-emphasis 0/50/75 $\mu$ s (locally or remotely). Input level from -12dBu up to +12dBu @ 0,1 dB steps for $\Delta f \pm 75$ KHz. Clipper f: Clipper profile: OFF – normal – hard -ideal (remotely by the web pages).
Audio/ AUX over IP	GBE input / SFP connector on rear panel
AES3/EBU Input:	Impedance 110 ohm Sensitivity from 0dBFs up to – 24dBFs @ 0.1 dB steps
RDS Input:	Built-in dynamic RDS encoder
MONO/RDS:	Available
RF IN (repeater / transposer)	50 Ohm, connector N Female Type Dynamic range -80+-20dBm
ASI IN (Decoding)	75 Ohm BNC Female Type
DVB IN (T7T2-S/S2)	50 Ohm F Female Type Dynamic range -80+-20dBm decoding function supported, descrambling function supported (with opt CAM slot)

## INPUT FEATURES

Max. Deviation:	From 50 up to 100 kHz @ 1 KHz steps
Delay time:	Alarm activation in case of modulation signal missing From 10 up to 120 s @ 1 s steps
Threshold:	Alarm activation in case of modulation signal missing From - 20 up to -50 dB @ 1 dB steps
Modulation signal missing alarm:	On all input signal
Static Delay:	Between input and output signals From 0 to 900 $\mu$ s @ 0.1 $\mu$ s steps

## STEREO OUTPUT SPECIFICATIONS with L/R and MPX INPUT

Amplitude/frequency:	< $\pm 0.1$ dB (40 Hz - 100 KHz) (Measured with $\Delta f \pm 75$ kHz)
Total Harmonic Distortion +Noise:	0.03% @ 400Hz
AM Noise: (MPX Input)	$\leq - 60$ dB ref. amplitude modulation 100% of the carrier
Synchronous AM: (MPX Input)	With $f = 400$ Hz and $\Delta f \pm 75$ KHz $\leq - 50$ dB ref. amplitude modulation 100% of the carrier.
S/N:	Stereo/mono > 80 dB ( $f=400$ Hz with $\Delta f \pm 75$ kHz)
Linear Crosstalk: (L/R Input)	< - 72 dB (40 Hz - 15 kHz ) (Measured with $\Delta f \pm 75$ kHz)

## SYNCHRONIZATION

Sync receiver / connector /impedance	Internal / connector type N / 50 Ohm
Standard	GPS/Glonass
Ext ref Input	1x 10 MHz (connector BNC 75 ohm) 1PPS (connector BNC 75 Ohm)

## CONTROL AND MONITORING

Local	Graphic display with push buttons
Remote	SNMP V2C / web pages/ RS232/ TLS-TLC GSM/UMTS/GPRS as option

## GENERAL SPECIFICATIONS

Mechanical dimensions	W x H x D: 483 mm x 178 mm (4RU) x 600 mm
Weight	38kg
Power Supply	180+264 Vac Single phase or 208/400Vac Three phases 47+63 Hz
Power consumption at max output power	7850W (power factor >0.95)
Environmental conditions	
Max altitude	4000 m a.s.l.
Working temperature range	-10+50°C
Max relative humidity	95% @ 35°C non condensing