MPX-1g

RDS EDITION

FM-RDS Encoder

Highlights

1-channel dynamic RDS/RBDS Encoder

Complete UECP support

Off-the-shelf option package

Your audio. Our solution.

2wcom

Dedicated to your Use-Case

	MPX-1g **FM-MPX Generator**	**MPX-1g** RDS EDITION **RDS Encoder**
Power Supply	1x 230 V / 48 V 2x 230 V / 48 V (optional) 2x Hot-plug (optional)	1x 230 V
RDS Encoder	Optional	Included
Stereo Encoder	Optional	N/A
AoIP/MPX Encoder	Optional	N/A
AoIP/MPX Decoder	Optional	N/A
µMPX Encoder/Decoder	Optional	N/A
SRT	Optional	N/A
Analog XLR output	Optional	N/A
FM/DAB/SAT tuner	Optional	N/A

MPX-1g – FM-RDS Encoder

Dedicated to your use-case

The MPX-1g RDS Edition is a dedicated option package for the generation of a RDS/RBDS signal. It comes readily equipped with an RDS Encoder module and integrates seamlessly into existing and new FM-RDS distribution chains.

- Full replacement of the established 2wcom C02 and C04 RDS Encoders
- Supports the dynamic generation of a full-featured RDS signal.
- FM transmitters with integrated stereo encoder

The MPX-1g with RDS Encoder module complements systems, where FM-stereo coding is performed in a separate device:

- Setups with separate stereo encoders, for example existing 2wcom S02
- FM transmitters with integrated stereo encoder

Off-the-shelf Option package

The MPX-1g RDS Edition contains exactly the software and hardware modules required for a pure RDS Generator.

- Single internal AC power supply
- RDS Encoder module
- Analog and digital interfaces for 19 kHz pilot and RDS output

If additional functionality is required, please refer to the MPX-1g FM-MPX Generator which can be flexibly equipped with software and hardware modules according to the use-case.

RDS Encoder Module

- RDS Standards: UECP 7.05, CENELEC EN 50067, IEC 62106
- Up to 16 data sets available
- Scrolling PS to show messages of up to 160 characters
- UECP via DTE (2x), IP ports (4x) or Ancillary Data (AoIP Decoder optional)
- Compatible with Arcos Config or ARCOS Network for RDS encoder fleet
- Built-in RDS decoder for live view, enables detailed analysis with RDSLab software

Smart Management

Configuration via web user interface for easy setup
Remote control and monitoring via HTTP, FTP, Telnet, Ember+, JSON, NMS, NMOS and SNMP.
Monitoring and alarm control of RDS and MPX parameters.

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Technical details 1/3

Interfaces

Audio/MPX

MPX in	2x integrated 50 Ω BNC socket; unbalanced >10kΩ
MPX out	2x integrated 50 Ω BNC socket; unbalanced >10kΩ
Digital in	2x AES/EBU, 110 Ω balanced, integrated XLR female shared with analog in (configurable)
Analog in	1x L/R, < 20 Ω balanced, integrated XLR female shared with digital in (configurable)
Digital out	2x AES/EBU, 110 Ω balanced, integrated XLR male shared with analog out (configurable)
Analog out (optional)	1x L/R, < 20 Ω balanced, integrated XLR male shared with digital out (configurable)
Headphone (out)	L/R, < 10 Ω, 6,3 mm
Analog reference level	+6 dBu (max.+18 dBu)
Adjustable gain	-20 … +6 dB
Harmonic distortion	< 0.05 % / <-66 dB (40 Hz ... 10 kHz)
Digital reference level	-9 dBFS
Adjustable gain	-20 … +6 dB
Dynamic range	16 Bit: > 89 dB; 24 Bit, > 130 dB

Ethernet

Connector	3x RJ45 (Control, 2x Data)
Type	Auto switching 10/100/1000 BASE-T, Unicast, Multicast

Serial/GPIO

DTE 1 + 2	2x 9 pole D-Sub male connector for the serial RS-232C data communication Private data, UECP/RDS (acc.to TR 101 154)
USB	USB 2.0 interface for service, configuration and firmware updates
Contact closure	26 pole sub-D male; 8 inputs; 8 outputs

Time synchronization

PTP v2	Network synchronization according to IEEE 1588-2008 (optional)
1 PPS	SMA Connector

Technical details 2/3

RDS Module

RDS Signal

Standards	UECP 7.05, CENELEC, EN 50067, IEC 62106
Coding	Differential and biphase
Modulation	double-sideband amplitude modulation (DSSC) with suppressed carrier
Center frequency	57 kHz ±6 Hz
Bandwidth	±2.4 kHz
RDS Level	0 ... 8191 mVpp
RDS Phase offset	-180° ... 180°
Linear Distorsion	< 0.5 dB between upper and lower sidebands
SNR	> 80 dB
Carrier suppression	> 85 dB

RDS Synchronization

Mode	Synchronized to external pilot or internal stereo generator
Fallback	Automatic switchover to internal oscillator
Frequency	19 kHz ±2 Hz
Level external	< 9Vpp

RDS Features

RDS Functions	PS, PI, TP, TA, PTY, PTYN, MS, DI, RT, CT, AF 64 lists, EON, EWS, ODA, TMC, TDC, IH, RP, PIN, SLC, LINKAGE, EPP, ECC, FFG, SPS, ODA
Data sets	16

Control and monitor

GUI and interfaces

User interface	Integrated WebGUI, LCD display
Protocols	HTTP(S), FTP, Telnet, Ember+, JSON, NMS, NMOS, SNMP

Front panel

Headphone	6.3 mm / 1/4” socket
LEDs	Power, Input, Output, Warning
Operation	Display and Jog Wheel, PIN lock configurable

Expansion

Tuner

Satellite	2x 75Ω F-Type (optional)
FM/DAB	2x 75Ω F-Type (optional)

Technical details 3/3

General data

Power consumption	< 20 W
Case dimensions	19'', 1 RU, Depth: 310 mm, Width: 424 mm, Front panel: 484 mm
Weight	< 5 kg
Material	Steel plate (aluminium-zinc coated)
Operating temp. range	0 … +45°C
Storage temp. range	-40 … +70°C
Language	English

Internal Storage (optional)

Data	Internal audio or MPX files (optional)
Size	7 GB (optional 1000 GB)
Type	eMMC (optional SSD)

Power supply

Standard AC	1 internal IEC power connector voltage range 90 – 260 VAC (nominal 100–240 VAC) frequency range 47 – 63 Hz (nominal 50 – 60 Hz)