RDS ENCODER

RADIO DATA SYSTEM

RDS2
RDS
RDBS

TCP/IP

POWERFUL PERFORMANCE

- RDS2 Ready
- Spectral purity

POWERFUL CONTROL

- UECP Control
- Web Control
- USB Control

POWERFUL SAVINGS

- Nvidia AI Computer systems
- Linux Operating system

Technical Features

RDS FEATURES	
Group supported	From 0A to 15A
Group sequence	Configurable
EON	10 PSN
PS	10 PSN
PTY	10 PSN
PI	10 PSN
PTY	RDS/RDBS
AF	method A (25) and B (100
TP/TA	Active by command
PTYN	Enable
CT	NTP sync + GPS
ODA	Enable
TMC	Enable
Side Chain Mode, Loop through mode, Bypass feature	Configurable
RDS2 Ready	Supported
RADIOTEXT	
Radiotext	10messages
RT+	Enable

PHYSICAL SPECIFICATIONS	
External Dimensions (W / L / H)	219.58mm x208.02mm x 44 mm
Power supply voltage and current	12-24 VDC 1000 mA
RDS/RBDS signal	conforms to CENELEC EN 50067/EN62106
Output level of RDS	10Vp-p adjustable
MPX lead through voltage gain	1x(guarantee from 2 Hz to 100 kHz)
19 kHz pilot Synchronization	+/- 8Hz
Pilot tone input level	3-5000 mV p-p
RDS Sampling frequency RDS Frequency stability	592 kHz +/- 2Hz
RDS Phase stability	+/- 3Degree
RDS Frequency	57 kHz
RDS DAC Resolution	8 Bit
RDS Pilot Connector	BNC Female

SCROLLING PS	
Dynamic PS	Yes
Sequencing speed	Adjustable in sec
Scrolling by character	Yes from 1 up to 8
Scrolling by word, 8 character block, automatic centering, truncate	Yes
Repeating, Labeling, Delay before display	Yes
COMMUNICATION	
Control Software	Magic RDS4
Web access	Embedded web server with responsive design website
Control protocol	TCP UDP
Control connection	USB or Ethernet
VPN Engine	Open VPN
ASCII protocol	Supported
UECP standard	V7.05
HARDWARE	
Communication	1 RJ45 + 1 USB
Operating Systems	Linux
Hardware platform	Nvidia Jetson Nano
Front panel display	OLED 3"
GPS Receiver	Built-In
4G LTE	Built-In

Test Results

R&S ETL RDS Analysis S/N 102839, FW 3.50

Ch: --- RF 93.250000 MHz FM Stereo MCOT9650

* Att 20 dB
ExpLvl 0.00 dBm

Pass	Limit	<	Results	<	Limit	Unit
RDS Deviation	1.500		5.809		7.500	kHz
RDS Freq Offset	-2.00		-0.83		2.00	Hz
RDS Phase	87.0		91.7		93.0	°
RDS BER			0.0e+0		1.0e-2	

Program Service Name				MCOT9650
Date				Thu, 9/29/2022
Local Time				12:34
UTC Time				5:34
Program Identification				0xFF
Decoder Identification				0x1
Program Type				0x0 (None)
Country				---
Ext Country Code				0xFA
Flags	TP:	Off	TA: Off	MS: On

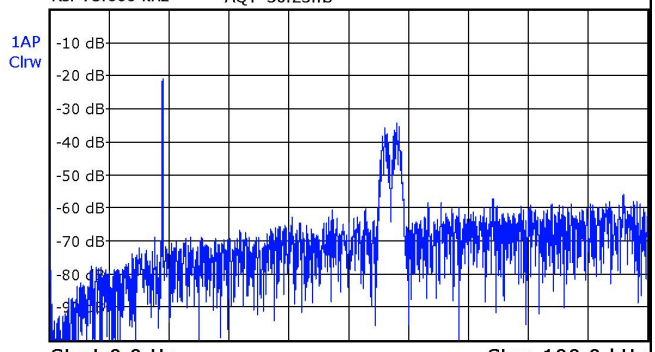
Lvl -31.6dBm |Freq Offs -0.304 kHz |MPX Dev 14.410 kHz STEREO

R&S ETL RDS Analysis

R&S ETL Audio Spectrum S/N 102839, FW 3.50

Ch: --- RF 93.250000 MHz FM Stereo MCOT9650

* Att 20 dB RBW 100 Hz
Ref 75.000 kHz AQT 36.25ms



Signal Path	MPX	Deemphasis	Off
SINAD MPX	5.9 dB	Mod Freq MPX	19.000 kHz
THD MPX	-39.3 dB		

Lvl -31.6dBm |Freq Offs -0.298 kHz |MPX Dev 14.562 kHz STEREO

R&S ETL Audio Spectrum

R&S ETL Radio Overview S/N 102839, FW 3.50

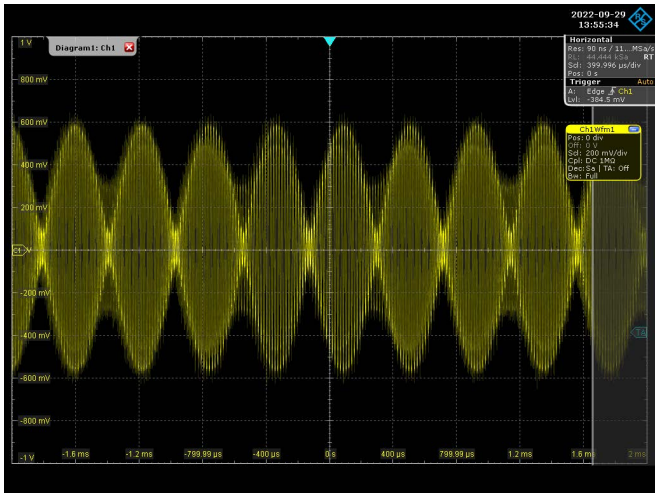
Ch: --- RF 93.250000 MHz FM Stereo MCOT9650

* Att 20 dB
ExpLvl 0.00 dBm

Fail	Limit	<	Results	<	Limit	Unit
Level	-47.0		-31.6		20.0	dBm
Carrier Freq Offset	-0.500		-0.420		0.500	kHz
AM Depth	-----	*	6.18		1.00	%
MPX Deviation	0.000		15.142		75.000	kHz
L Deviation	0.000		1.224		67.500	kHz
R Deviation	0.000		1.174		67.500	kHz
M Deviation	0.000		0.344		67.500	kHz
S Deviation	0.000		1.076		67.500	kHz
Pilot Deviation	6.000		6.545		7.500	kHz
Pilot Freq Offset	-2.00		-0.29		2.00	Hz
Pilot Phase	-3.0		-----		3.0	°
RDS Deviation	1.500		5.817		7.500	kHz
RDS Freq Offset	-2.00		-0.89		2.00	Hz
RDS Phase	87.0		92.8		93.0	°

Lvl -31.6dBm |Freq Offs -0.420 kHz |MPX Dev 15.142 kHz STEREO

R&S ETL Radio Overview



Audio Scope