



## RDS Encoders RDS300, RDS500, RDS1000

### Why choosing RDS/RBDS Encoders from us?

Kvarta is widely considered as a reliable producer of radio and TV equipment. Our RDS/RBDS encoders are growing in popularity due to their reputation of reliability, quality and functionality at exceptional prices.

All our RDS/RBDS encoders have been designed for professional broadcast use and are fully compliant with the standards.

### RDS300

The RDS300 unit is the entry point for every small to medium-sized radio station. It supports all the key features like scrolling PS and RT, remote configuration and automation software integration. It is at a very affordable price which makes it the best choice for radio stations not willing to spend a lot. Moreover, RDS300 preserves the high reliability and functionality of a professional RDS/RBDS encoder. It is firmware upgradable to RDS500 or RDS1000.

### RDS500/RDS1000

Both units have been designed to answer all the requirements for medium to large-sized radio companies.

The support of SNMP greatly improves the remote configuration capabilities making it very simple to configure several RDS encoders at the same time. RDS500 has been designed specifically for broadcasters who want to exploit the interactive functionality offered by **RT+ / Song tagging +**. The top of the range - RDS1000 offers not only RT+ but also support for Traffic Message Channel (TMC), Emergency alert applications and all other ODAs.

## FEATURES

- Fully Compliant with RDS/RBDS standards
- Support for RT+
- ODA support for TMC & Emergency Alert\*
- Embedded Scheduler
- Firmware upgrade available from RDS300 to RDS500 or RDS1000
- Embedded Webserver
- Multi communication links to connect with automation software
- Support for multiple protocols : ASCII , UECP, ASCII+UECP
- Remote monitoring of broadcasted data
- SNMP support

### APPLICATIONS:

RDS/RBDS can be used:

- to identify the Radio Station
- to retune automatically between transmitters of the same program
- to display song titles and singers information on receivers
- to display advertisements
- for interactive radio (RT+ ODA application)
- for traffic Announcements & Traffic Message Channel (TMC)\*
- as an emergency alert system\*



\* RDS1000 only

## BENEFITS

- Send timely & relevant information to your listener base
- Offer interactive radio to engage your listeners & improve loyalty
- Change Scrolling PS & RT messages based on time & date
- Access and control the encoder securely from anywhere via the web browser
- Simple configuration with standard UECP protocol or Kvarta ASCII commands

# RDS300

## Latest technology in RDS Encoders

Dynamic RDS/RBDS encoder designed for small and medium-sized radio stations.

The RDS Encoder RDS300 offers the most popular RDS functions at an exceptional Price/Quality ratio.

RDS Encoder RDS300 can be connected to automation software in order to display information such as artist name and song title on FM/RDS receivers.

Delivered with a quick-start and a connection diagram, the unit is easy to install and has a user-friendly website (useable by non-technical staff).

Firmware upgradable to RDS500 or RDS1000 extending the functionality.



RDS300 - Fully Compliant with RDS/RBDS standards with remote configuration and dynamic PS and RT display

## FEATURES

- Dynamic RDS/RBDS encoder designed for small and medium-sized radio stations.
- Embedded Webserver
- Cost-effective solution
- Supports the following parameters: PI, PS, TP, TA, MS, PTY, PTYN, DI, AF, RT, CT
- Integrates latest Kvarita developments such as Scrolling PS by word and by character
- Plugs and plays with easy set-up
- No trimmers or potentiometer - Digital level and phase adjustment
- 1 port for TCP/UDP Remote configuration

## Digital Signal Generation

All of our RDS encoders use surface-mount components and multilayer circuit boards with a large ground plane. This enables us to keep high frequency signal paths very short, and provides inherent shielding. The result is measurably better performance than other types of construction. All our encoders construct their data digitally at a sample rate of 912 kHz.

This prevents any possibility of spurious signals affecting audio quality. Unlike some competing units, modulation of the data onto your composite signal is also in the digital domain for purity and freedom from interference.

## Reliability

Kvarita encoders are designed for continuous 24/7 on-air operation. All of our units feature solid state memory, have no moving parts and retain their configuration through power outages. Every parameter is controlled through software: there are no potentiometers or trimmer capacitors that may age or need realignment.



# RDS500

# RT+



## WEB CONFIGURATION

## RDS500

### Interactive radio station

Karta's RDS500 is a new RDS encoder designed specifically for radio stations and broadcasters who wish to engage listeners with a RT/PS scrolling experience or to exploit the interactive functionality offered by RT+.

It is based on the same solid hardware as RDS300 and RDS1000. With its unrivalled reputation for reliability, quality and functionality, the new RDS500 is available at a highly affordable price and can be easily upgraded should you require more extensive functionality in the future.

The support of SNMP makes it very easy to remote configure and monitor several RDS encoders at the same time.

RDS500 – besides dynamic PS and RT display, it allows configuration of RT+ / Song tagging + for interactive radios

### RT+ : Catapult your FM radio station into the digital

Today's listeners can access content via multiple platforms such as the internet, social networks, mobile apps and digital broadcasting.

With RT+ on your Kvarta RDS encoder, you can now make exciting interactive content from these new platforms available on your analog FM broadcast. Podcasts, Streaming, Radio on Demand, SMS, MMS and EPG are just some examples of the rich new functionality that can be offered to better engage with your listeners and encourage greater loyalty. Listeners with suitably equipped receivers will not only know the name of the song they are listening to but also will be able to access related web data, a music store or any internet-based music search service. They can use an Electronic Program Guide (EPG) to schedule program recording, directly contact the station by phone, email or SMS and gain easy access to additional information on commercials.

The RDS500/RDS1000 simply allow radio stations to offer the interactivity today's listeners have come to expect.

### SCROLLING PS

Scrolling PS enables you to scroll dynamic messages (song titles, artist information and much more) and mix these messages with the static PS name.



## FEATURES

- Dynamic RDS/RBDS encoder designed for small/medium to large-sized radio stations.
- RT+ support
- Affordable price
- Embedded Webserver
- SNMP support
- Embedded Scheduler
- Scrolling PS/RT
- Plug and play with easy set-up
- No trimmers or potentiometer - Digital level and phase adjustment
- Remote monitoring
- 2 TCP/UDP ports for UECP/ASCII commands

# RDS1000

## All the possibilities in one RDS Encoder

Besides all the dynamic PS and RT text display features that you can get from RDS300 and the RT+ and SNMP capabilities of RDS500, this top class RDS Encoder supplies all the other ODA applications and UECP commands, supports and enables configuration and monitoring of the RDS encoder from multiple points.

## TCP/UDP/SNMP

You can control your RDS encoder through TCP/IP. Simply plug into a local Ethernet network, WAN, or even the internet for secure operation from anywhere in the world. Its built-in, password-protected server is compatible with FTP, Telnet, SNMP and HTTP and with UECP standard RDS protocols.

## FEATURES

- Supports all groups and features of the RDS/RBDS standards
- Fully UECP compliant
- RT+ support
- All ODA application support
- Embedded Webserver & SNMP
- Embedded Scheduler
- Scrolling PS/RT
- No trimmers or potentiometer - Digital level and phase adjustment
- Remote monitoring
- 4 TCP/UDP ports for UECP/ASCII commands



## ODA (Open Data Applications)

There are many applications that can use the RDS/RBDS technology, bringing more services to your listeners and more revenue to the Radio station/Network. These applications cannot be deployed with any RDS/RBDS encoder as they require ODA. The RDS1000 RDS encoder offers this capability as standard.

## TMC: Traffic Message Channel

TMC delivers up-to-date traffic information and voice messages direct to a user's satellite navigation system.

## Paging

Remote control applications: street lighting, billboards etc.

## Emergency Alert System

The RDS1000 is compatible with services that relay data to emergency providers.



# Choosing the right RDS/RBDS encoder?

RDS Encoder Comparison chart		RDS300	RDS500	RDS1000
RDS Features	Groups supported	0A,1A,2A,4A,10A	From 0A to 15A except 14A and 14B	From 0A to 15A
	Group sequence	Variable	Variable	Variable
	EON	NO	NO	YES
	PS	YES(PSN1)	Yes(4 DSN)	Yes(6 DSN)
	PI	YES(PSN1)	Yes(4 DSN)	Yes(6 DSN)
	AF/TA/TP/MS/PTY/PTYN	YES	YES	YES
	CT(Clock Time)	YES	YES	YES
	ODA: TMC, EWS, EPP PAGING, RT+...	NO	RT+ only	Yes
Scrolling PS	Remote monitoring	Partial	Full	Full
	Dynamic PS	YES	YES	YES
	Sequencing speed	Adjustable in sec	Adjustable in sec	Adjustable in sec
	Scrolling by character	Yes from 1 up to 8	Yes from 1 up to 8	Yes from 1 up to 8
Radiotext	Scrolling by word, Automatic centering, Truncate long words, Repetition, Labeling, Delay before display	YES	YES	YES
	Dynamic RT	YES	YES	YES
	Radiotext	1 message	10 messages	10 messages
	Formatted Radiotext	YES	YES	YES
Communication	RT+	NO	YES	YES
	Scheduler	NO	YES	YES
	Configuration Software	Embedded web server	Embedded web server	Embedded web server
	Password protection & IP Filters	YES	YES	YES
	Log	NO	YES	YES
	Connection with automation software	Yes with RS232 or TCP/IP	Yes with RS232 or TCP/IP	Yes with RS232 or TCP/IP
	TCP/UDP ports for ASCII/UECP remote configuration/monitoring	1	2	4
	Command translator	YES	YES	YES
Hardware	SNMP	NO	YES	YES
	UECP Standard	Partially compliant	Compliant	Fully Compliant
	Communication ports	1 RS232 and 1 Ethernet port	1 RS232 and 1 Ethernet port	1 RS232 and 1 Ethernet port
	Level and Phase Adjustment	Digitally	Digitally	Digitally
Side Chain Mode, Loop through mode, Bypass feature	YES	YES	YES	
	Firmware upgradeable	YES (to RDS500 or RDS1000)	YES (to RDS1000)	YES