

# S79005

## 500W FM Transmitter

### Special Features

- Compact Amplifier and PSU Modules are replaceable On Air
- Compatible with S7600 series PA and PSU's\*
- Fully compliant with ETS 300 384 specification for FM transmitters
- Easily configured into a wide range of system architectures
- Uses highly efficient SMPS power supplies with PF correction
- Comprehensive remote control and monitoring facilities



### Introduction

The new S7900 series of FM amplifiers provides the same highly sought after modularity that Eddystone is renowned for in a more compact and cost effective package. The use of the E2021 300W hot-pluggable Power Amplifier modules means that removal of amplifiers can be carried out with minimal reduction in output power and it retains complete compatibility with its predecessor the S7600 series amplifiers. The design also features the newly updated single or dual redundant highly efficient hot-pluggable switched mode power supplies. Both PA and SMPSU modules are common to the entire 7900 and 7600 series from 500W to 20kW, resulting in greatly reduced spares holding costs for networks and groups.\*

\* Based on S7600 series transmitters featuring 1kW SMPSU modules, not APC units.

### System Overview

The drive input is fed to an internal 2 way splitter which provides the PA module input drive. Each E2021 Power amplifier uses dual packaged MOSFET's mounted on a substantial heatsink assembly with minimum airflow over RF components. DC power is fed to the RF modules from the 1 or 2 (option) switched mode power supplies. Internal control and self protection in case of reverse power, excess current or over temperature is handled within each individual E2021 power amplifier module with all monitoring being microprocessor derived. Each module transmits its internal parameters to the central transmitter controller/monitor (E2023) and parameters are displayed on an easy to read backlit LCD screen.

Outputs from the 2 Power modules are pre filtered and then combined via a highly efficient 2 way common rail Wilkinson combiner.

### Cooling Systems

Eddystone Broadcast low power transmitters have self contained redundant cooling fans mounted on the rear of the transmitter. This cooling system can be ducted if required and bespoke systems can be provided to meet special requirements.

### Specifications

<b>Power Output</b>	500W (Adjustable to -6dB)
<b>Operating Frequency</b>	87.5 to 108 MHz
<b>RF Output Load Impedance</b>	50 ohm unbalanced
<b>RF Output Connector</b>	N Type (female)
<b>Maximum VSWR</b>	Able to maintain full power at 1.5:1 before protection cuts in
<b>Mains Power Supply</b>	Single phase 85-265V
<b>RF Harmonic Output</b>	Better than or equal to -79dBc
<b>Power Factor</b>	Typically 99%
<b>Ambient Temperature Range</b>	5°C to +55°C at an altitude up to 3000M
<b>Overall Efficiency</b>	Typically 60%