

## 8 Series Time & Frequency Standard

The 8 Series is a precision time & frequency standard designed for use in any applications where reliable time and frequency information is required. There are three models available, depending on the synchronisation source you require.

### Features

- Choice of clock synchronisation options (GPS, LF or Timecode)
- Crystal oscillator for high frequency stability with option to upgrade
- 1PPS, Pulse & Timecode outputs
- Standard or enhanced front panel
- 1 U high standard 19" rack mount
- Equipment configuration stored in non-volatile memory

Standard Version



Enhanced Version



### Options

#### Synchronisation Source/Model Type(see table below):

- Satellite (GPS)
- Terrestrial Low Frequency (MSF, DCF77, WWVB, HBG)
- Timecode (e.g. IRIG, AFNOR, etc)

#### Front Panel (see product image):

- Standard
- Enhanced (5 button front panel keyboard for equipment configuration and control plus alphanumeric display of time, date and status)

#### Master clock:

- Crystal (fitted as standard)
- Temperature Controlled Crystal (TCXO)
- Oven-Controlled Crystal (OCXO)
- Precision OCXO
- Rubidium
- Precision Rubidium

### 8-Series Model Selector

Sync Source:	Satellite (GPS)	Terrestrial (LF)	Timecode
<b>Standard</b>	GPS8	RCC8	TCT8
<b>Enhanced</b>	GPS8plus	RCC8plus	TCT8plus

# Specifications

## General

Status Indicators:	Power, Status, Data Valid, Satellite Tracking, Reject Code
Mechanical:	19inch rack mount, 1U high (45mm), 305mm deep
Alarm status:	Voltage free relay/ TTL changeover contacts
Power:	110/230V AC rear panel selectable (24V DC/ 48V DC optional)
Weight:	5kg typical
MTBF:	160,000 hours (GB +25°C)
EMC:	CE compliant

## Outputs Included as Standard

1PPS Output:	BNC Connector, Type TTL, On Time Rising Edge
Pulse Output:	BNC Connector, Type TTL, Code Options: IRIG-B, 1PPM, 1PPD
Timecode Output:	Modulated 1kHz carrier, BNC Connector, Code options IRIG-B, NASA36, 2137, AFNOR
Serial Interface:	2 ports, 9-way 'D' socket, with RS232 or RS422 interface

## Optional Additional Frequency Outputs

BNC Connector, frequency stability as per oscillator

Output options:	1MHz, 5MHz, 10MHz, T1 (1.5544MHz), E1(2.048MHz) NB T1 & E1 frequencies cannot be mixed
Sinewave 1:	2 x selected frequency (50 Ohm)
Sinewave 2:	2 x selected frequency (50, 75 or 120 Ohm by jumper)
Squarewave:	2 x selected frequency (75 Ohm)
Frame output:	BNC connector, 75 Ohm Squarewave, Rate: 8kHz

## Input (Synchronisation) Options

### GPS Reception [GPS8 & GPS8plus models]

Satellite code:	C/C 1.023 MHz, receiver type parallel 8-channel
Start-up:	<20 sec (warm), <120 sec (autonomous), automatic (cold)
Timing Accuracy:	± 150 nanosecond from UTC (for holdover mode, as per oscillator)

### LF Reception [RCC8 model & RCC8plus models]

Receiver types:	MSF 60kHz (UK), DCF77 77.5kHz (Germany), HBG 75kHz (Switzerland), WWVB 60kHz (USA)
Accuracy:	± 1 millisecond from UTC

### Timecode Reception [TCT8 model & TCTplus models]:

Timecode options:	IRIG-B, IRIG-E, XR3, 2137, NASA36, AFNOR
Accuracy:	± 1 millisecond from received signal

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