

## M211 Modular Timing System

The M211 is a high capacity flexible timing system designed for use in any application where reliable time information is essential. It is ideal where synchronisation of many different output interfaces is required.



### Features

- 9-slot module output capacity
- Choice of clock synchronisation options
- Choice of master clock accuracy
- Large range of output options
- 3 U high standard 19" rack mount
- 5-segment button front panel keyboard for equipment configuration and control
- Alphanumeric display of time, date and status
- Equipment configuration stored in non-volatile memory

The M211 Timing System provides a Master Clock, which is based upon a central microprocessor. This provides all the timekeeping functions utilising an internal oscillator. A 5-segment front panel button is used in conjunction with an alphanumeric display for control and configuration of the unit. Such features as time entry and option configuration are achieved through the use of this facility.

The display also indicates time, date and status information. The M211 Timing System is designed to allow the inclusion of a large number of options such as data interfaces and standard time receiver modules. These options allow the output of time and date in various formats together with the automatic synchronisation of the Master Clock to the various national and international time standards that are available. The inclusion of a precision oscillator ensures a high long-term stability for the Timing System.

The M211 Timing System is designed to support applications requiring a large number of varied interfaces, or the inclusion of high precision oscillators. The provision of 9 module slots gives great scope to the functionality of the M211 Timing System, whilst it still remains compact within a 3U 19" rack mountable unit. This ensures that the M211 Timing System can fulfil complex system requirements, which are beyond the capacity of the smaller M210 Time System.

### Main Options

#### Synchronisation source:

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

#### Master clock (in order of accuracy):

- Standard crystal
- Oven controlled crystal
- Commercial grade Rubidium
- Industrial grade Rubidium
- Industrial grade Caesium
- Military grade Caesium

#### Output:

- Serial data outputs (RS232, RS422, 20mA Current Loop)
- Parallel BCD output
- Time code outputs (IRIG, etc)
- Analogue clock impulse drives.

**N.B.** We have over 60 individual modules or use with the M211, and we are continually developing new ones. Please contact us for an up-to-date list.

## Specifications

### Performance Specification at 20°C

Time Accuracy:	Standard crystal oscillator maintains free-run accuracy of 20 milliseconds over 4 hours at 20°C.
Display:	2 row by 40 character LCD. Character height 5mm.
Configuration:	5-segment button for equipment configuration and control. Storage of equipment configuration in non-volatile memory.
Power:	90-260V AC $\pm$ 10% 50-60Hz Load 40W (typical)- subject to options and oscillator fitted. Connection via 3 pin IEC plug.
Mechanical:	19 inch rack mounting 3U high 353 mm deep. The chassis has provision for up to 9 option modules to be fitted within the unit.

### Environment (Operation and Storage)

Temperature:	0°C to +40°C
Humidity:	Up to 95% RH (non-condensing)
EMC:	CE Compliant

**N.B.** If you require a more compact version of the M211 Modular Timing System, then please see the M210 Modular Timing System, which is just 1U high and has 3 module slot capacity.

As we are always seeking to improve our products, the information in this document only provides general indications of product capability, suitability and performance, none of which shall form any part of any contract.

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