

# SW1080

## Programmable Synchronization Signals Source

The SW1080 is a configurable multi-format time generator. From a 1PPS input and a digital time message, the equipment can generate 8 independent outputs digital time signals in the following formats:

- 1 PPS width 20 microseconds
- 1 PPS width 200 microseconds
- 1 PPS width 200 ms
- Havequick ICD-GPS-060 Message
- IRIG B002 Message
- IRIG B006 Message
- STANAG 4430 (XHQ) Message
- STANAG 4372 / iii Message

Electrical interfaces are available:

- ICD-GPS-060 (50 Ω)
- TTL
- RS422

### Features

Each output is available below this electrical format: RS422, ICD-060 (+10V) and TTL. The setting of the type of output signal is performed in software. It is stored in a SD CARD which applies when starting the equipment.

The choice of electrical format is done simply by connecting to the pins of the corresponding outputs of the output connector.

A parameter is taking the delay on the outputs (routing time of the signal to the subscriber). This parameter is a value in tenths of microseconds that defines the difference between the internal Second Top of the equipment and the signal emission time

### Synchronization

The equipment is synchronized from a second signal Top and a digital time message. Top Second can be received in one of the following three standards:

- RS422
- TTL 50Ω
- ICD-GPS-60

The time for his message is still received on a RS422 interface. It can have one of the following formats:

- Havequick ICD-GPS-60
- NMEA ZDA frame

Equipment's setting allows the consideration of the delay on the entry. This parameter is a value in tenths of μs that defines the difference between the internal Top second of the equipment and the instant that the signal is emitted.

### Oscillator

The equipment has a local oscillator OCXO type to ensure the provision of accurate time for several hours in the absence of input reference signals.

This oscillator is frequency from the Top Second inputted.

The internal oscillator ensures a better stability than  $1.10^{-9}$  / day in standalone mode.

### NTP Server

The SW1080 provides NTP (Network Time Protocol) that allows any computer or device connected to synchronize network. Service client computers can be synchronized with a precision better than 10 ms. NTP client software must be installed on each client device for syncing with the server.

### Remote control

Remote monitoring of the equipment is made by the network connection by using a simple protocol (TCP).

### Configuration

The entire equipment configuration is contained in a removable micro SDCARD type of memory that allows remote software updates easily.



SW1080 : Front Panel

## Specifications

### Internal Reference

OCXO 10 MHz

### Short term stability free running

Typical  $2 \times 10^{-11}$  on 1 to 10s

### Long term stability free running

Typical

$1 \times 10^{-9}$  per day

$3 \times 10^{-8}$  per month

### Internal top second phasing

$\pm 100$ ns / Top Second input

### Input top second

TTL 50 $\Omega$ , RS422, ICD-GPS-60

### Input digital message

HAVEQUICK ICD-GPS-60,

NMEA weff ZDA

### Electrical inputs interface

TTL 50 $\Omega$ , RS422, ICD-GPS-60

Isolated inputs

Consideration of the signal delay entering is configurable with a correction and a resolution of 0.1 $\mu$ s

### Digital outputs

8 independent digital outputs configurable

### Top Second:

Pulse width of 20  $\mu$ s, 200 $\mu$ s, 200 ms

### Time messages

HAVEQUICK ICD-GPS-60, IRIG B002, IRIG B006, STANAG 4430

### Electrical interface digital outputs

TTL 50 $\Omega$ , RS422, ICD-GPS-60

Isolated outputs

Input connector SUBD HD 15 pins male

Chaining input connector SUBD HD 15 pins female

Digital output connector SUBD 50 pins

### NTP-SNTP time server

Network Time Protocol):

NTP (RFC 1305) SNTP (RFC 1361) Port UDP 123 used.

Configurable generator in V3, V4 version or automatic V3/V4 mode.

### TCP/UDP

Remote management by TCP..

### TFOM Generator

Configurable information

### Network Security

Iptables firewall

### Temperature:

Operation temperature: -10° à 60°C

Storage temperature: -20° à 70°C

Relative humidity range : 10% à 90% (non-condensing)

Storage humidity range: 5% à 95% (non-condensing)

### Dimensions :

Rack 1U 19" depth 280 mm

### Weight:

< 5.3 Kg

### Power supply:

AC main supply

EEC socket 2P+S with filter & On /Off

Compatible STANAG 1008 ed.9 network

Voltage: 85-264VAC / 47-440Hz

Power consumption: < 20W à 230VAC

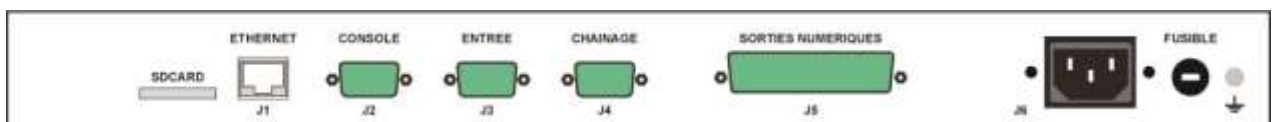
50 Hz

### Certification :

Matériel certifié CE, ROHS et ITAR

### MTBF :

> 280 000 h



SW1080 : Rear Panel

### Ordering code

SW1080: Standard model

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