

IRIG Time Code Generator

TCG509

- Time Information coded in IRIG-A/B Format
- Derived from GPS167 or PZF509
- High Accurate Sine Wave Carrier
- Status LED



- Function:** The Board TCG509 was designed for the generation of IRIG and AFNOR standard timecodes. Particularly it is intended for operation with the Meinberg GPS-Radioclocks [GPS161](#), [GPS163](#) and [GPS167](#) as well as the DCF77 correlation receiver [PZF509](#). Apart from the digitally generated amplitude-modulated code, TCG509 also provides the unmodulated DC-Level shift code. The modulated sine wave carrier and the boards internal time pattern are derived from the radioclocks disciplined oscillator. For special applications, the board can be equipped with a freewheeling oscillator (OCXO or TCXO). Signals needed for operation are a synchronuos pulse per second signal (PPS), a serial timestring at RS232 level, and a 10MHz reference clock as mentioned above.
- Requested Inputs:** 10MHz oszillator-clock (TTL level)
pulse per second, active high (TTL level)
serial [time string](#)
- IRIG-Codes:**
- A002: 1000pps, PWM-DC signal, no carrier, BCD time of year
 - A132: 1000pps, AM, 10 kHz sine-wave carrier, BCD time of year
 - A003: 1000pps, PWM-DC signal, no carrier, BCD time of year, SBS time of day
 - A133: 1000pps, AM, 10 kHz sine-wave carrier, BCD time of year, SBS time of day

B002: 100pps, PWM-DC signal, no carrier, BCD time of year
B122: 100pps, AM, 1 kHz sine-wave carrier, BCD time of year
B003: 100pps, PWM-DC signal, no carrier, BCD time of year, SBS time of day
B123: 100pps, AM, 1 kHz sine-wave carrier, BCD time of year, SBS time of day
AFNOR: Code according to NFS-87500, 100pps, AM sine-wave signal, 1kHz carrier frequency, BCD time of year, complete date, SBS time of day, signal level according to NFS-87500

Outputs: AM sine-wave signal; 3Vpp (MARK), 1Vpp (SPACE) into 50 ohm IRIG
or 2.17Vpp (MARK), 0.688Vpp (SPACE) AFNOR
PWM signal, open-drain

Status LED: state of synchronisation

Power Requirements: +5V, @300mA

Connectors: 64 pin rear VG edge connector DIN 41612
BNC connector for the sine wave output available in the frontpanel

Physical Dimension: Eurocard, 100mm x 160mm, 1.5mm Epoxy

Front Panel: 4HP/3U (20mm wide x 128.4mm high)

Ambient Temperature: 0 ... 50°C

Humidity: 85% max.