GS-102B-FPC

TIME STARTS HERE…

GNSS/IRIG Synchronized Time Code Generator With Internal Rechargeable Battery in Rugged Case

WHY THE GS-102C-FPC Field Portable Clock?

- Synchronizes to GNSS
- Synchronizes to IRIG-B, IEEE-1344
- AM and DCLS Time Code Outputs
- USB Port: Management, Status, Time, Position
- Precise 1PPS Output
- Optional 10MHz Output
- Programmable Pulse Output
- RS-232 I/O Port
- LED Status Indicators
- OLED Display/Keypad
- Wide Range DC Power
- Internal Rechargeable Battery
- Weather Resistant Rugged case
- Optional External Connectors and Observable window in lid



The Model GS-102C-FPC GNSS/IRIG Synchronized Time Code Generator (S TCG) is a low-cost high performance STCG that provides many features typically found on higher cost units. When operated in the GNSS mode, time and rates are precisely referenced to UTC. When operated in the IRIG mode, time and rates are precisely referenced to the IRIG generating source. Management, status, time, and position are available on the RS-232 I/O and USB (serial) Ports.

Housed in a weather resistant rugged case, the Model GS-102C-FPC STCG is ideal for providing time, rates and position infor- mation to camera, power utility, computer and other portable applications. The GS-102C-FPC can drive large format wall and console time displays. Its rugged packaging is ideal for portable or dynamic applications. Rechargeable internal batteries pro- vide more than 24 hours of operation. Optional external connectors and an observation window in the lid allow for closed-case operation.

The RS-232, USB, and manual control allow the user to configure the unit to provide local or daylight savings time or to configure the programmable pulse, rate output, and most other aspects of the unit.

APPLICATIONS

Aerospace · Defense · Test Range · Telemetry · Utilities · Laboratories · Camera Sync · Industrial Automation · Time Display Systems

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GS-102C-FPC

Field Portable Clock

PERFORMANCE	
Timing Accuracy (GNSS)	±100 nanoseconds to UTC
Position Accuracy	<2.5 meters CEP typical (SA off)
GNSS Input Frequency	1176 MHz to 1605 MHz
GNSS Receiver	72 parallel channels — GPS, Galileo, GLONASS, BeiDou, QZSS
Internal Oscillator	TCXO <5×10-9 (disciplined to GNSS)

INPUTS	
GNSS Antenna Input	Connector: BNC
Time Code Input	IRIG B122, B002, IEEE1344 (AM/DCLS) Connector: AM - SMA (CODE INPUT) DCLS – HD15
Time Interval/Event Time Input	TTL Levels Connector: HD15

OUTPUTS	
AM Serial Time Code Output	IRIG-B 122/123, IEEE-1344, IRIG-E, NASA36, 2137; Connector: SMA (CODE OUTPUT)
DCLS Time Code Output	IRIG-B 002/003, IEEE-1344; IRIG-E, NASA36, 2137; TTL; Connector: HD15
1PPS Output	<100ns accuracy, TTL into 50Ω, 50% duty cycle; HD15
Programmable Pulse Output	TTL, positive edge on time, 20µs width; HD15
10 MPPS Output	TTL Connector: HD15
RATE Outputs	TTL, 1PPS, 10PPS, 50PPS, 100PPS, 200PPS, 500PPS, 1PP2S, 1PP Day Connector: HD15
ALARM Output	Open Collector when no fault is active Connector: HD15

INTERFACES	
RS-232 I/O Port	Baud rate 9600–115200; time, position, status & setup; HD15
USB (Serial) Port	Time, position, status & setup
Optional OLED Display/Keypad	Up to 4-lines alphanumeric, Lock and Alarm LEDs

POWER	
DC Power Input	5–40 VDC, <500 mW
AC Power	Via AC-to-DC converter module
USB Power	+5V Via USB Connecot

ENVIRONMENTAL / MECHANICAL	
STCG Dimensions	4.72″ L × 4.07″ W × 1.20″ H
STCG Weight	0.65 lb
Operating Temp.	–20°C to +70°C
Storage Temp.	–40°C to +80°C
Humidity	To 95% non-condensing
Certifications	RoHS

AVAILABLE OPTIONS
Conformal Coating
Custom Pulse Rates
OEM Firmware
GNSS Mag-Mount Antenna w/ 5m SMA cable
GNSS Outdoor weather-resistant antenna with cable
RS-422 Outputs
Extended Warranty

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