

EXPANSION OPTIONS



Expansion Module 2

1 x Network time server port - RJ45 connector
10/100 Mbps

Timing accuracy: <100 ns to UTC

This UTP network interface option allows the TCG 02-G to function as a Stratum 1 NTP/SNTP Time Server.

Protocols Supported:

ARP, UDP, ICMP, TFTP, DHCP, SNMP V1, V2 & V3; VLAN.

Plus:

2 x isolated digital inputs which can be configured for synchronization to an external TTL DC IRIG-B source and/or event recording: 0-5 V TTL (2 pin)

Timing accuracy: <100 ns to UTC

Plus:

1 x Programmable output, either:

TTL 0 - 5 V, 75 mA (BNC) or Fiber Digital TX (62.5/125 μm , λ 820 nm), compatible with multi-mode fiber (ST Fiber connectors)

Timing accuracy: <100 ns to UTC

Plus:

4 x IRIG-B outputs, either:

IRIG-B switchable between TTL 0 - 5 V, 25 mA and AM IRIG-B (BNC)

Fiber Digital IRIG-B TX (62.5/125 μm , λ 820 nm), compatible with multi-mode fiber (ST Fiber connectors)

Timing accuracy TTL/Fiber <200 ns to UTC

Timing accuracy AM IRIG-B: <2 μs to UTC



Expansion Module 3

1 x Programmable output, either:

TTL 0 - 5 V, 75 mA (BNC) or Fiber Digital TX (62.5/125 μm , λ 820 nm), compatible with multi-mode fiber (ST Fiber connectors)

Timing accuracy: <100 ns to UTC

Plus:

3 x IRIG-B outputs, either:

IRIG-B switchable between TTL 0 - 5 V, 25 mA and AM IRIG-B (BNC)

Fiber Digital IRIG-B TX (62.5/125 μm , λ 820 nm), compatible with multi-mode fiber (ST Fiber connectors)

Timing accuracy TTL/Fiber <200 ns to UTC

Timing accuracy AM IRIG-B: <2 μs to UTC

Plus:

2 x T1/E1/10M BNC outputs

T1, E1 and 10M modes are software configurable

Switchable between sine and square wave formats

Plus:

2 x T1/E1/J1 RJ48 outputs

T1, E1 and J1 modes are software configurable

ENVIRONMENTAL AND ELECTRICAL

Power Supply*: L=14-36 Vdc (2 pin)
M=20-75 Vdc (2 pin)
H=90-300 Vdc (2pin)
I=85-265 Vac (IEC320 inlet)

*Redundant power supply optional

Power drain: 12W max
Operating temperature: -10 to 65°C
Humidity: 10 to 95% RH
(non condensing)

Isolation:
Outputs to base unit: 2.5 kV
Power supply to I/O: 3.5 kV

CONFIGURATION SOFTWARE

Windows based configuration software is available for download on the Tekron website.

Remote configuration over Ethernet includes the following user adjustable features:

- Multi-level access control
- Privacy & authentication methods equivalent to SNMP USM
- "Supervisor-mode" prevents non-approved changes
- Test mode
- Commissioning tool

Timing & Synchronization

Worldwide daylight savings and local time configuration using either rule based or fixed date methods. Options that allow equipment checks prior to full installation and adjustable hold-over times to increase reliability in the case of poor GNSS coverage. Adjustments to compensate for installation parameters such as delay of GNSS signal through antenna cable.

Programmable Outputs

IRIG-B (B00x / B22x) time code with selectable C37.118.1 and AFNOR S87-500 extensions
DCF77 time code, 1 kHz square wave
User defined pulse sequences:
Repetition rates from 20 ms to 24 hours
Offsets and durations from 10 ms to 24 hours

Serial Strings

NMEA-0183 ZDA
NMEA-0183 RMC
IRIG J-17
Tekron A - H (Eight protocols for plug and play compatibility with a wide range of equipment).

SNMP

v1, v2c & v3 support can be independently enabled
Configurable v1, v2c community names & security groups
Fully configurable via SNMP
v3 User-based Security Module (USM) support
USM authentication methods: MD5, SHA
USM privacy methods: DES, AES
USM MIB support
Notifications
SNMP trap generation v1, v2c & v3
SNMPv3 traps can be authenticated & privatized via USM
Syslog (RFC-3164 & 5424 varieties)

OPTIONAL ACCESSORIES

Physical

- GNSS antenna
- Antenna cable
- Adjustable antenna mount
- Lightning protection kit

Refer to tekron.com for full technical specifications.

OSCILLATOR OPTIONS

OCXO

1PPS

Precision:
<±50ns UTC Time

Holdover Characteristics:
<±5 µs/8 hours (48-hours aging)
±10 µs/18 hours (48-hours aging)
±10 µs/24 hours (7-days aging)

10MHz

Stability:
<±1.0x10⁽⁻⁹⁾ Peak to Peak

Precision:
<±1.0x10⁽⁻¹²⁾ Avg per 24 hours
<±1.0x10⁽⁻¹⁰⁾ Root Allan
Variance (tau=1 second)

Holdover Characteristics:
<±1.0x10⁽⁻¹⁰⁾ / 24 hours Common to 48-hours aging and 7-days aging

Atomic

Please contact Tekron for information

ABOUT TEKRON

Tekron is a leading developer of accurate GPS/GLONASS clocks and time synchronisation solutions for use in industrial applications.



CONTACT US

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Note:
The quickest and most effective method to request a quote is through the online quote request form on the Tekron website.