



Compact and accurate  
satellite clock.

## TSC 100

---

The TSC 100 is a compact & accurate satellite clock with submicrosecond timing that is used to synchronize Intelligent Electronic Devices in the power industry.

---

### KEY FEATURES

- Wide range, isolated power supply
- High power line drivers
- Low noise characteristics due to balanced pair distribution
- UTC & LST with user defined DST options
- Remote configuration
- Security including password protection, user authentication & data encryption
- Complies with IEC 61850-3

---

### SUPPORTS

- DC IRIG-B (Un-modulated, DCLS - C37.118)
- User defined pulses
- Modified Manchester
- SNMP v1, v2c & v3
- DCF-77
- NTP/SNTP (IEC 61850)

---

## PHYSICAL

Metal DIN rail mountable case with IP30 rating  
155mm (L) x 110mm (W) x 45mm (H) 0.42 Kg

---

## LED INDICATORS

Three LEDs indicating multiple statuses:

- Sync
- Alarm
- Power

---

## GPS RECEIVER

L1, C/A code, 14 Channel Parallel-tracking receiver

Frequency: 1575.42 Mhz  
Pulse accuracy: 50 ns  
Sensitivity: Acquisition -142 dBm  
Tracking -160 dBm

---

## INPUTS

1 x RJ45 UTP connector: 10/100 Mbps  
1 x USB2.0 Type B

---

## OUTPUTS

1 x Sync indication output: 200 V, 150 mA (Max)  
2 x TTL Outputs:

- Time codes or pulses or user defined
- Electrical specification: TTL/CMOS compatible
- 0-5 V 150 mA sink/source
- Timing accuracy:  $\leq 100$  ns UTC

---

## INPUT AND OUTPUT OPTIONS

### TTL

#### Programmable Pulses

- From 1,000 per second to 1 per day with programmable offset & duration

#### DCF-77

- DC level Shift
- Local or universal time

#### IRIG-B

- DC Level Shift or Modified Manchester
- IEEE 1344 Extensions (C37.118)
- AFNOR NF S87-500 Extensions
- Local or universal time

#### Networking

DHCP - auto-configuration with fallback to ARP tested link-local address

VLAN - packet tagging

#### NTP

- Stratum-1 NTP & SNTP time server
- Multicast & Broad cast server capability
- Optional MDS authentication

#### 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 MIB support

#### USM authentication methods

- MD5, SHA

#### USM privacy methods

- DES, AES

#### Notifications

- SNMP trap generation v1, v2c & v3
- SNMPv3 traps can be authenticated & privatised via USM
- Syslog (RFC-3164 & 5424 verified)

---

## UPGRADES

Remote upgrade via Ethernet.

Firmware is cryptographically signed, & authenticated prior to permitting an upgrade.

---

## CONFIGURATION SOFTWARE

Windows based configuration software is available to be downloaded from the Tekron website.

### User adjustable features include:

- Multi-level access control
- Privacy & authentication methods equivalent to SNMP USM
- “Supervisor-mode” prevents non-approved changes

### Timing & Synchronization

Worldwide daylight savings & 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 GPS coverage.

Adjustments to compensate for installation parameters such as delay of GPS signal through antenna cable.

---

## ENVIRONMENTAL AND ELECTRICAL

Power supply:	36-300 Vdc
Power Drain:	5 W max
Operating temperature:	-40 to +65°C
Humidity:	To 95% non-condensing
Isolation	
Power to Antenna:	3.75 kV
Power to I/O:	3.75 kV

---

## COMPLIANCE

The TSC 100 passes the following tests:

### Applicable council directive according to:

- CE Compliance Low voltage directive EN60950-1
- EMC Directive EN61000-6-2, EN61000-6-4
- North America cULus UL60950-1
- C22.2 No. 60950-1



TSC 100 Top View



TSC 100 Bottom View

---

## OPTIONAL ACCESSORIES

### Physical

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

Refer to [tekron.com](http://tekron.com) for full technical specifications.

---

## ABOUT TEKRON

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



---

## CONTACT US

**Web:**  
[www.tekron.com](http://www.tekron.com)

**Phone No:**  
+64 4 566 7722

**Sales Freephone: (Australia)**  
1800 608 572

**Sales Freephone: (North America)**  
1800 256 2309

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