

SEIKO

Time Server

Pro.■

TS-2950

*PTP Grandmaster Clock
suitable for a wide range of applications that
require high accurate time synchronization*



Broadcasting

Finance

Transportation

Electric Power

Media Network

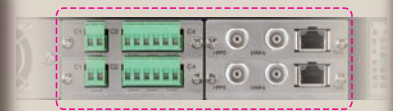
IoT

**Synchronizes easily in L2/L3 network with
PTP or NTP**

**Versatile optional output units including
Black Burst for various application**

Hot-swap redundant power supplies and fans

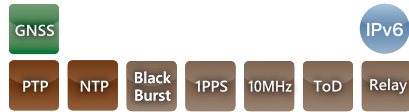
**Holdover function by either CSAC or OCXO for
stable time delivery at all times**



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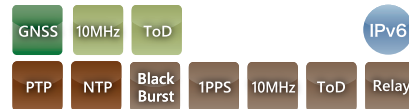
TS-2950 TS-2950-01

Basic model with up to four expansion boards



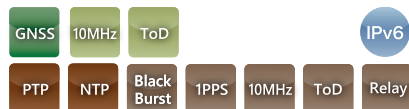
TS-2950-10 TS-2950-11

Compatible with 10 MHz signal output from rubidium transmitter



TS-2950-20 TS-2950-21

Compatible with BB and Tri-levelSync signal



TS-2950-XY

X=0 Basic Model

X=1 10MHz Model X=2 Black Burst

Y=0 CSAC Model Y=1 OCXO Model

GNSS Antenna



TS-210/TS-211

Operation Temperature	-40°C to 85°C
External dimensions	φ66.5×47.5 (H) mm
Weight	approx. 150g (10m cable included)

TS-1550 Sync Generator



- 19-inch rack mountable
- Supports SMPTE ST 2059 and PTP-Slave
- Black Burst, LTC and Word Clock output interface

Model		TS-2950				
		-01	-10	-11	-20	-21
Time source	GNSS	Yes				
	GPS	Yes				
	QZSS	Yes				
	GLONASS	Yes				
ToD(BCD)		—	—	Yes	Yes	Yes
Frequency source		—		10MHz		Black Burst, Tri-level Sync
Holdover accuracy ¹	CSAC (Cesium)	1us/1Hrs ²	—	1us/1Hrs ²	—	1us/1Hrs ²
	OCXO Type-A	—	400ns/5Hrs 1.5μs/24Hrs	—	400ns/5Hrs 1.5μs/24Hrs	—
Leap second adjustment		Yes				
Summer time		Yes				
Black Burst output		Option				
Pulse output		1PPS, 10MHz (Option)				SMPTE alignment point 1PPS, 10MHz (Option)
Relay contact output		Option				
LAN interface		10BASE-T / 100BASE-TX / 1000BASE-T 4 ports				
PTP	Number of available interface port	1				
	Correction accuracy (GPS lock)	UTC within < 100ns				
	Profile	Default profile SMPTE ST 2059-2				
	Protocol	IPv4 UDP/ IPv6 UDP/Ethernet				
	Delay mechanism	Delay request-response Peer delay				
	Sync. message transmission type	1 step/2 step ³				
	Processing capability (max.)	Sync : 16 packets/sec Delay_request (receive) : 16,384 packets/sec Delay_response (send) : 8 packets/sec Announce : 8 packets/sec				
	Number of available interface port	3 ⁴				
	Correction accuracy (GPS lock)	±1msec				
	SNTP	Yes				
NTP	Autokey authentication	Yes				
	MD5 authentication	Yes				
	Processing capability (max.)	14,000 packets/sec				
	TIME, DAYTIME	Yes				
HTTP, HTTPS		Yes				
Telnet, SSH		Yes				
SNMP		Yes				
syslog		Yes				
Mail notification		Yes				
IPv6		Yes				
Characteristics		TS-2950				
Rated voltage		AC 100V-240V±10% (50/60Hz)				
Rated current		0.50A				
Power consumption		45W				
Calorific value		162.0KJ/h				
Operation temperature		0°C to 40°C				
Operation humidity		20% to 80% RH (no condensation)				
Installation style		Rack mount (fittings included)				
Dimensions		430(W) x 500(D) x 44(H) mm (projection not included)				
Weigh		Approx. 10kg				
Certificates		VCCI-A, RoHS, PSE				
Option		GNSS antenna antenna holder power unit module fan module expansion module Cesium oscillator				

¹ Depending on the Oscillator (hardware) selected for the required holdover performance.

² CSAC is very superior to OCXO in long term stability of frequency.0.3ppb/month (unlock to GPS)

³ In case of IPv6 UDP the operation of the time synchronization can be carried out only in two-step, and the peer delay measurement can be carried out only in two-step too.

⁴ It supports source address based routing.

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