



# Kronos Series 2P

## Panel Mount Satellite Clock



### Description

The Kronos Series 2P Satellite Clock is a cost effective and precise timekeeping solution tailored for automation, and control applications. The compact panel mount device offers several IRIG-B and NTP output options for use in new or retrofit applications. Designed with utility-grade reliability, configuration is simple and intuitive using the WebUI, and status is quickly observed on the integrated LED display.

With support for multiple constellations, the Series 2P ensures fast lock and minimal time in holdover while maintaining accuracy of  $\pm 60\text{ns}$ .

### Key Features

#### Ethernet Integration

- Supports browser-based configuration and SNMP

#### Output Flexibility

- NTP and SNTP
- IRIG-B (unmodulated and modulated)
- Ethernet, twisted pair, coax, fiber
- PPS or PPM signals

#### Multi-Constellation Support

- Locks onto GNSS constellations: GPS, GLONASS, BeiDou, Galileo
- Assures fast lock and minimal time in holdover

#### High Precision

- Available with standard TCXO
- Antenna cable-delay compensation for enhanced accuracy
- Accuracy 60ns (99%, clear sky)



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### Technical Data

General Data	
Unit Dimensions	10.6"W x 1.73"H x 5.54"D (269 x 44 x 141mm)
Mounting / Front Panel Height	Panel / 1 RU
Housing Material	Aluminum
Degree of Protection	IP40-rated enclosure protection
Weight	3.1b (1.4 kg)

Power Supply	
Supply Voltage Range	18-72V dc or 80-300V dc / 86-264V ac (50/60 Hz)
Max Power Consumption	7VA

Indicators	
LED	Locked (Green) Holdover (Yellow) Alarm (Red)
Display	Red Dot Matrix Display (5.0"x0.7"/127x18mm)

Environmental	
Operating Temperature	-40°C to +85°C (-40°F to +158°F)
Storage Temperature	-40°C to +85°C (-40°F to +158°F)
Humidity	5% to 95%, non-condensing
Altitude	2000m

Unmodulated IRIG-B	
Supported IRIG-B Protocols	B000/B002/B004/B006
Connector Type / Quantity	Pluggable compression screw terminal (twisted pair): up to 2 BNC female (coax): up to 4 ST (fiber): up to 2
Physical Performance (twisted pair, coax)	200mA drive capability at 5V level Up to 160 ft (50 m) cable 15 $\Omega$ output impedance Fully-isolated
Optical Performance (fiber)	820nm wavelength Optical power: -15.8dBm into 50/125 $\mu$ m fiber (-12dBm into 62.5/125 $\mu$ m fiber)

Modulated IRIG-B	
Supported IRIG-B Protocols	B120/B122/B124/B126
Connector Type / Quantity	BNC female (coax): up to 2
Electrical Performance (twisted pair, coax)	5V pp (no load) / 3.2V pp (50 $\Omega$ load) output voltage 25 $\Omega$ output impedance



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Ethernet	
Connector Type	1 RJ45 10/100BaseT Ethernet Port
Protocols	VLAN IEEE 802.1Q NTP/SNTP SNMP MQTT HTTPS

GNSS Interface	
GNSS Receiver Multi-constellation 72-channel	L1-C/A (1575.42 MHz) GPS signal E1-B/C (1575.42 MHz) Galileo L1OF (1602 MHz) GLONASS B1 (1561.098 MHz) BeiDou  Note: TCXO supports GPS, Galileo, and GLONASS or BeiDou simultaneously
Antenna Connector Type	TNC (female), 50 $\Omega$
Antenna Type	Active
Holdover Oscillator	TCXO (standard): 0.1 ppm (approx. 8.64ms/24hrs) typical drift
Tracking Sensitivity	-166dBm

Functional	
Alarm Dry Contact	Type C / Breaking Capacity: 300mA @ 300V dc (resistive load)
Additional Features	Built-in SNMP agent, with trap generation User-configurable rules for daylight saving time (DST) Antenna cable open and short-circuit detection PPS/PPM signal

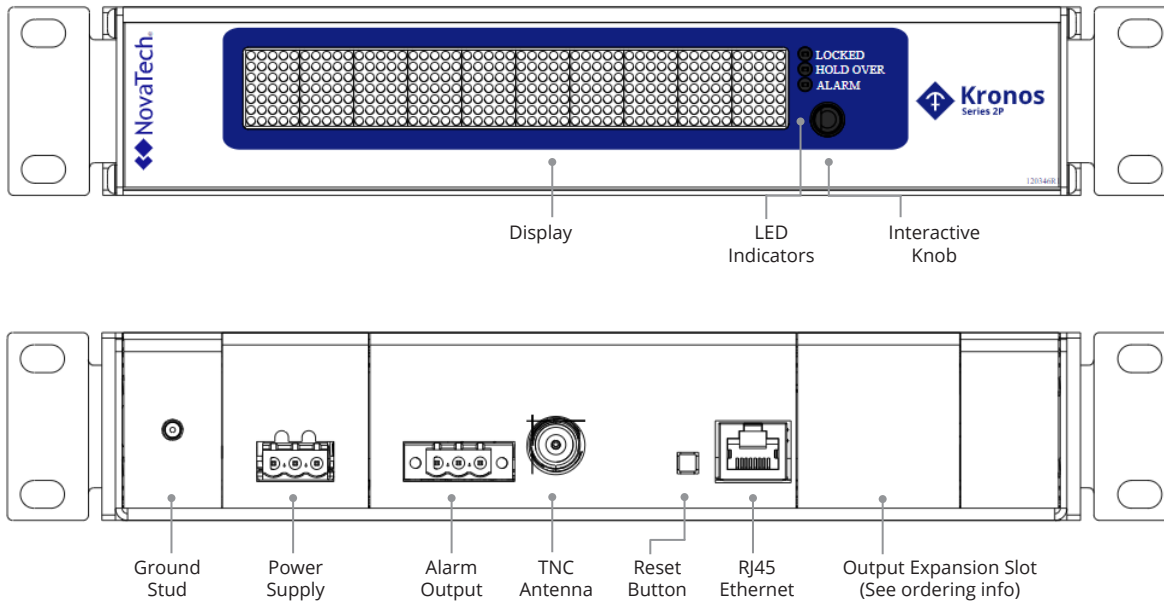
Export Information	
Country of Origin	USA
HS Code	8517.62



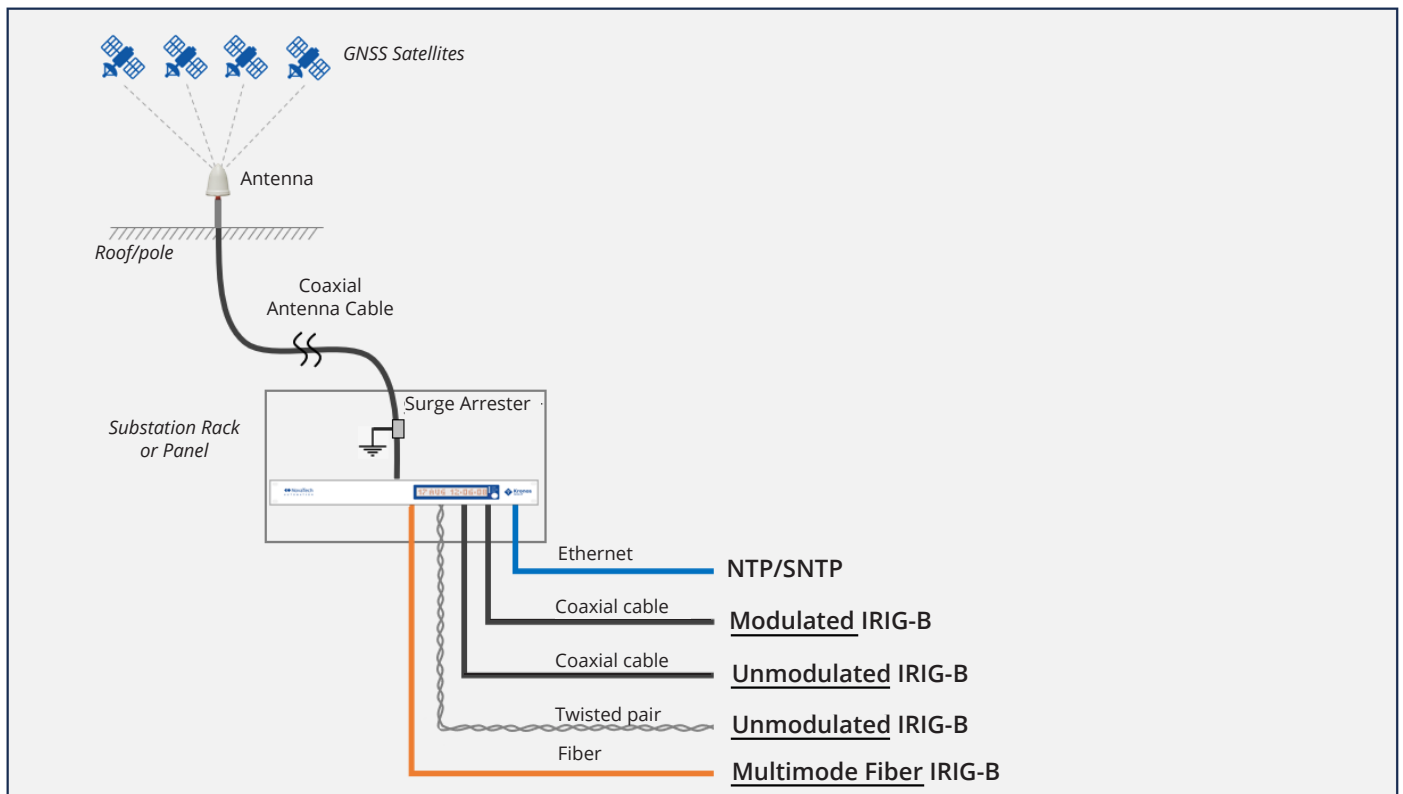
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### Product Diagram



### Application Diagram



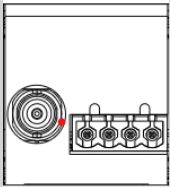
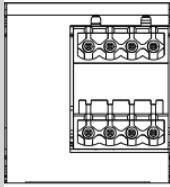
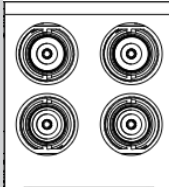

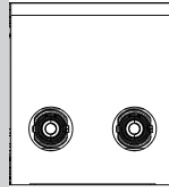


## Kronos Series 2P

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### Ordering Information

#### Output Expansion Cards

Card P/N	-1	-2	-4	-A	-F
Type	Unmodulated	Unmodulated	Unmodulated	Modulated	Multimode Fiber
Connectors	1 BNC + Compression screw terminal	Compression screw terminal	4 BNC	2 BNC	2 ST
IRIG Formats	B000/2/4/6	B000/2/4/6	B000/2/4/6	B120/2/4/6	B000/2/4/6
Output Power	1 x 200mA	2 x 200mA	4 x 200mA	2 x 200mA	-15.8dBm in 50/125µm fiber
Diagram					



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### Ordering Information

Model Builder

Model	Expansion Card 1	Antenna	Antenna Cable	Antenna Mount	Description
Kronos 2P	-	-	-	-	Panel Mount satellite clock, includes 1 RJ-45, 10' coax cable and surge arrestor
	A	-	-	-	Dual Modulated Output Card
	1	-	-	-	Single Unmodulated Output Card
	2	-	-	-	Dual Unmodulated Output Card
	4	-	-	-	Quad Unmodulated Output Card
	F	-	-	-	Dual Fiber Output Card
	X	-	-	-	Empty Expansion Slot (note: Must fill in order)
		AU	-	-	Universal Antenna
		XX	-	-	No Antenna
			C015	-	Antenna Cable 15' (4.5m) – RG58
			C030	-	Antenna Cable 30' (9m) – RG58
			C050	-	Antenna Cable 50' (15m) – RG58
			C080	-	Antenna Cable 80' (25m) – RG58
			C200	-	Antenna Cable 200' (60m) – LMR400
			XXXX	-	No Antenna Cable
				MT	Antenna Mount for Universal Antenna (AU)
				XX	No Antenna Mount

