

CsSync 1030

The Ultimate Performance Time & Frequency Receiver



- **Cesium-like (Stratum 1) frequency performance**
- **Independent UTC source**
- **Time and frequency outputs**
- **All-in-view station acquisition/tracking**
- **Adaptive interference cancellation**
- **E-field or H-field antenna operation**

Ideal GPS Complement

Our new DSP based receivers elevate Loran performance standards to an unprecedented level, making the CsSync receiver the ideal complement to GPS whenever complete availability, reliability, and integrity are required.

Superior Coverage & Penetration

Locus' patented Linear Averaging Digital (LAD) Loran technology provides simultaneous tracking of up to 40 Loran transmitters with overall signal to noise improvement at least 20 dB better than conventional receivers. Incorporating Locus' proprietary adaptive filtering, digital noise blanking and DSP techniques, the CsSync receiver provides hundreds of thousands more square miles of coverage and virtually complete penetration into the most dense urban environments, regardless of ambient weather or interference conditions.

Redundancy & Reliability

The CsSync offers true Stratum 1 frequency performance indefinitely, including

independent UTC generation, and can operate in deep urban canyons and densely foliated areas where line of sight blockage prevents GPS penetration. Cellular base stations can now be located where they are needed, with minimum installation requirements, and the CsSync offers indefinite system redundancy and reliability wherever GPS blockage, interference, or jamming might occur. Short E-field and small H-field antenna options minimize installation profile.

Applications

Precise time and frequency applications

Outputs

2 BNC connectors that are software-configurable to provide either one 1,1.544, 2.048, 5 and 10 MHz frequency output and one 1 PPS, 5V TTL output.



Interface

Data available in NMEA 0183, RTCM SC104 Type 9, and ASCII formats via RS-232 port.

Availability

Available now, order directly from Locus.

CsSync 1030 Product Specifications

Receiver	Signal Level	30-120 dB uV/M
	Interference Cancellers	44 automatic, variable Q notches
	Tracking Capability	Up to 40 stations ¹ , 12 chains simultaneously tracked, tracks CHAYKA (Russian Loran)
Performance	Acquisition Time at 25° C	15 s typical TTF ² - cold start to first data
	Timing Accuracy ³	<100 ns with respect to UTC (locked, 1 sigma)
	Independent Position Calculation Rate	1 s position update rate (typical)
Antennas	E-Field 	Active antenna: 45.7 cm (18") height, cable lengths to 457 meters (1,500 feet) with 24-gauge cable (standard), and 915 meters (3,000 feet) with 18-gauge cable (custom).
	H-Field 	Active antenna: Dome diameter: 199.0 mm, 7.84 inches Dome height: 96.6 mm, 3.80 inches Dome height including 1"-14 mast thread: 128.4 mm, 5.06 inches Cable lengths to 152 m (500 feet) with 24 gauge cable (standard), and 305 m (1,000 feet) with 18 gauge cable (custom).
Power	Requirements	10-36 VDC 100 mV _{p-p} ripple
	Consumption	18 W nominal
Physical	Dimensions	44 x 213 x 203 mm (1.72 x 8.37 x 8.0 inches)
	Weight	0.9 kg (2 lbs.)
	Connectors	2 DB-9s for serial ports; DB-9 for antenna; 2 BNCs for frequency and 1 PPS outputs
Communications	Outputs	(2) RS-232 serial communications ports ; (2) BNCs software configurable for 1,1.544, 2.048, 5 and 10 MHz frequency output and/or 1 PPS, 5V TTL output.
	Data Message	TDs, TOAs, latitude, longitude, time, Eurofix data, NMEA 0183 V2.3, RTCM SC104 Type 9 DGPS
	Alarms	Station blink, ECD skywave uncertainty, cycle slip, SNR
Environmental	Operating Temperature	-25°C to 60°C
	Storage Temperature	-40°C to 85°C
	Humidity	To 95% non-condensing
		¹ Dual rated station = 2 stations ² Time to first fix ¹ ³ Neglecting cable delay and dependent on USCG control