

CFS 2075

Cesium Frequency Reference Standard



**Portable
with 117 Vac, 60Hz
input power**

CFS 2075 Technology

The new Larus CFS 2075 represents a major advance in the utilization of Cesium Beam Frequency Standard technology. It is designed to serve an ever increasing base of demanding users in communications, timing, synchronization, and other applications.

The CFS 2075 is a compact, economical solution for applications requiring the exceptional accuracy, stability, and independence that only cesium based instruments can provide. Housed in a portable enclosure or a 2U high 19 inch rack mounting package, the unit weighs only 28 pounds (13 kg).

The CFS 2075 provides 5 MHz and 10 MHz RF sine wave outputs together with a 1 PPS output. Telecommunications outputs at E1 and T1 are also available. In addition, the unit includes comprehensive system monitoring and control via a standard RS232 port.

Larus comprehensive product offerings provide solutions that address the need for distribution and alternative outputs. These portable bench top or rack mount products include optional components for 1 MHz to 10 MHz frequency conversion and distribution, 1 PPS distribution, and T1/E1 synthesizers that provide up to 4 outputs.

Features

- Advanced technology
- Remote monitor and control via RS232 port
- Sine wave outputs of 5 MHz and 10 MHz
- 1 PPS
- Optional E1 & T1 outputs
- No calibration required
- Lengthy cesium beam tube life span
- Compact portable or 2U rack mount
- Outlet powered 117 Vac, 60 Hz
- Optional carrying case
- Lightweight 28 pounds (13.0 kg)



CFS 2075 Cesium Frequency Standard

PERFORMANCE PARAMETER (Standard)

Accuracy < 2.0E-12

Warm-up Time (typical) 30 minutes
< 1.2E-12

Reproducibility

Stability **Allan Deviation**

Averaging, Time (s)	< 1.2E-11
10 ⁰	< 8.5E-12
10 ¹	< 2.7E-12
10 ²	< 8.5E-13
* 10 ³	< 2.7E-13
* 10 ⁴	< 8.5E-14
* 10 ⁵	< 5.0E-14
* floor	

SSB Phase Noise Offset (Hz)	5 MHz
10 ⁰	-106 dBc
10 ¹	-135 dBc
10 ²	-145 dBc
10 ³	-155 dBc
10 ⁴	-160 dBc
10 ⁵	-160 dBc

Settability

Range	± 1E-9
Resolution	1E-15
Control	via RS232 port

* Excluding environmental effects

LED Panel Indicators

Power	Green indicates there is power to the instrument.
Lock	Amber indicates proper operation.
Major Alarm	Red indicates improper operation.

Power Requirements (AC)

Operating Voltage	85 to 265 V
Frequency Range	47 to 63 Hz 400 Hz
Power	
(operating)	110 VA, 65 W
(warm-up)	140 VA, 90 W

RF Outputs

Frequency	1 each 5 MHz and 10 MHz
Amplitude	1 Vrms
Harmonic	< -40 dBc
Spurious	< -80 dBc
Connector type	BNC
Load Impedance	50 ohms
Location	rear panel

Dimension

Height	3.50" (88.9 mm)
Wdth (front panel)	19.00" (483 mm)
(instrument)	17.31" (440 mm)
Depth	15.00" (381 mm)

1 PPS Output

Frequency	One pulse per second
Amplitude/wave shape	> 3.0 V pk into 50 ohms (TTL compatible)
Width	20 μs
Rise Time	< 5 ns
Jitter	< 1 ns rms
Connector type	BNC
Location	rear panel

Weight

≈ 28 lbs (≈ 13.0 kg)



Rear View



Portable model with carrying case

Options and Modules Available

Transport Case	E1 output module	T1 output module
RF Distribution	Pulse Distribution	Telecom Synthesizer

Specifications are subject to change without notice.



Larus Corporation

894 Faulstich Court
San Jose, CA 95112
TEL: (408) 573-2700
(800) 999-9946
FAX: (408) 573-2708
WEB: www.laruscorp.com