4210A Rubidium Frequency Standard

10MHz Rubidium Frequency Reference
100kHz Capability (with MOPS option)
1PPS Disciplining Input (standard)
Ultra Low Phase Noise (-130dBc at 10Hz)
RS 232 Monitor/Control
Convenient 2U bench or 19" rack mount

The ***ptf*** 4210A Rubidium Frequency Standard is a unique solution for providing a highly stable, low phase noise, frequency reference for applications requiring atomic reference stability performance.

The instrument contains a high performance rubidium module, with an extended life design, and very low aging rate, with high quality OCXO o/p for low phase noise.

For even better long term stability the unit will accept a 1PPS input that can be derived from a reference such as caesium or GPS.

An ideal laboratory or system frequency reference, which includes a range of options are available to enhance the functionality of the unit.

Specifications subject to change without notice

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Specifications

Electrical

Output Level (standard)

10MHz 0.5 vrms into 50Ω
1PPS 5 v CMOS ±20 mA sink/source

Output Level (w/MOPS Option)

1MHz	1.0 vrms into 50Ω +13dBm ±1dBm
5MHz	1.0 vrms into 50Ω +13dBm ±1dBm
10MHz	1.0 vrms into 50Ω +13dBm ±1dBm
1PPS	4.2 v CMOS into 50Ω

Stability

Short-term:	1s	1E-11
	10s	3E-12
	100s	1E-12

Aging <5 E-11/month (after 30 days)
<5 E-10/year
Accuracy 5E-11 (at shipment)

Phase Noise, 1Hz b/w,

Offset from carrier	Phase Noise (dBc)
10Hz	-130
100Hz	-140

Spurious -130 dBc (100kHz bw)

Environmental & Physical

Power Requirements

AC Input (±15%)	90 - 264 VAC, <10W
DC Input (optional)	

Dimensions

(HxWxD)	2U x 19” x 12”

Configuration Options

Option #	Description
PPSI	External 1 PPS
EXP4	4 ch. Expansion Module
MOPS	Multiple RF Outputs (1, 5 & 10MHz)
RF01	1MHz Sinewave out (x4)
RF05	5MHz Sinewave out (x4)
RF10	10MHz Sinewave out (x4)
PULS	Pulse Distribution (x4)
OCXO	High Performance OCXO
ULNO	Ultra Low Noise Output
FPOC	Front Panel Outputs
DCPS	DC Power Supply
RSLD	Mounted Rackslides

ptf 4210A rear view (w/MOPS option)

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