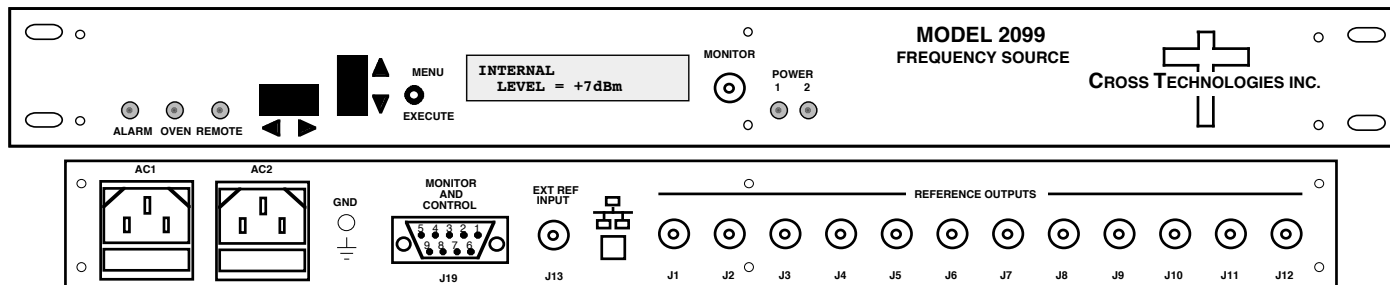


2099-100XX Frequency Source

The Model 2099-100XX Frequency Source provides four (xx=04), eight (xx=08) or twelve (xx=12) 100 MHz reference outputs from a 0.1 ppm high stability oven controlled crystal oscillator (OCXO). Front panel LEDs indicate alarm (red), oven warm-up (yellow), remote (yellow), and power from the two redundant power supplies (green). The output level is +7 dBm (max), and the 2099-100XX works into either a 75Ω or 50Ω load. An available External Reference option (Option E) provides an external reference input which can be used to lock the internal 100 MHz source to a high stability external reference. An LCD display shows the 100 MHz output level (and mode setting, gain, lock reference frequency). Connectors are 50/75 Ohm BNC female. A relay contact closure or open indicates when an alarm occurs. The 2099-100XX is mounted in a 1RU rack mountable chassis with redundant power supplies fed by separate fused 100-240 ± 10% VAC AC input connectors and provides RS232/422/485 (Ethernet optional) M&C Interface.



EQUIPMENT SPECIFICATIONS*

Front and Rear Panel (Shown with optional Ethernet)

Output Characteristics (RF)

Number of outputs	4, 8, or 12 (including monitor)
Impedance	50Ω/75Ω
Return Loss	>18dB
Frequency	100.0000 MHz
Level, adjustable (int ref)	-7 dBm to +7 dBm
Gain, adjustable (ext ref)	-10 dB to +3 dB (option -E only)
Harmonics	< -30 dBC, < -40 typ.
Spurious	< -75 dBC

External Reference Input Characteristics

Impedance	50Ω/75Ω
Return Loss	>18dB
Level	+3 dBm ± 3 dB

Oscillator Characteristics

Frequency Stability	± 0.03 ppm max 0°C to +50°C
Aging	± 0.01 ppm per day; ±0.1 ppm per year
Warm up	± 1.0 ppm in 4 minutes; ±0.1 ppm in 1 hour
Tuning Adjustment	± 0.5 ppm

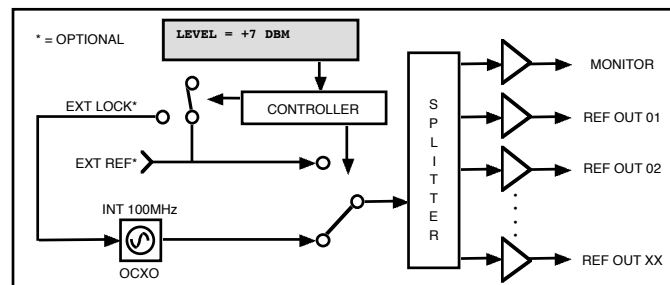
Phase Noise @ Freq	10Hz	100Hz	1kHz	10 kHz
dBC/Hz	-90	-125	-145	-155

Controls, Indicators

Output Level Adjust	Direct readout LCD; push-button switches or remote selection
Power	Green LEDs
Remote	Yellow LED, RS232C/422/485
Oven Warm-Up	Yellow LED
Alarm	Red LED, External contact closure

Other

10 MHz Connectors	BNC (female), 50Ω/75Ω impedance
Alarm/Remote Conn.	DB9 (female) - NO or NC contact closure on Alarm
Size	19 inch standard chassis 1.75" high X 12.0" deep
Power	Redundant 100-240 ± 10% VAC, 47 - 63 Hz, 45 watts max.



2099-100XX BLOCK DIAGRAM

Available Options

W31 - 0 to +50 degrees C operation
 E - External Reference Input (includes INTERNAL, EXT LOCK, and EXT LOCK AUTO modes)

Remote M&C Ethernet Options

W8 - Ethernet w/web browser Interface
 W18 - Ethernet w/SNMP (and MIB) Interface
 W28 - Ethernet w/direct TCP/IP Interface
 W828 - W8 +W18 +W28

Connectors

Std. - 50/75Ω BNC

Contact Cross for other options

*10°C to 40°C; Specifications subject to change without notice