

## QFS-106 Quartz Frequency Standard



The QFS-106 is a high performance frequency standard.

The QFS-106 provides 6 output channels of a single reference frequency, typically 10 MHz.

The internal reference oscillator options available are: free running OCXO or free running rubidium oscillator.

The QFS-106 has 6 individually buffered low phase noise outputs.

Each output has a level detector that will indicate loss of an output or overload via the front panel LED.

Power supply options include 115/230 VAC, 36 – 72 VDC, 18 – 36 VDC, or 09 – 18 VDC.

The QFS-106 is configured as a 1U 19" rack mount unit.

### Features:

- ❑ High stability OCXO or rubidium oscillator
- ❑ 6 individually buffered outputs
- ❑ Low phase noise output buffers

### Related Brandywine Communications Products

#### PTS:

High performance GPS disciplined frequency standard with network interface.

#### GPS8:

Stand alone GPS time and frequency system.

#### FTSU-100:

Distribution amplifier with up to 2 output frequencies, time code, and 1 PPS. It has a built in low noise OCXO for hitless switching.

#### SYNCCLOCK Board Level Products:

Advanced board level GPS and IRIG clocks for VME, PCI, ISA, PMC, and PC/104 bus displays.

#### NTA-100GM NTP Time Server

A GPS based network time protocol server.

## QFS-106 Specifications

Frequency Outputs	
Number of Outputs	6
Frequency	10 MHz standard Optional: 1, 10, 10.492, 12.8, 13, 19.6608, or 64.8 MHz
Level	1 Vrms into 50 ohm (13 dBm)
Distortion	Less than 33 dBc
Connector	BNC
Internal Reference Oscillator	
OCXO	
Stability	$1 \times 10^{-8}$ at -30 to -60°C
Aging	$5 \times 10^{-8}$ per year
Rubidium	
Stability	$\pm 1 \times 10^{-10}$ at 0 to 50°C
Aging	$5 \times 10^{-11}$ per month
Phase Noise at 10 MHz	
1 Hz	-90 dBc/Hz
10 Hz	-110 dBc/Hz
100 Hz	-140 dBc/Hz
1 KHz	-150 dBc/Hz
10 KHz	-157 dBc/Hz
Environmental	
Temperature	-30 to +60°C
Humidity	95% non-condensing
Power	
	115/230 VAC
Optional	09 – 18 VDC, 18 – 36 VDC, or 36 – 72 VDC
Dimension	19.00" x 6.150" x 1.720" (L x W x H)
Weight	3 lbs. nominal

### Ordering Information:

PART NUMBER	OSCILLATOR	POWER SUPPLY
015006001	OCXO	115/230 VAC
015006101	OCXO	115/230 VAC
015006002	OCXO	09 – 18 VDC
015006003	OCXO	18 – 36 VDC
015006004	OCXO	36 – 72 VDC
015006011	Rubidium	115/230 VAC
015006012	Rubidium	09 – 18 VDC
015006013	Rubidium	18 – 36 VDC
015006014	Rubidium	36 – 72 VDC