

Description



The Polaris DDS-2CH-OCXO is a dual channel direct digital synthesizer that provides ultra-precise frequency resolution, low spurious, and low phase noise performance. The DDS-2CH-OCXO has an internal 100MHz OCXO for excellent temperature stability of the system clock.

This synthesizer can generate output frequencies from less than 1 MHz up to 400 MHz (based on a 1 GHz clock) with step sizes of 4 μ Hz. The output power is available up to 13 dBm at the specified frequency.

The DDS-2CH-OCXO comes in a robust aluminum milled case and operates over the temperature range of 0°C to 50°C. A protocol to manage this synthesizer can be provided and interfaced with an external controller through 3.3 V UART communication.

Features

- Dual Channel Outputs
- 1 GSPS Internal Clock Speed (up to 400 MHz output directly)
- 48-bit Frequency Tuning Word with 4 μ Hz Resolution
- Low Phase Noise
- Internal 100 MHz OCXO with Excellent Temperature Stability
- Serial Control Interfaces
- Fault Diagnosis

Options

- Single Channel Output
- Single-ended CMOS Output
- Differential HSTL Output
- External Clock
- Parallel Control Interfaces
- Extended Operating Temperature: -20 °C to 70 °C
- User Interface Connectors
- Customized Outlines

Applications

- Agile LO Frequency Synthesis
- Low Jitter, Fine Tune Clock Generation
- Test and Measurement Equipment
- Wireless Base Stations and Controllers
- Secure Communications
- Fast Frequency Hopping

Specifications

Parameters		Specifications under 25°C and static conditions			
		Unit	Min.	Typ.	Max.
Number of Output Channels			2		
Output Frequency	Range	MHz			400
	Resolution	Hz	0.000004		
Output Power		dBm			13
Spurious		dBc			-60
Harmonics		dBc			-60
Internal System Clock	Frequency	MHz	10 or 100		
	Temperature Stability	ppb			± 50
Phase Noise		dBc/Hz	Consult Factory		
VSWR		: 1			1.5
Output Impedance		Ω	50		
Supply Voltage		V	6 ± 0.5 or 12 ± 0.5		
Current Consumption		mA	Consult Factory		
Hardware Fault Alarm			Normal: 3.3 V, Abnormal: 0 V		
Operating Temperature		°C	0		50
Connectors	DDS Output			SMA-Jack, 2-Hole	
	SYSCLK MON			SMA-Jack, 2-Hole	
	EXT_MCU Note 1	Connector		Molex, 53015-0510	
		Pin Description		(#1) 6 Vdc, (#2) 3.3V UART_RX, (#3) 3.3V UART_TX, (#4) H/W_ALM_OUT, (#5) GND	
	RF Converter			Auxiliary Connector	
Size (Length x Width x Height)		mm	129.1 x 146.6 x 23.2		
Housing Finish			Milled Aluminium Case		

Note 1: UART port setting

Communication Speed (bps) : 460800,

Data Bit : 8,

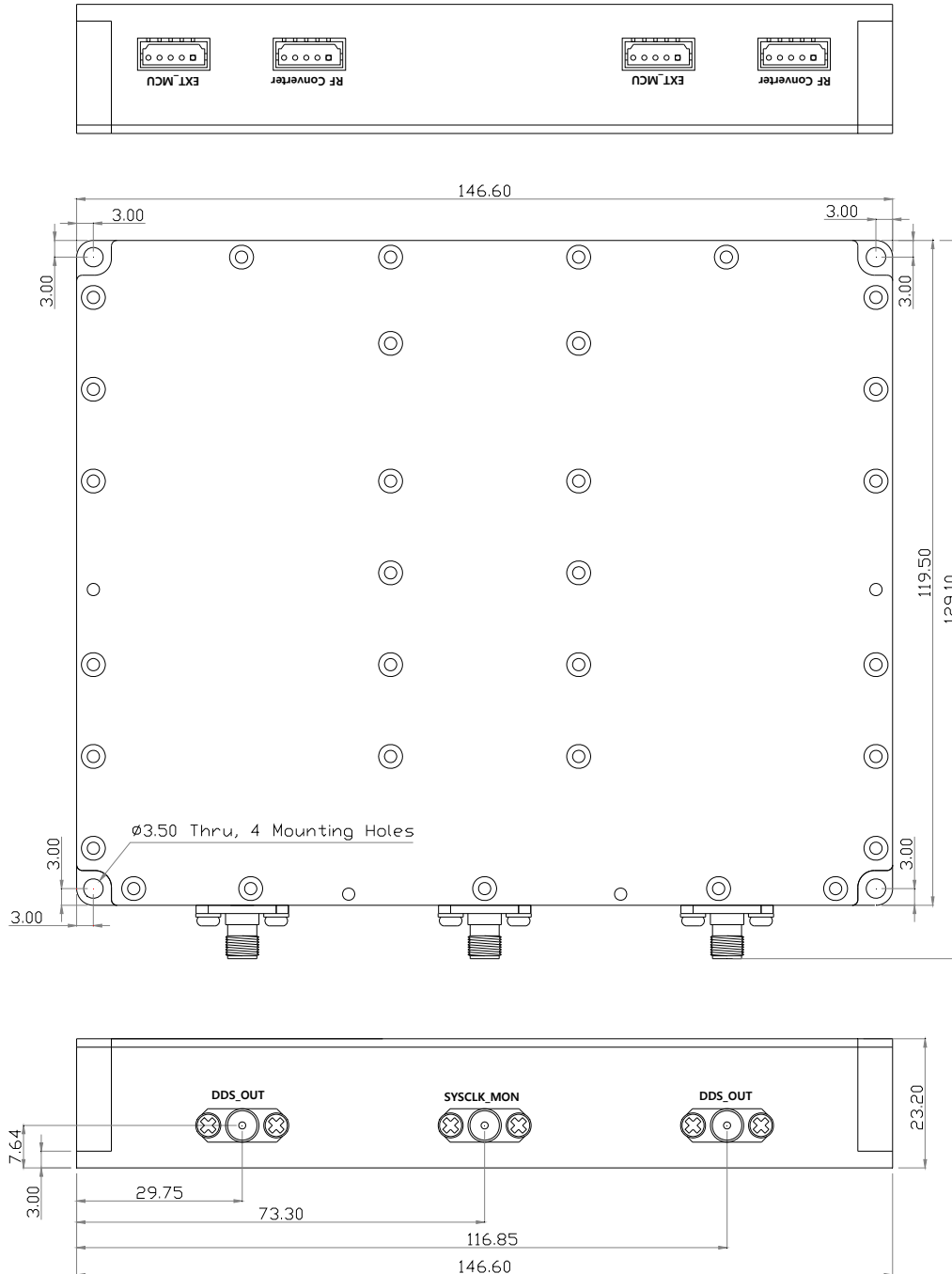
Parity : None,

Stop Bit : 1,

Flow Control : None

Outline Drawing

Dimensions are in millimeters.



- Address: #1913, Anam tower, 311 Teheran-ro, Gangnam-gu, Seoul, Republic of Korea
- Tel: +82-2-2009-2120
- e-mail: info@polariswave.com
- web: www.polariswave.com