



M509 HYDRUS

Array

OVERVIEW

The M509 Hydrus Array is a thin line digital array. The array streams digitized acoustic and non-acoustic sensor data. Hydrus is a low noise, low drag, low power and lightweight array making it ideal for towing from an uncrewed vehicle. Applications vary from **marine surveillance, marine monitoring, and detection** applications. The array and tow cable are neutrally buoyant to support low speed tow. Hydrus includes acceleration cancelling hydrophones to minimize mechanical noise.

The Hydrus array can be customized for any number of acoustic channels, up to a maximum of 255. The array is user configurable to a max of 8.0 kHz sampling rate and features high/low acoustic channel gain to tailor performance to various applications. Non-acoustic sensors include depth, temperature, roll, pitch, and yaw.



KEY CHARACTERISTICS

ACOUSTIC

Frequency Band	10 - 3200 Hz
Max # of Acoustic Channels	64
Acoustic Channel Sensitivity	-196 dB re V/ μ Pa
Sampling Rate	Up to 8.0 kHz [dependent on number of channels]
User Configurable Channel Gain Settings	Two settings [Hi/Low]
Acoustic Channel Gain	10 and 32 dB [0 - 32 dB customizable on order]
Self Noise SPL Equivalent @ 1kHz	35 dB re μ Pa/ Hz
Digital Interface	UDP Ethernet Stream 10BASE-T1L

MECHANICAL/ELECTRICAL

Max Operating/Survival Depth	300 m
Nominal Array Diameter	45 mm
NAS Sensors	Depth, Temperature, RPY
Power Consumption/Channel	200 mW [nominal]
Supply Voltage	24 - 96 VDC
Array/Tow Cable Buoyancy	Neutrally Buoyant
Tow Cable Length	Up to 1000 m
Operating Temperature	0 - 40 °C
Preamplifier Self-Noise Level	< Sea State Zero [SS0]
Max Cut Frequency [Min Sensor Spacing]	4 kHz