Complete Guide to the DG Hydro 1

Introduction

The DG Hydro 1 from **ElphaPex** is the first-ever hydro-cooled ASIC miner designed for mining cryptocurrencies like **Dogecoin (DOGE)** and **Litecoin (LTC)**, utilizing the **Scrypt** algorithm from Elphapex. With an -performance mode that increases the **hashrate** to **24.5 GH/s** and a power consumption of **9000W**, the DG Hydro 1 offers a perfect solution for miners seeking high-performance hardware with advanced liquid cooling.

This guide provides a comprehensive overview of the DG Hydro **1**'s technical specifications, purchase options, best maintenance practices, safe overclocking methods, and other key aspects to optimize the use of this advanced ASIC miner.

Technical Specifications of the DG Hydro 1

Main Features

Feature	Details
Manufacturer	ElphaPex
Model	DG Hydro 1
Release Date	2024
Mining Algorithm	Scrypt
Hashrate (Standard Mode)	20 GH/s (20,000 MH/s) ±3%
Hashrate (High Performance Mode)	24.5 GH/s (24,500 MH/s) ±3%
Power Consumption (Standard Mode)	6200W ±10%
Power Consumption (High Performance Mode)	9000W ±10%
AC Input Voltage	380-480V AC, 3-phase + ground, input 10kW
Interface	Ethernet (RJ45 10/100M)
Miner Size (Length x Width x Height, without package)	656 mm x 447 mm x 86 mm with handle
Net Weight	25 kg

Feature	Details
Gross Weight	26.5 kg
Inlet Water Temperature	35-55°C
Water Flow	≥10L/min
Water Pressure	≤4 bar
Coolant Demand per Miner	About 1L

Mineable Cryptocurrencies

The DG Hydro 1 is specifically designed for mining cryptocurrencies that utilize the **Scrypt** algorithm.

Cryptocurrency	Symbol	Algorithm
Dogecoin	DOGE	Scrypt
Litecoin	LTC	Scrypt
Verge	XVG	Scrypt

Cryptocurrency	Symbol	Algorithm
Emerald	EMD	Scrypt
Auroracoin	AUR	Scrypt
Gulden	NLG	Scrypt
Florincoin	FLO	Scrypt
GameCredits	GAME	Scrypt
Einsteinium	EMC2	Scrypt

Where to Buy the DG Hydro 1

Purchase Options

You can purchase the DG Hydro 1 directly from **ElphaPex**'s official website or through authorized resellers. It is important to choose reliable purchase channels to ensure product quality and receive adequate support.

Purchase Platform	Link	Note
ElphaPex Official Store	www.elphapex.com	Direct purchase from the manufacturer

Purchase Platform	Link	Note
Premium Resellers	https://minerasic.com/	Official warranty and support

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DG Hydro 1 Maintenance

Device Cleaning and Care

To keep your DG Hydro 1 in perfect condition, it is essential to follow a regular maintenance routine.

1. **Regular Cleaning**: Since the device is hydro-cooled, it's important to keep the cooling system in good condition. Change the water every 6 months and check for any impurities in the circuit.
    - **Method**: Clean the cooling system using distilled water, removing dust and debris.
2. **Temperature Monitoring**: Maintain the inlet water temperature between 35°C and 55°C to avoid overheating and damage to internal components.
3. **Fan and Cooling System Check**: Periodically inspect the water flow and pressure to ensure the cooling system works properly.
4. **Firmware Updates**: Keep the miner's firmware up-to-date to optimize performance and fix any bugs.

Overclocking the DG Hydro 1

What is Overclocking?

Overclocking increases the miner’s computation speed (hashrate), but it must be done with caution to avoid long-term damage. Increasing the frequency also increases energy consumption and heat production, so it’s important to monitor these parameters carefully.

Overclocking Procedure

1. Access the miner's web interface via your browser by entering the device’s IP address.
2. Go to the "Overclocking" section and gradually increase the clock frequency (by 5% at a time).
3. Monitor the temperature and energy consumption closely to prevent damage.

Precautions for Overclocking

- **Cooling**: Overclocking generates more heat, so ensure your cooling system is adequate.
- **Stability Testing**: After each adjustment, test the device to ensure it operates properly without instability.

Tips for Optimal Use

1. **Initial Setup and Installation**
    - Place the miner in a well-ventilated area away from direct heat sources to maximize efficiency.
    - Use certified power supplies to avoid energy losses and overloads.
2. **Troubleshooting Common Issues**
    - **Connection Issues**: If you can't connect to the mining pool, check the IP settings and network connection.

    - **Hardware Failures**: Identify common hardware failures, such as fan or power supply issues, and replace faulty components.
3. **Device Security**
    - Protect your miner from external attacks by using a VPN and configuring a firewall.
    - Always keep the firmware up-to-date to fix security vulnerabilities and improve performance.
4. **Periodic Maintenance and Prevention**
    - In addition to cleaning and fan checks, regularly inspect the power cables and connectors to prevent malfunctions.

Cooling System of the DG Hydro 1

The **DG Hydro 1** from **ElphaPex** incorporates an advanced **liquid cooling system** that ensures efficient heat dissipation and maintains optimal operating temperatures for the miner. This system is particularly beneficial for high-performance ASIC miners like the **DG Hydro 1**, which generate a significant amount of heat during operation.

Key Features of the Cooling System:

1. **Hydro-Cooling Technology**: The **DG Hydro 1** uses a water-based cooling system, which allows for more efficient heat transfer compared to traditional air-cooling methods. This system helps to reduce the temperature of the miner's components and keeps the device running at maximum performance.
2. **Water Flow and Pressure**: The cooling system operates at a water flow rate of **≥10L/min** and requires water pressure of **≤4 bar**. This ensures consistent cooling performance and prevents overheating, even under heavy workloads.

3. **Temperature Range**: The system is designed to handle an inlet water temperature range of **35-55°C**, ensuring stable operation even in environments with fluctuating ambient temperatures. Keeping the water temperature within this range is critical for maintaining the cooling efficiency and preventing thermal throttling.
4. **Coolant Requirements**: Each miner requires approximately **1L of coolant**. The coolant used in the system is typically a water-based solution, and it is important to regularly check and replace the coolant to ensure optimal thermal conductivity.
5. **Cooling Maintenance**: To keep the hydro-cooling system functioning efficiently, the water should be replaced every **6 months** or sooner if it becomes contaminated. Additionally, regular checks should be performed to ensure there are no blockages in the water channels and that the water pressure remains within optimal levels.
6. **Enhanced Cooling Efficiency in High-Performance Mode**: When the miner is running in high-performance mode (24.5 GH/s), the increased heat output requires the cooling system to work harder. The hydro-cooling technology allows the miner to operate at full capacity while maintaining a safe temperature, ensuring that performance remains consistent without compromising the hardware's lifespan.

Benefits of Liquid Cooling for Mining:

- **Improved Efficiency**: Liquid cooling systems, like the one in the **DG Hydro 1**, are more efficient at transferring heat compared to air-based systems. This allows the miner to run at higher performance levels without overheating.
- **Noise Reduction**: Water cooling can help reduce the noise levels typically associated with traditional air-cooled miners, as it eliminates the need for large, high-speed fans.

- **Longevity of Components**: Proper cooling extends the life of the miner's internal components by preventing them from being exposed to excessive heat, which can degrade the performance and longevity of the hardware.

Cooling System Maintenance Tips:

1. **Check for Leaks**: Ensure that the cooling system is free from leaks. If there are any signs of leakage, stop the system and perform repairs immediately.
2. **Water Quality**: Use distilled water or a recommended coolant solution to prevent scaling or mineral buildup that could clog the cooling system.
3. **Water Replacement**: Regularly replace the water to avoid contamination and ensure optimal cooling performance.
4. **Water Pressure Monitoring**: Keep an eye on the water pressure within the system to ensure it stays within the recommended range. If the pressure drops too low, the cooling efficiency will be compromised.

By incorporating this **liquid cooling system**, the **DG Hydro 1** ensures that the miner operates at peak performance while effectively managing the heat generated during mining. This is crucial for maintaining both the longevity and stability of the hardware, especially during long mining sessions or when running in high-performance mode.

The Importance of a Holistic Approach to Choosing an ASIC Miner

When evaluating profitability, it's important to consider factors beyond just **hashrate** and **power consumption**. Many people focus on these two metrics, but profitability depends on many other variables.

- **Diversification**: Consider investing in multi-algorithm miners that can adapt to changing mining conditions.
- **Hardware Costs**: Take into account the initial cost of the hardware and how long it will take to recoup the investment.
- **Electricity Costs**: Use renewable energy sources to lower operational costs and improve profitability.
- **Long-Term Viability**: Evaluate whether the miner will still be profitable in the long term, as ASIC miners may become obsolete due to rising difficulty or newer, more efficient models.

By following these recommendations, you can maximize the performance of your **DG Hydro 1**, ensuring a long operational life and maximizing your profits.