auradine



Teraflux™ AI3680

The Auradine Teraflux™ Portfolio of Bitcoin miners offers industry-leading performance, quality, uptime, security, and demand response features to deliver the lowest total cost of ownership for Bitcoin mining solutions.

The **Auradine Teraflux™ AI3680** is an ASIC-based single-phase immersion-cooled Bitcoin miner that can be managed using APIs and a web console that is available for each miner, and with FluxVision™ (purchased separately), the cloud management solution for pre-deployment configuration and tuning of Auradine miners at scale.

Uptime

Auradine Bitcoin miners possess exceptional uptime performance due to several key attributes that ensure reliability and better financial outcomes for Bitcoin mining operations.

- Superior Build Quality — High-quality components and construction reduce the likelihood of common failure modes seen in traditional systems. This is crucial for reliably maintaining continuous operation and avoiding downtime.
- Wide Operating Temperature Range — Bitcoin mining operations often take place in various environments with different temperatures. A wider operating temperature range allows the miners to function effectively even in extreme conditions, preventing unexpected shutdowns.
- Demand Response Capabilities — The ability to seamlessly adjust the operating point on the performance-power spectrum enables the miners to slow down and keep running instead of shutting down completely. Unlike traditional Bitcoin miners that take ten minutes per iteration and require frequent reboots to adjust the operating frequencies and voltages of the mining ASICs, the Auradine miners have a sophisticated, built-in Dynamic Frequency and Voltage Scaling (DVFS) mechanism that perform these optimizations in half the time. To maximize profitability and minimize downtime, operators can respond to the time-based rates or signals from the electric grid and adjust power consumption during peak periods, and promptly resume desired hashing levels thereafter.

Software Specifications

Power Management

Auradine is the only hardware OEM to directly integrate with the power grid and Qualified Scheduling Entities (QSEs) such as Voltus. A QSE can modulate power consumption on your mining farm based on demand response to grid supply and load curtailment for cost savings. Power Management is available with FluxVision.

EnergyTune™

EnergyTune uses Dynamic Voltage and Frequency Scaling (DVFS) to set the desired power consumption (in Joules) per miner by suitably varying all other system parameters. In addition to this default mode where you can customize your preference, the web console on the miner also allows the operator to select an operating mode of ECO (least power consumed per TH or maximum efficiency) or Turbo (highest TH/s performance). EnergyTune is configurable using APIs and the web console that is available for each miner.

AutoTemp

Temperature regulating mechanism that continuously monitors the internal junction temperature of the ASICs and reduces the TH/s to ensure that the ASICs are operating in a safe zone. AutoTemp is enabled on every miner and automatically tuned to a pre-determined threshold to dial down performance and prevent damage from overheating.

Hardware-Based Secure Boot

The Teraflux portfolio of miners are equipped with a hardware-based root of trust secure boot implementation that ensures the integrity of the software during boot up. The secure boot process validates that only digitally signed and trusted code is allowed to run during the boot sequence and thereby safeguards the miner from the execution of unauthorized or potentially malicious code.

User-friendly Interface and API Support

The miners support a user-friendly web-based console and a set of APIs, as well as FluxVision, the cloud management solution. The dashboard on the miner web console displays system information and statistics on memory consumption, hash rate, power consumption, and efficiency with additional details on frequency, voltage, and temperature for each installed hashboard. It also makes it very easy to install and upgrade Auradine firmware on the miner.
You can also leverage the API integration with Foreman or AwesomeMiner for fleet management.

FluxVision™

FluxVision is the cloud management solution for pre-deployment configuration and tuning of Auradine miners at scale. It is a standalone product that helps bitcoin operators organize miners as ‘miner groups’ to simplify the configuration and reporting for different sets of miners, and leverage Zero Touch Provisioning (ZTP) so that the miners can start hashing as soon as they are plugged into the network.

FluxGPT

On FluxVision, you can also leverage FluxGPT, the generative AI-based conversational experience that’s designed to assist you in finding answers or information on Auradine products quickly and efficiently.

Hardware Specifications

AI3680 Product Specifications	Value	
Crypto Algorithm	SHA-256	
Hashing Performance (TH/s at Joules/TH)	Range: 0-365 TH/s[1] Normal: 16 J/TH at 250TH/s[1] Turbo: 19 J/TH at 365 TH/s[1]	
Fluid Inlet Temperature	68 to 122°F (20 to 50°C[2])	
Cooling Mechanism	Single-phase immersion	
Power Supply Option A Dual Input	Power AC Input Voltage, Nominal, Min/Max AC Input Current Power Cables Included	7500 Watts[3], 2 x C20 Input 200-240V, 180 - 264V 0-17.6 Amp per input 2 x C19 to C20
Power Supply Option B Single Input	Power AC Input Voltage, Nominal, Min/Max AC Input Current Power Cables Included	7500 Watts[3], 1 x PA45 Input 208-277V, 200 - 305V 0-45 Amp TBD
AC Input Frequency	48-62 Hz	
Connectivity Options	RJ45 Ethernet 10/100/1000	
Dimensions (Length/Width/Height)	12.2 x 8 x 11.5 inches / 310 x 202 x 290mm	
Weight	40 lbs / 18.1 kg	
Storage Temperature	-40 to 158°F (-40 to 70°C)	
Operation Humidity, RH	20-80% RH non-condensing	
Operation Altitude	9,840ft (3,000M)[4]	

[1] Preliminary estimates, ±8%, [2] At sea level, [3] PSU spec; system maximum may be slightly lower, [4] Operating temperature will vary based on altitude

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