Digital Laser Driver VS Analog Laser Driver

Subject	Analog driver	Digital driver	Advantage
Power consumption	>200W	<150W	A smaller power supply at lower voltage can be used
Heat	High heat, need strong cooling system	Low heat	Saving space of power supply & cooling system, making the laser smaller to save shipping cost
Modulation speed	Not fast enough, with dragging and mismatch, missing points in delicate area	Accurate control, high speed, start and stop immediately	Graphics have no gaps, and the delicate areas are displayed completely
Color	Will not light on below 15% brightness, some color missing	It can accurately control the brightness of 1-100%	Really what you see is what you get, and the color gradient fully matches the output without missing color
Factory debugging	Each laser needs professional person to debug the power, it cost much time and difficult to have the consistency	Save the current laser setting, and just load the setting for the next laser then it can get 98% consistency. To make it more accurate, just start the laser and adjust it	No personnel training is needed, any worker can complete 98% of the adjustment by plugging in the USB to load setting, and no need to start the laser module. Much more efficient and saving labor cost
Precision constant temperature	The temperature is adjusted by potentiometer, not accurate, no one knows if it is broken	Accurately control the temperature to 0.1° C, you can adjust the temperature yourself. The accurate control makes the lifespan of TEC much longer, also reduce the power consumption a lot	Analog temperature control is like a fixed frequency air conditioner, and the digital temperature control is like a variable frequency air conditioner

Protection	Only some very basic protective devices, and the settings are not accurate	Have real time data via CPU, provides good protection to temperature and overload	You can view the working status of the laser in real-time on the computer, without guessing or using additional tools
User-friendliness	After the analog driver is set, most customers dare not adjust it, and manufacturers do not want customers to adjust it themselves to avoid trouble	Customers can save the laser setting and then adjust it to a satisfactory position. In case the setting is in error, just load the setting to reset to factory setting. In case customers forget to backup, the manufacturer can send them the setting to restore	The history of the laser driver that users cannot touch is gone. A screenshot of the laser parameters and working conditions will show the problem, no need to waste words any more, more efficient for after-sales service