
GLOSSARY OF TECHNICAL TERMS

In this Document, unless the context otherwise requires, explanations and definitions of certain terms used in this Document in connection with our Company and our business shall have the meanings set out below. The terms and their meanings may not always correspond to standard industry meaning or usage of these terms.

“2D-to-3D conversion”	transforming a flat 2D design into a three-dimensional tool-path for CNC or laser machining. This process digitally interprets depth from 2D data to create complex operations such as curved-surface engraving, relief embossing, and inner engraving on a physical workpiece
“3D modeling”	virtual representations of physical objects created using computer-aided design software or acquired through 3D scanning techniques
“APIs”	defines the interactions between multiple software intermediaries, including the types of calls or requests that can be made, how to make calls or send requests, the data formats to be used, the conventions to be followed, etc. It can also provide extension mechanisms, allowing users to extend existing functionalities in various ways and to varying degrees
“apparel printer(s)”	specialized printers used to create or augment clothing and accessories
“artificial intelligence generated content”/“AIGC”	content created automatically by generative AI models without manual drafting
“automated creation system”/ “ACS”	an integrated AI engine that orchestrates end-to-end workflow — from material recognition and auto calibration to path planning and real time monitoring — reducing set up time from minutes to seconds, automating the entire laser-processing workflow
“auto-calibration”	a routine self-checking procedure that aligns laser optics and built in cameras, focus and motion axes before each job to achieve micron-level repeatability
“CAGR”	compound annual growth rate
“Cartesian guide rail solution”	a motion control system designed for precise, programmable multi-axis linear movement along orthogonal (perpendicular) X, Y, and/or Z axes

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”CNC Cutter”	a high-precision creative fabrication tool driven by computer numerical control systems to perform multi-axis cutting operations
“CO ₂ laser”	gas-based laser used for cutting and engraving non-metallic sheets such as wood, acrylic and fabric in desktop and industrial material printers
“Computerized Numerical Control”/“CNC”	a digitally driven machining architecture that used to remove material using rotary or linear cutting tools, complementary to laser processes
“connected machines”	refers to our machines that are connected to our xTool Studio software platform
“deep-learning-based semantic segmentation”	implemented through deep learning technology, which uses a camera to capture images of consumables and then analyzes these images via deep learning algorithms to identify the valid areas of the consumables
“diode laser”	a semiconductor-based laser that generates coherent light when an electrical current passes through a p-n junction
“Direct to Consumer”	a sales channel that allows to sell products directly to end-users
“DTF”	refers to direct to film, print designs onto transfer films, which are then heat-pressed onto garments
“DTG”	refers to direct to garment, a digital printing technology where specialized inkjet print heads deposit water-based inks directly onto the surface of a textile
“EXW”	a trade term meaning the seller makes the goods available at their own premises (factory, warehouse, workshop), and the buyer bears all costs and risks involved in transporting the goods from that point to the final destination
“fiber laser”	lasers that channels infrared light through an optical fiber and, enabling high-speed metal cutting for rapid manufacturing and welding
“FOB”	a trade term meaning the seller delivers the goods on board the vessel at the port of shipment, with the buyer bearing all costs and risks thereafter

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“G7-certified”	an international colour-management standard (ISO 12647-2) confirming that the printer’s colour output meets predefined delta-E tolerances across the production gamut
”gross merchandise value”/“GMV”	it is a key metric used to measure the total sales value generated through a marketplace over a specific time period
“HD camera”	high-definition vision module integrated into printers and laser systems for real-time surface inspection, alignment and visual positioning
“high-precision”	the ability to consistently and repeatedly produce nearly identical results or measurements, with minimal variation between operations
“infrared”/“IR”	an electromagnetic spectrum employed by CO ₂ lasers and sensor arrays for material heating, surface detection and non contact measurement
“laser”	light amplification by stimulated emission of radiation, a technology used to selectively fuse or cure printing materials
“laser engraver”	a machine that removes a thin top layer (ablation) for permanent surface marking, using lower power, faster speeds, and raster (pixel-by-pixel) scanning to create designs, images, or text on materials like wood, glass, metal, or leather
“laser cutter”	a machine that slices completely through material (like wood, acrylic, fabric) using high power for clean, precise edges, often via vector paths
“laser welder”	a high-power fiber laser system that fuses metal powders or sheets layer-by-layer, using a high power laser beam, offering precise, low-heat-input joining
“laser-compatible materials”	substrates that absorb or reflect laser energy within safe operational limits, including polymers composites, metals, glass, ceramics and textiles

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“LiDAR”	an active remote sensing technology that measures distance by illuminating a target with pulsed laser light and measuring the time it takes for the reflected pulses to return to the sensor
“machine-learning”	the application of artificial intelligence techniques to analyze data from the printing process to automate, optimize, and improve various aspects of design, production, and quality control
“MOPA”	a laser system that amplifies a seed signal light with high beam quality through a power amplifier to achieve high-power output while maintaining the beam quality
“net promoter score”/“NPS”	customer-loyalty metric calculated as a percentage of promoters and a percentage of detractors
“OEM(s)”	contract manufacturers that produce hardware under strict design-transfer and quality-assurance protocols, enabling rapid scale-up
“path optimization”	use of machine-learning models to refine cut-paths for reduced waste and faster execution
“path planning”	automatic generation of optimal laser-travel routes determining the optimal sequence of tool-head movements
“PET”	a transparent thermoplastic polymer widely used for filament, film and post-processed parts
“pixel”	the smallest unit of light printers can project in the two-dimensional X-Y plane which can directly influences resolution in laser-based systems
“plug-and-play”	accessible, portable, and reliable use of various applications
“precision optical”	systems and components manufactured to extremely tight tolerances, minimizing aberrations and maximizing performance
“Raster Image Processing”/ “RIP”	a key technology in the digital printing industry for processing image files, which ensures accurate color reproduction and consistent quality of printed images through color management routines

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“small and medium-sized businesses/SMB”	an independent business below a specific size limit, typically under 500 employees, but the thresholds can vary by industry, region, and defining authority
“sub-pixel level”	the ability to control the curing process at a resolution finer than the physical size of a single pixel on the printer’s projector or mask, resulting in effective resolution beyond the sensor’s nominal limit
“Triple Anti-Clogging”	highly technical applications where three distinct architectural features were designed to prevent clogging in printhead
“ultra-fine thermoplastic powder”	a key material used in powder bed fusion additive manufacturing technologies enable high-resolution part fabrication with reduced porosity
“UV”/“Ultraviolet”	an electromagnetic radiation with a wavelength shorter than that of visible light, typically ranging from 10 nm to 400 nm
“vision systems”	complete hardware-software stack that captures images, runs vision-algorithms and feeds results to the ACS
“visual positioning”	high-precision vision system (near-field 0.05–0.2 mm, far-field 0.1–0.5 mm) that combines camera, LiDAR and distortion-correction algorithms to ensure “what you see is what you get” processing