IRONLIGHT

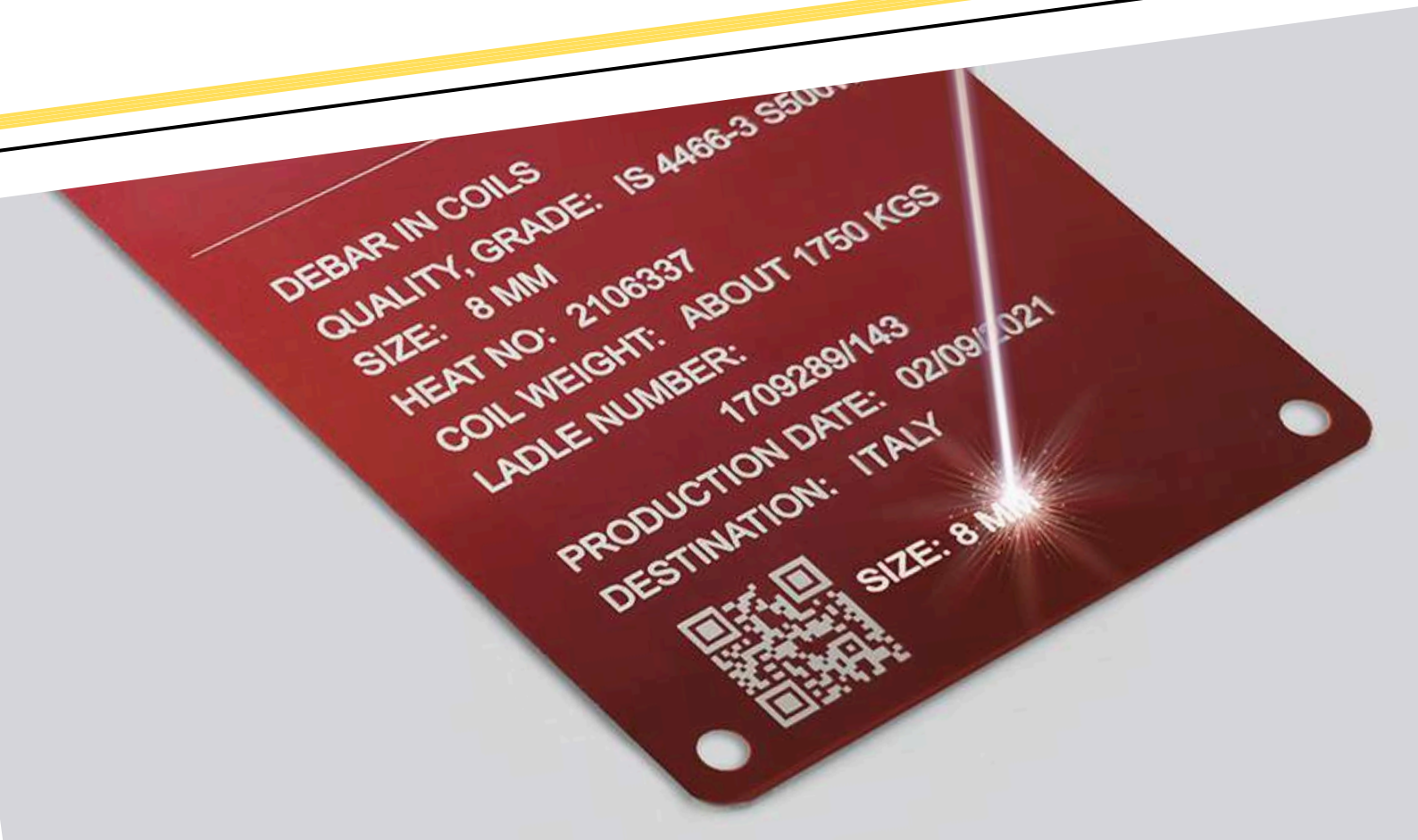
IRONHP

HIGH PERFORMANCE

LASER MARKING SYSTEMS FOR METAL PLATES

CIM

CARD IMAGING MASTER



IRON LIGHT & IRON HP: UNMATCHED LASER MARKING!

IRON Light and **IRON HP (High Performance)** are advanced **laser marking systems** engineered and manufactured specifically for marking metal plates, which are used in the identification and tracking of products, components, and industrial equipments.

High quality is a hallmark of the IRON Systems, which boasts a DPSS (Diode Pumped Solid State) laser for accurate metal marking. This technology ensures superior quality data marking that are highly legible by the human eye and industrial scanners, maintaining readability over time and under various environmental conditions.

Flexibility is another key feature of IRON Systems, allowing for adjustable marking parameters to achieve different levels of marking depth and complexity. Whether it's text, logos, 1D or 2D codes, or complex designs, the IRON Systems can satisfy the different marking requirements easily. In addition, IRON Systems can handle materials such as **aluminum, stainless steel,** and other metal materials, ensuring the durability and longevity of the marked data over time.

The robust design of IRON Systems makes them suitable for **heavy-duty applications**, ensuring consistent performance even under harsh conditions. **Durability**, another pivotal aspect of the System, is imperative in every CIM solution.

With two configurations, **IRON LIGHT** and **IRON HP (High Performance)**, each one tailored for specific production needs, the Systems cater to a wide range of requirements. Whether you need to mark a high quantity of plates or small batches, there's a tailored solution to meet your unique needs.

LASER TECHNOLOGY

MAIN FEATUERS

ADVANCED LASER TECHNOLOGY

IRON Systems boasts a DPSS (Diode Pumped Solid State) laser, renowned as a leading solution in laser marking technology. It offers advantages such as **precise marking**, **high-quality results**, and **great flexibility**.

PHYSICAL NETWORK INTEGRATION

IRON Systems are featured with communication interfaces like **USB, Ethernet,** and **Wi-Fi** (optional), facilitating physical integration to any factory or office network. This empowers users to manage IRON Systems from any network location, enabling real-time monitoring and remote access functionalities.

TOUCH SCREEN DISPLAY

TOUCH SCREEN DISPLAY

IRON Systems feature a built-in 7-inch WVGA LCD touchscreen display for **easy setting and monitoring**. Users can easily access and configure the machine through a **multi-level menu**, making metal plate laser marking functions simple and intuitive to set up and use.

VIEW FROM THE INTERNAL CAMERA

INTERNAL VIEW CAMERA

An internal view camera, managed by the software, allows live monitoring of the marking area, **facilitating tuning**, such as verifying the alignment of the metal plate, ensuring the proper functioning of the laser, and performing adjustments. The camera also enables shooting a picture of each marked tag that can be stored or shared.

BUILT FOR DURABILITY AND SAFETY

Designed to excel in demanding industrial settings, IRON Systems are engineered to thrive in heavy-duty environments. Its **robust case and rugged body** are made to withstand rigorous usage. The completely closed casing ensures protection to users from laser emissions.

LASERED METAL PLATE

TWO VERSIONS, TWO SPEED PERFORMANCES

The system comes in two versions: **IRON Light** is ideal for processing small batches of plates and/or marking jobs with low complexity, while **IRON HP** is the perfect solution for applications requiring high marking speed and/or complex jobs.

SOFTWARE

ZIRCON

IRON Systems come with a dedicated software designed to manage tasks of any complexity. **Easy to use and intuitive**, Zircon enables users to supervise IRON Systems' functionalities and set up processes in a simple and efficient manner. It integrates with Windows 10 and Windows 11. Optional compatibility for Linux and MacOS.

POWER WEB SERVICE (API)

To simplify the logical integration of IRON Systems into the customer's production workflow, we provide **Power Web Service**, an optional dedicated **API** (application programming interface), ensuring intuitive usage and seamless integration.

BCHAINLOGMANAGER

BChainLogManager is the software solution for event logging, managing the entire process from acquisition to security audit and analysis. It uses blockchain technology to securely store each logged event, ensuring data integrity and preventing fraud or tampering.

OPTIONAL ACCESSORIES

LASER FUME ESTRACTOR

Laser fume extractor is suited for collecting and filtering contaminants and impurities in the form of dust and gases produced during laser marking process. It ensures a **clean and safe working environment.**

INDUSTRIES

- AUTOMOTIVE
- MANUFACTURING
- CONSTRUCTIONS
- OIL & GAS
- ELECTRONICS
- MINING & RESOURCES
- HYDRAULICS
- FOUNDRY
- UTILITIES COMPANIES
- AEROSPACE

TECHNICAL FEATURES

	IRON LIGHT	IRON HP (High Performance)
PLATE AND FEEDER		
Input system	210 plates capacity (0,4 mm/0.0157 in)	210 plates capacity (0,4 mm/0.0157 in)
Output system	210 plates capacity (0,4 mm/0.0157 in)	210 plates capacity (0,4 mm/0.0157 in)
Materials	Stainless Steel, Aluminum, Copper*, Brass* *A preliminary evaluation is required on a case-by-case basis	Stainless Steel, Aluminum, Copper*, Brass* *A preliminary evaluation required on a case-by-case basis
Min. & Max. tag size (HxL)	Min. 21 x 50 mm / Max. 90 x 115 mm Min. 0.827 x 1.969 in / Max. 3.543 x 4.527 in	Min. 21 x 50 mm / Max. 90 x 115 mm Min. 0.827 x 1.969 in / Max. 3.543 x 4.527 in
Min. & Max. thickness	Min. 0,4 mm / Max. 0,9 mm Min. 0.0157 in / Max. 0.0354 in	Min. 0,4 mm / Max. 0,9 mm Min. 0.0157 in / Max. 0.0354 in
Laser marking area	110 x 110 mm / 4.33 x 4.33 in	110 x 110 mm / 4.33 x 4.33 in
MARKING PROCESS		
Technology	Laser marking	Laser marking
Marking process	Automatic	Automatic
Speed/performance	Up to 600 tag/hour* (time for laser marking only) *The performance of the laser marking vary depending on material and job complexity.*	Up to 1000 tag/hour* (time for laser marking only) *The performance of the laser marking vary depending on material and job complexity.*
LASER UNIT		
Output power	3W	10W
Laser technology	DPSS	DPSS
Mode of operations	High frequency pulsed	Active Q-switched
Main wavelength	1064 nm (Infrared)	1064 nm (Infrared)
Aiming beam wavelength	635 nm (Red)	635 nm (Red)
Repetition rate range	26 - 30 KHz	10 -100 KHz
Pulse width (typ)	3 nS	15 nS
Pulse energy	0.054 to 0.085 mJ @10KHz	0.39 to 0.43 mJ @10KHz
Temperature range	Working Temp: 10°C to 35°C Storage Temperature: 0°C to 60°C	Working Temp: 10°C to 35°C Storage Temperature: 0°C to 60°C
Cooling system	Forced Air (max.60m3/h)	Forced Air (max.60m3/h)
Laser safety classification	Laser Beam: CLASS 4	Laser Beam: CLASS 4
COMMUNICATION INTERFACE		
Interfaces	USB, Ethernet and WiFi (optional)	USB, Ethernet and WiFi (optional)
SOFTWARES		
Operating software	Zircon	Zircon
Operating system	Windows 10, Windows 11. Linux and MacOS (optional)	Windows 10,Windows 11. Linux and MacOS (optional)
Dynamic fields	Access, Oracle, MySQL, Microsoft SQL Server, PostgreSQL, H2, DB2, Firebird, Windows XLS, XLSX e CSV	Access, Oracle, MySQL, Microsoft SQL Server, PostgreSQL, H2, DB2, Firebird, Windows XLS, XLSX e CSV
Logo/image types	DXF, BMP, other formats upon request	DXF, BMP, other formats upon request
Tuning	YES, through remote camera view support	YES, through remote camera view support
Internal camera	Remote control, with camera view support	Remote control, with camera view support
Power Web service (API)	YES (optional)	YES (optional)
BChainLogManager	YES (optional)	YES (optional)
HARDWARE		
Power Supply	100-240V | 50/60Hz	100-240V | 50/60Hz
Power Cons. - Operation	185W	290W
Power Cons. - Standby	40W Total	40W Total
Dimensions	60x74x52 cm / 23,622x29,134x20,472 in	60x74x52 cm / 23,622x29,134x20,472 in
Weight	65 kg / 143,3 lb	65 kg / 143,3 lb
OPTIONS		
Laser fumes	Laser fume extraction/filter unit (optional)	Laser fume extraction/filter unit (optional)
OCR reader	YES (optional)	YES (optional)
Print Server	YES (optional)	YES (optional)
WARRANTY		
Period	12 months	12 months

SERVICE & SUPPORT

PROJECT SUPPORT

Assistance is available at every stage of your project, from initial definition to final on-site installation.

TECHNICAL ASSISTANCE

A team of technical experts is available during Systems lifespan to ensure continuous support.

Do you have questions or need more information?
info-usa@cimusainc.com
+1 305 639 3040
www.cim-usa.com

FOLLOW US:

CIM
CARD IMAGING MASTER