Eddyfi Technologies

Beyond current

Getting Started with

IGNITE



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This document was prepared with particular attention to usage to ensure the accuracy of the information it contains. It corresponds to the version of the product manufactured prior to the date appearing on the back cover. There may, however, be some differences between this document and the product, if the product was modified after publication.

The information contained in this document is subject to change without notice.
Manual version A

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Chapter 1

Important Information, Safety Precautions, and Conventions

1. Important Information – Please Read Before Use

Intended Use

The Ignite® is designed to perform non-destructive inspections using electromagnetic testing (ET) technologies for surface inspection.

WARNING!



Do not use the Ignite for any purpose other than its intended use.

User Manual

This user manual contains essential information on how to use the instrument safely and effectively. Before using the Ignite, please review this user manual. Use the instrument as intended.

Keep this manual in a safe place for future reference.

Instrument Compatibility

Use only approved ancillary equipment provided by Eddyfi with this instrument.

CAUTION



Always use equipment and accessories that meet Eddyfi specifications. Using incompatible equipment could cause instrument malfunction and/or damage, or human injury.

Repair and Modifications

This instrument does not contain any user-serviceable parts. Opening the device might void the warranty.

CAUTION



To prevent human injury and/or instrument damage, do not dissemble, modify, or repair the instrument.

Equipment Disposal

Before disposing of the Ignite, check your local laws, rules, and regulations, and follow them accordingly.

2. Marking and Symbols

The following symbols can appear on the instrument and pertain to safety regulations that should be followed carefully.



The exclamation mark label is used as a general warning sign. It indicates that you should refer to this user manual to obtain the information necessary to ensure the proper protection of the instrument and its users.



The hot surface symbol label is used to indicate the presence of hazardous hot surfaces. External casing can become hot during operation. To avoid the risk of severe burns, do not touch the casing. Allow the equipment to cool down before opening, touching, or performing any maintenance. Always refer to the user manual to ensure proper handling and safe practices.



The "Crossed-Out Wheeled Bin" marking acts as a reminder that the product should not be discarded as unsorted waste but must be sent to separate collection facilities for recovery and recycling in accordance with the local regulations applicable to Waste Electrical and Electronic Equipment (WEEE).

3. General Precautions – Please Read Before Use

1. Before turning on the instrument, carefully read the instructions contained in this manual.
2. Carefully follow the installation and operation procedures.
3. Respect safety warnings on the instrument and in this manual.
4. The Ignite should only be used by qualified personnel.
5. When carrying the Ignite, it is the user's responsibility to make sure that the safety precautions used are in accordance with the local department of transportation's (or equivalent governing body's) rules and regulations.
6. The electrical plug shall only be inserted into a power outlet providing protective earth contact. You must not negate the protective action by using an extension cord (power cable) without a protective conductor (grounding). Grounding one conductor of a two-conductor outlet is not sufficient protection.
7. The instrument must only be connected to a power source corresponding to the type indicated on the rating plate.
8. If the equipment is used in a manner not specified by Eddyfi Technologies, the protection provided on the equipment may be rendered ineffective.
9. Do not install substitute parts or perform any unauthorized modifications to the instrument.
10. Service instructions, when applicable, are for trained service personnel only. To avoid dangerous electric shock, do not perform any service unless qualified to do so.
11. When using an Ignite with some highly sensitive probes, it is possible that some high-intensity electromagnetic phenomena (e.g., voltage arcs from welding machines, electrical transients created by commuting high-power inductive loads, and so on) create visible disturbances observable in the acquired data. Since probes are electromagnetic-sensitive devices and are intended to receive and amplify low-intensity electromagnetic fields, it is normally expected that high-intensity external electromagnetic disturbances would be observable on the screen.
12. The instrument may be operated in the rain. When operating the instrument in wet weather, ensure that caps are covering unused connectors.

13. For any problem or question regarding this instrument, contact Eddyfi Technologies, or an authorized Eddyfi Technologies representative.

4. Optional Magnetic Probe Precautions



The Ignite can be used to perform inspections with external probes and accessories that generate significant magnetic fields. Eddyfi recommends the following precautions when using such a product. The products marked with the adjacent icon contain a permanent magnet with a static magnetic field that is below the 2 T occupational exposure limit, but above the 5 mT limit for interference with implanted medical devices such as pacemakers, Implantable Cardioverter Defibrillators (ICDs), and other devices. If you have an implanted medical device, consult your healthcare provider before using this product. Always keep this product away from any implanted medical device. This warning is based on guidelines from the International Commission on Non-Ionizing Radiation Protection (ICNIRP). Eddyfi does not recommend the use of this product near implanted medical devices.

5. Regulatory Compliance

The Ignite instrument complies with applicable EMC standards. However, minor interference with measurements may occur within the 19–21 MHz and 535–550 MHz frequency bands. In most applications, this interference is unlikely to be noticeable. When present, it will typically appear as low-level noise only. Measurement reliability is not expected to be affected unless the electromagnetic energy is significantly higher than the levels applied during EMC testing.



Eddyfi recommends following good practices for cable layout, routing, and deployment to minimize the effects of the surrounding electromagnetic environment.

FCC Compliance (USA)

This equipment has been tested and found to comply with the limits for Industrial, Scientific, and Medical (ISM) equipment, pursuant to Part 18 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in an industrial or commercial installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. Conformity Authorization: This device is authorized under the Supplier's Declaration of Conformity (SDoC) / Certification procedure for Part 18 industrial environments.

Caution: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

ICES Compliance (Canada)

This ISM device complies with Canadian ICES-001(A).

Cet appareil ISM est conforme à la norme NMB-001(A) du Canada.

South Korea (대한민국 전자파 적합성)

A급 기기 (업무용 방송통신기자재)
이 기기는 업무용(A급)으로 전자파적합기기로서
판매자 또는 사용자는 이 점을 주의하시기 바라며,
가정 외의 지역에서 사용하는 것을 목적으로 합니다.

Translation: Class A (Broadcasting and Communication equipment for Business)

Sellers and users should note that this equipment is an electromagnetic device for business (class A), and is intended for use outside the home.

Japan (VCCI Class A notice)

この装置は、クラスA情報技術装置です。この装置を家庭環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

Translation: This equipment is a Class A information technology equipment. If this equipment is used in a domestic environment, it may cause radio interference. In such a case, the user may be required to take appropriate corrective actions.

UKCA (UK)

This product bears the UKCA mark in accordance with the relevant UK Statutory Instruments. A copy of the full UK Declaration of Conformity (DoC) is available upon request from the manufacturer or the UK Authorized Representative.

1. UKCA Compliance Statement

This product bears the UKCA mark in accordance with the relevant UK Statutory Instruments. A copy of the full UK Declaration of Conformity (DoC) is available upon request from the manufacturer or the UK Authorized Representative. This equipment complies with the following UK Regulations:

- Electromagnetic Compatibility Regulations 2016 (S.I. 2016 No. 1091)
- Electrical Equipment (Safety) Regulations 2016 (S.I. 2016 No. 1101)
- The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012 (RoHS, S.I. 2012 No. 3032, as amended by S.I. 2021 No. 422)

2. ISM Equipment Classification (BS EN 55011 / CISPR 11)

This equipment is classified as Group 1, Class A Industrial, Scientific, and Medical (ISM) equipment in accordance with BS EN 55011 / CISPR 11.

- Group 1 definition: Equipment in which radio-frequency energy is generated and/or used only for the internal functioning of the equipment itself.
- Class A warning: This is a Class A product intended for use in commercial, industrial, or professional environments. In a domestic environment, this product may cause electromagnetic interference, in which case the user may be required to take adequate measures.
- Intended users: This equipment is designed and tested for use in industrial, commercial, or professional electromagnetic environments only. It must be operated and maintained only by trained and qualified technical personnel.

Warning : This is a Class A product. It is not intended for use in residential environments. Use in a domestic environment may cause electromagnetic interference, in which case the user may be required to take adequate corrective measures.

Please find the full UKCA Declaration of Conformity on the Eddyfi website: www.eddifytechnologies.com

CE marking (EU)

This equipment is classified as **Group 1, Class A equipment** in accordance with **EN 55011 / CISPR 11**.

- **Group 1** equipment is equipment in which radio-frequency energy is generated and/or used only for the internal functioning of the equipment itself.
- **Class A** equipment is intended for use in commercial, industrial, or professional environments and is not intended for use in domestic environments. Use in residential environments may cause electromagnetic interference.

This product complies with the essential requirements of the Electromagnetic Compatibility Directive (2014/30/EU), the Low Voltage Directive (2014/35/EU), and the RoHS Directive (2011/65/EU), as amended by Delegated Directive (EU) 2015/863 and Directive (EU) 2017/2102.

Please find the full EU Declaration of Conformity on the Eddyfi website: www.eddifytechnologies.com

China RoHS Compliance

China RoHS (Restriction of Hazardous Substances) is a regulation implemented by the Ministry of Information Industry (MII) in the People's Republic of China to address the environmental impact of electronic and electrical products. Modeled after the European Union's RoHS Directive, China RoHS aims to restrict the use of certain hazardous substances in electronic and electrical equipment, thereby reducing the potential harm these substances can cause to human health and the environment.

China RoHS reflects the growing global awareness of the need to minimize the environmental impact of electronics, promote responsible manufacturing practices, and ensure the safe handling of electronic waste.



The China RoHS mark plays a pivotal role in signaling a product's commitment to environmentally conscious practices. However, it's crucial to underline that this mark doesn't directly correlate with the product's Environment-Friendly Use Period (EFUP). The EFUP, represented by the acronym, signifies a specific duration during which designated controlled substances, as outlined by the China RoHS regulation, are intentionally safeguarded against leakage or chemical deterioration within the confines of the product. This distinct timeframe, meticulously evaluated and affirmed, spans an impressive 15 years for the Ignite instrument. Within this stipulated period, the integrity of the controlled substances integrated into the Ignite is vigilantly maintained, preventing any degradation or escape into the surrounding environment.

Note: The EFUP encapsulates the meticulous engineering that strives to align with sustainability principles, preserving the substances and mitigating their environmental impact. However, it's paramount to clarify that the EFUP is distinct from the product's functional and performance-related lifespan. While the EFUP focuses solely on substance preservation, the product's overall functionality and operational effectiveness may span beyond this designated timeframe. This differentiation underscores the multifaceted nature of assessing products, encompassing ecological considerations as one facet among several that both consumers and manufacturers must consider.

Table 1- Restricted substances for China RoHS 3

部件名称 Part name	有害物质 - Hazardous substances									
	(Pb) 铅	(Hg) 汞	(Cd) 镉	(Cr(VI) 六价铬	(PBB) 多溴联苯	(PBDE) 多溴二苯醚	(BBP) 邻苯二甲酸苄丁酯	(DBP) 邻苯二甲酸二丁酯	(DEHP) 邻苯二甲酸二乙基己酯	(DIBP) 邻苯二甲酸二异丁酯
电缆和连接器组件 Cables and connector assemblies	X	O	O	O	O	O	O	O	O	O
电气和电子零件 Electrical & electronics parts	X	O	O	O	O	O	O	O	O	O
金属部件 Metal parts	X	O	O	O	O	O	O	O	O	O
塑料件 Plastic parts	O	O	O	O	O	O	O	O	O	O
橡胶件 Rubber parts	O	O	O	O	O	O	O	O	O	O
印制电路板及配件 Printed circuit board and accessories	O	O	O	O	O	O	O	O	O	O
电池及配件 Battery and accessories	O	O	O	O	O	O	O	O	O	O

粘合剂、密封剂和标签 Adhesives, Sealants and Labels	O	O	O	O	O	O	O	O	O	O

(本表格依据SJ/T11364的规定编制)
This table is compiled according to SJ/T 11364 standard.

O: (表示该有害物质在该部件所有均质材料中的含量均在GB/T26572规定的限量要求以下.)
Indicates that the concentration of the hazardous substance in all homogeneous materials for the part is below the relevant threshold of the GB/T 26572 standard.

X: (表示该有害物质至少在该部件的某一均质材料中的含量超出GB/T26572规定的限量要.)
Indicates that the concentration of the hazardous substance in at least one homogenous material of the part is above the relevant threshold of the GB/T 26572 standard.

6. Calibration and Warranty Seals

Calibration and warranty seals are hidden under the front-left bumper of the Ignite to prevent accidental damage.

IMPORTANT: **Broken seals void the calibration certification and product warranty.**

7. Safety Indications

The purpose of the various safety indications in this manual is to ensure operator safety and instrument integrity.

WARNING!



The Warning sign indicates a hazard. It calls attention to a procedure, practice, or the like, which, if not correctly performed or adhered to, can result in personal injury. Do not proceed beyond a Warning sign until the indicated conditions are fully understood and met.

CAUTION



The Caution sign indicates a hazard. It calls attention to a procedure, practice, or the like that, if not correctly performed or applied, can result in material damage or loss of data.

Do not proceed beyond a Caution sign until the indicated conditions are fully understood and met.

WARNING!



This symbol indicates that the marked surface or component can become extremely hot during operation or immediately after power-off.

Safety Precautions:

- **Do not touch** any surface marked with this symbol without appropriate personal protective equipment (PPE), such as heat-resistant gloves.
- **Allow the equipment to cool down** completely for the duration specified in the maintenance section before performing any service, calibration, or handling procedures.

Qualified personnel only: Only trained technicians aware of thermal hazards are authorized to access areas where this symbol is displayed.

IMPORTANT **The IMPORTANT indication calls attention to important information or information essential to completing a task.**

Note *The Note calls attention to an operating procedure, practice, or the like that requires special attention. A Note also indicates related, parenthetical information that is useful, but not essential.*

---

8. Typographical Conventions

The various typographical conventions used in this document to describe the operations of the instrument are explained below and were designed to standardize and simplify the look and feel of this document.

Italic

An italic typeface is used to indicate emphasis on a specific word or phrase (i.e., This option should never be selected.)

Bold

A bold typeface is used to indicate the name of a menu item or a named user-interface element (i.e., the File menu, the Options button, etc.) Generally, items in bold typeface are capitalized to reflect the capitalization used on screen.

SMALL CAPITALS

Small capitals are generally used when reference is made to inscriptions found "as is" on an instrument (buttons, connectors, indicator lights, etc.)

9. Technical Support

Eddyfi is firmly committed to providing the highest level of customer service and product support. If you experience difficulties when using our instrument, or if it fails to operate as described, first consult this user manual, and then, if you are still in need of assistance, please contact Eddyfi at support@eddyfi.com

To return an Eddyfi Technologies product for repair or calibration, you must first obtain a Return Merchandise Authorization (RMA) number before shipping your equipment. Contact us through the Eddyfi customer portal; the technical support team will review your request and issue an RMA number along with specific shipping and customs instructions.

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Chapter 2

Introducing Ignite

1. Introducing Ignite

Eddyfi's innovative Ignite unleashes the full potential of electromagnetic testing (ET) technologies for manual and automated surface inspection. This high-performance ET data acquisition system offers the following key features:

- Light, rugged, and sealed
- Plug-and-play connectivity
- SmartMUX™: integrated, universal, and programmable array multiplexer for up to 128 elements and 256 channels
- QuickLink technology to store and retrieve files directly onto ET probes
- Digital I/O for direct communication with a programmable logic controller (PLC)
- System Performance Verification for on-demand functionality checks of the instrument

Ignite is controlled by a computer running Microsoft Windows® 11, and Eddyfi's Magnifi® Ignite running on a 64 bits operating system. This computer is referred to as the workstation in this document.

For details about Magnifi, refer to the Magnifi User Manual.

2. Standard Equipment and Accessories

All Ignite instruments come with the following standard equipment and accessories:

- One power adapter (100 V– 240 V)
- One region-specific power cord
- One high-quality shielded Ethernet cable
- One tool for System Performance Verification
- One robust and waterproof transport case

3. Instrument Description

The Ignite is available in 3 different configurations:

- Ignite 64: allowing up to 128 elements and 64 channels
- Ignite 128: allowing up to 128 elements and 128 channels
- Ignite 128TR: allowing up to 128 elements and 256 channels

4. Front Plate Description

The front plate panel of the Ignite enables the user to perform the following:

- Turn on the instrument
- Connect ECA probes
- Connect digital inputs and outputs
- Read the instrument status (connected to the software, in acquisition)
- Get a warning of high internal temperature

The following figure shows the front plate of the instrument.

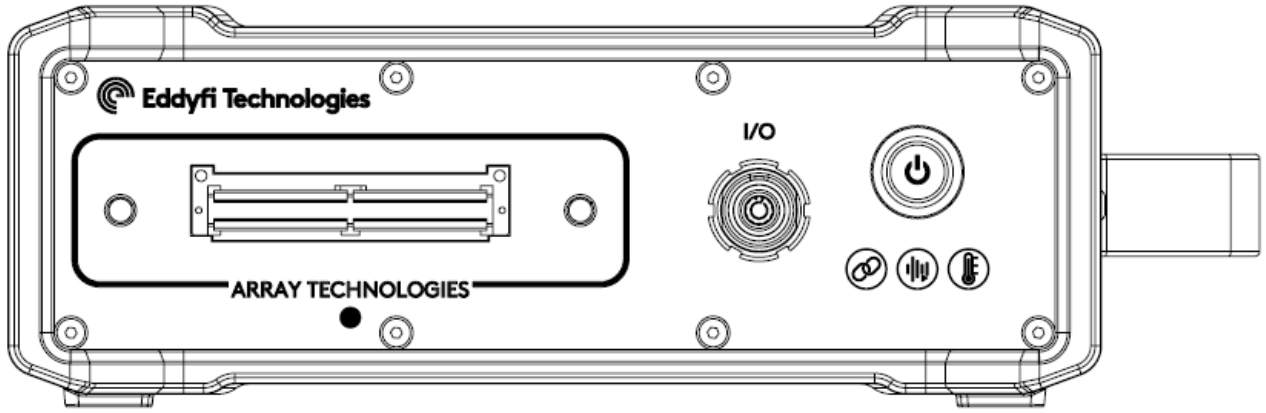


Figure 1- Ignite front plate

5. Carrying Handle

The handle on the Ignite can be used to lift and carry the instrument.

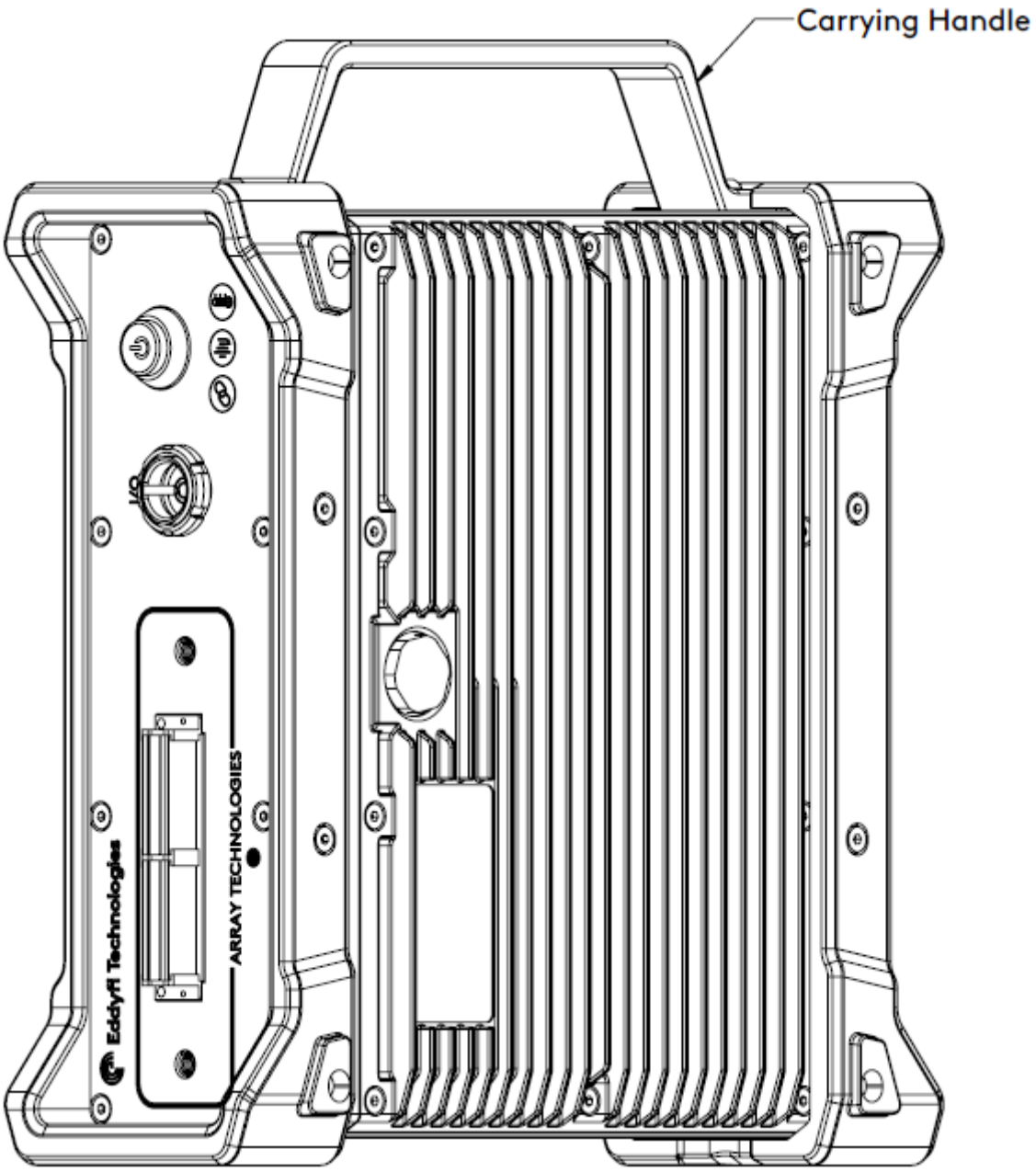


Figure 2- Carrying handle

6. Back Plate Description

The back plate panel of the Ignite enables the user to perform the following:

- Connect the instrument to a power outlet
- Connect the instrument to a computer via Ethernet
- Daisy-chain multiple instruments via the Sync connectors
- Reset the instrument to its factory settings.
- Ground the instrument.

WARNING! 	**This instrument must be connected according to the manufacturer's instructions to prevent risks of electric shocks. A bad grounding may produce a short circuit that can damage the electronic components or cause electric shocks.**

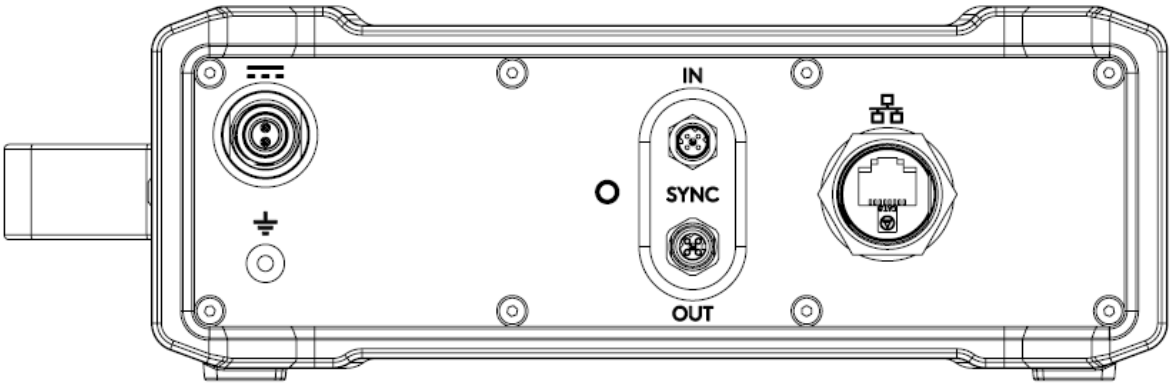


Figure 3- Ignite back plate

The ground connector is a simple screw that you remove to insert the ground wire, putting the screw back in to secure the connection.

Chapter 3

Preparing the Instrument

1. Setting Up the Instrument

To properly set up Ignite:

1. Remove the instrument from its case.
2. Position the instrument on a level and stable surface. You can position it horizontally or vertically.

IMPORTANT Regardless of how you position the instrument, you must *always have a minimum clearance of 10 cm (4 in.)* on all sides of the instrument. Always position the instrument away from heat sources. This ensures proper heat dissipation while the instrument is in use.

CAUTION



When in use, and depending on the loaded setup, the instrument can generate a non-negligible amount of heat. It should not cause any kind of harm but can prove uncomfortable to the touch. Therefore, when moving the instrument, always use the carrying handle.

2. Connection Procedure

To connect the instrument, follow these instructions.

1. Install the Ignite away from heat sources.
2. Using an Ethernet cable, connect the Ignite to the computer.
3. Using the appropriate cables, connect the components required by your setup to the corresponding Ignite connector. See Connection Configurations for more details.

3. Connection Configurations

The Ignite allows various test configurations shown in the following figures.

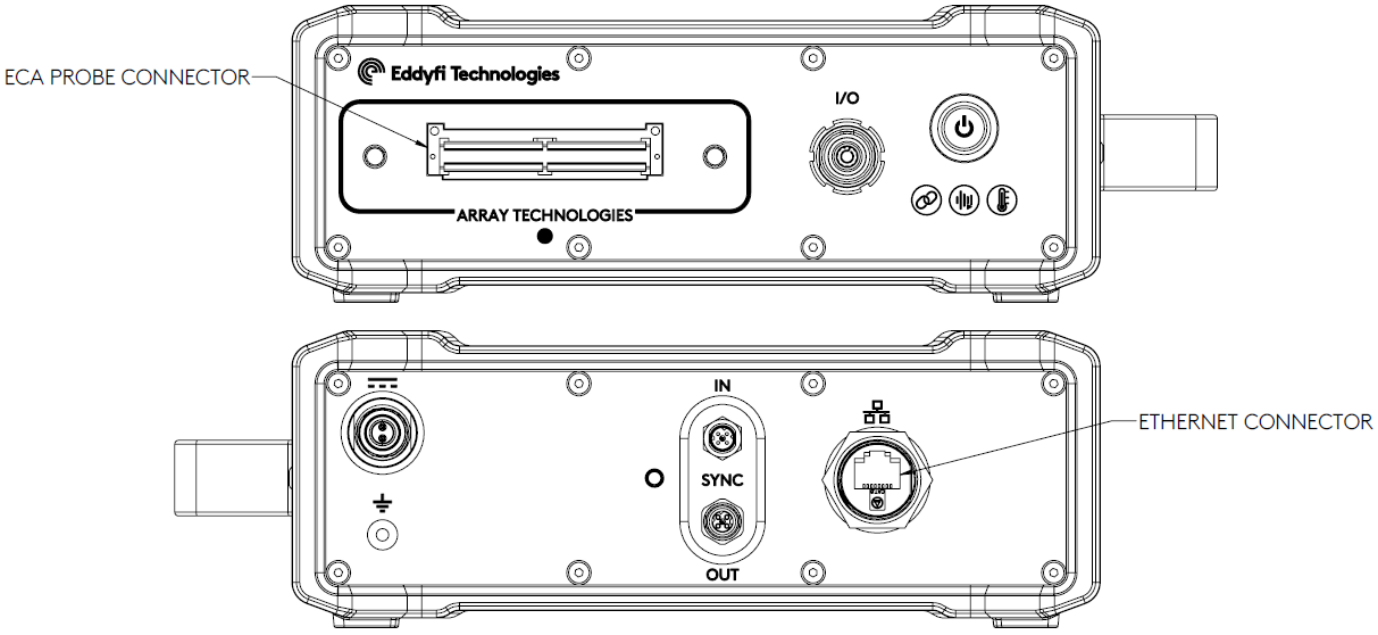


Figure 4- Typical configuration 1: Ignite with eddy current array probe

4. Starting the Instrument

Once you have properly connected all the components of your inspection setup, you can start the Ignite.

1. Connect the power adapter to the power cord.

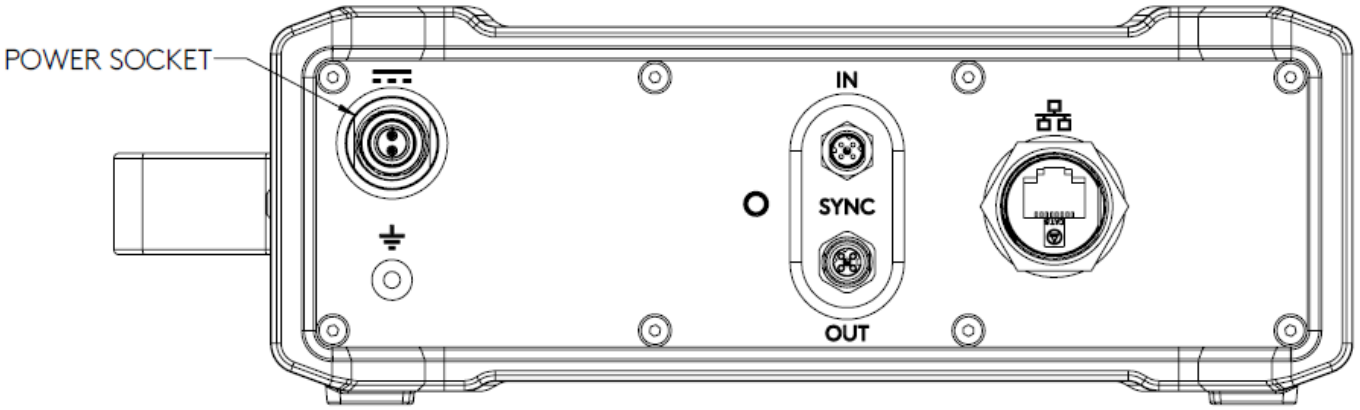


Figure 5- Power socket

2. Connect the power adapter to the power socket at the back of the Ignite.
3. Connect the power cord to the power outlet.
4. Press the power button. The power button lights up.

5. Understanding Indicators

There are four indicators on the front panel of the Ignite. This section explains the behaviors of these indicators.

Power Indicators

An LED is integrated into the power button; it lights up green when the Ignite is ON.

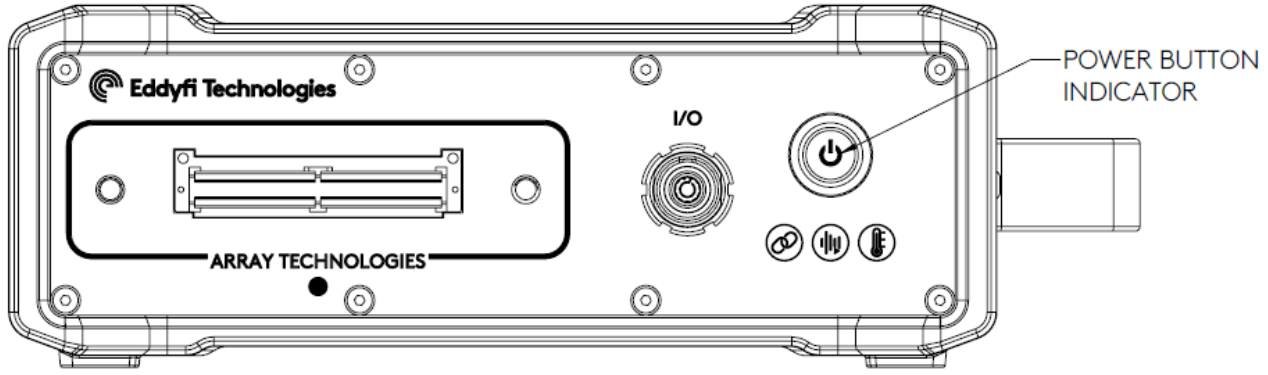


Figure 6- Power indicator

Status LEDs

There are three status LED indicators on the bottom right of the Ignite front plate.

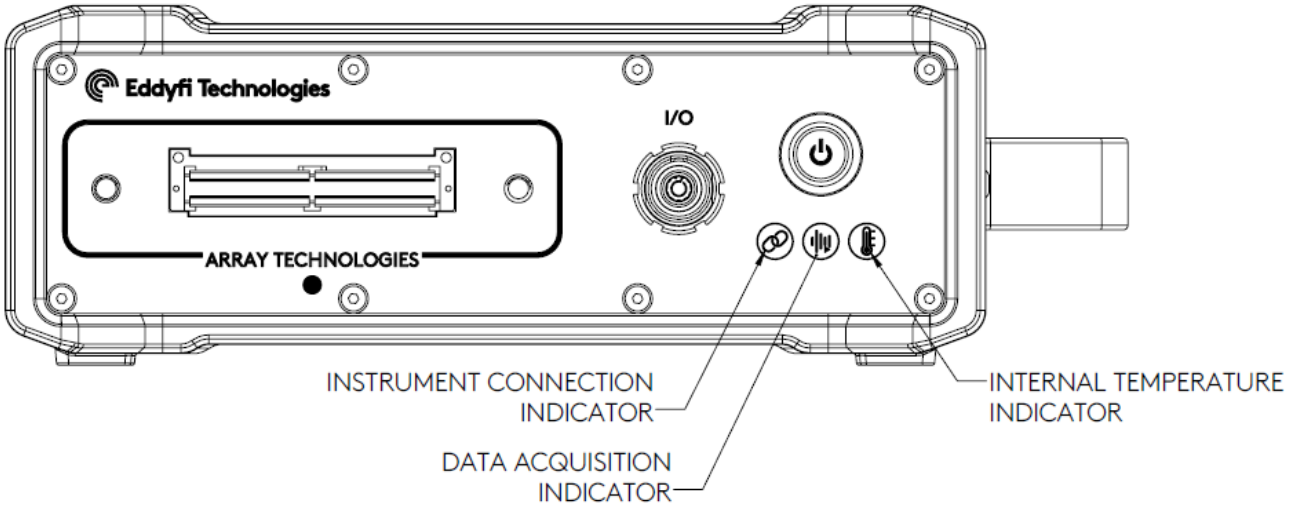


Figure 7- Status indicators

There are three LED indicators on the bottom right of the Ignite front plate. The following table indicates the information displayed by each LED.

LED position	State	Meaning
Leftmost	Off	Instrument not connected with control computer
	Green steady	Instrument connected with control computer
Middle	Off	Instrument is in idle mode not acquiring data
	Green steady	Instrument is actively acquiring data
Rightmost	Off	Internal temperature is within normal range
	Red blinking	Internal temperature has exceeded the warning threshold. Operator action is recommended.
	Red steady	Internal temperature has exceeded the critical threshold. Instrument has initiated an automatic thermal shutdown; it will not resume operation until the internal temperature returns to normal range.

Chapter 5

Connector References

1. I/O Connector (16 pins)

The I/O connector allows the instrument to send and receive various signals such as the acquisition start and stop commands, the encoder and rotation synchronization signals, the relay outputs, etc.

Description	16-pin, female, shell 1K connector
Manufacturer, number	Lemo HMG.1K.316.CLNP
Suggested cable connector	Lemo, FGG.1K.316.CLAC

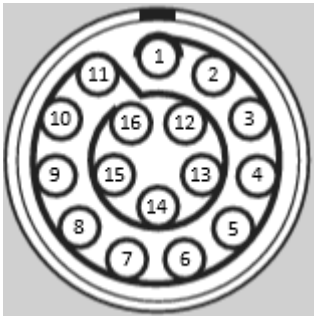


Figure 8- Encoder connector

Table 2- Encoder connector pinouts

Pin	I/0	Signal	Description
1	TTL Input/output	1WIRE	One-Wire
2	Power	+5VOUT	+5V power output limited to 0.25A
3	TTL Input	PDI1	General digital input 1 (with 1.5kΩ pull-up resistor to +5V) or CANSCLH signal
4	TTL Input	PDI2	General digital input 2 (with 1.5kΩ pull-up resistor to +5V) or CANSCLL signal
5	TTL Input	PDI4	General digital input 3 (with 1.5kΩ pull-up resistor to +5V) or IIM_INTn signal
6	TTL Input	PDI6	General digital input 6 or CLK_ACK_IN (acquisition clock input)
7	Output	PDO1	General digital output 1 (open drain with 1.5kΩ pull-up resistor to +5V) or CANSDAH

8	Output	PDO2	General digital output 2 (open drain with 1.5kΩ pull-up resistor to +5V) or CANSDAL
9	TTL Input	ENC1A	Encoder 1 phase A (with 1.5kΩ pull-up resistor to +5V)
10	TTL Input	ENC1B	Encoder 1 phase B (with 1.5kΩ pull-up resistor to +5V)
11	TTL Input	ENC2B	Encoder 2 phase B (with 1.5kΩ pull-up resistor to +5V)
12	TTL Input	ENC2A	Encoder 2 phase A (with 1.5kΩ pull-up resistor to +5V)
13	Output	PDO3	General digital output 3 (open drain with 1.5kΩ pull-up resistor to +5V) or CLK_ACQ_OUT (acquisition clock output)
14	TTL Input	PDO4/ENC3A	General digital input 4 or encoder 3 phase A (with 1.5kΩ pull-up resistor to +5V)
15	TTL Input	PDO5/ENC3B	General digital input 5 or encoder 3 phase B (with 1.5kΩ pull-up resistor to +5V)
16	-	GND	Return path for all I/O connector signals

2. Eddy Current Array Connector

Ignite instruments are equipped with the SmartMUX™ option, 160-pin connectors are available on the front of the instrument, under EDDY CURRENT ARRAY. These connectors are specific and designed by Eddyfi.

For details about the Eddyfi 160-pin connectors, contact Eddyfi directly at info@eddyfi.com.

3. Synchronization input and output connectors

The synchronization connectors allow cascading Ignite instruments to form larger systems.

Input Synchronization connector:

Description	4-pin, male, M8 connector
Manufacturer, number	Binder 86 6620 1120 00404
Suggested cable connector	Binder 77 5430 5429 34704-0100



Figure 9- Synchronization connector

4. Ethernet Connector

The Ethernet connector is used to connect the Ignite to a workstation through an Ethernet link. Eddyfi supplies a high-quality, military-grade circular Ethernet connector and cable. International Ethernet standards are used.

Description	RJ45, female connector
Manufacturer, number	PEI Genesis, Amphenol RJF22B00SCC

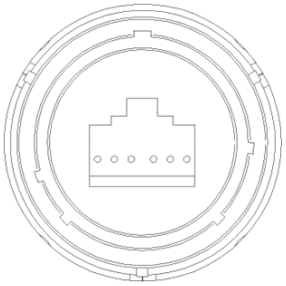


Figure 10- Ethernet connector

Table 3- Ethernet connector pinouts

Pin	I/O	Signal	Description
1	Bidirectional	Bi DA+	Bidirectional pair A+
2	Bidirectional	Bi DA-	Bidirectional pair A-
3	Bidirectional	Bi DB+	Bidirectional pair B+
4	Bidirectional	Bi DC+	Bidirectional pair C+
5	Bidirectional	Bi DC-	Bidirectional pair C-
6	Bidirectional	Bi DB-	Bidirectional pair B-
7	Bidirectional	Bi DD+	Bidirectional pair D+
8	Bidirectional	Bi DD-	Bidirectional pair D-

IMPORTANT **The Ignite must be linked to a workstation with at least a category 5e, shielded, Ethernet cable.**

Chapter 6

Specifications

1. System

Warm-up[a]	15 minutes
Workstation link	Ethernet 1000BASE-T
Transfer rate on Ethernet cable	1 Gbps

[a] The warm-up time corresponds to the time required by the unit to reach its optimal accuracy after it is turned on. Eddyfi recommends waiting until the end of the warm-up period before balancing probes or performing acquisitions.

2. Power Supply Specifications

Instrument power consumption	50 W max
Power supply source	Desktop power supply
Input power to desktop power supply	90-240Vac, 50/60Hz
Output power from desktop power supply	15Vdc, 100W

3. **Environmental Conditions**

Operating temperature[a]	0°C to 50°C (32°F to 122°F)
Storage temperature	–20°C to 60°C (–4°F to 140°F)
Relative humidity	95%, non-condensing
Cooling	Sealed and fanless
Protection	Designed for IP65
Altitude	2000 m maximum
Pollution degree rating	2
Approvals	EN 61010-1, CE, FCC Part 15B, ICES-003, AS/NZS, CISPR 22, RoHS, ASME

[a] The Ignite warns you through the front LED and through the Magnifi software when its internal operating temperature reaches 65°C (149°F), and then enters power safe mode to protect itself better when the operating temperature reaches 70°C (158°F). In power safe mode, some internal circuitry shuts down, acquisitions are stopped, and the instrument becomes inactive for work purposes until the condition that initiated the power safe mode is corrected.

4. Housing

Dimensions (WxHxD)	199 mm × 68 mm × 202 mm (7.8 in. × 2.7 in. × 8.0 in.)
Volume	2.7 L (165 in^3)
Net weight	2.9 kg (6.3 lbs)

5. Ethernet Cable

Type	At least category 5e, shielded
Maximum length	100 m (328 ft)

6. Eddy Current Array (ECA)

Number of channels and frequencies

Ignite 64	Up to 64 channels for each ECT frequency (max. 5 frequencies)
Ignite 128	Up to 128 channels for each ECT frequency (max. 5 frequencies)
Ignite 128TR	Up to 256 channels for each ECT frequency (max. 2 frequencies) or Up to 128 channels for each ECT frequency (max. 5 frequencies)
Multiplexer	SmartMUX™: integrated, universal, and programmable
Number of elements	Up to 128
Eddy current inputs	8
Connector type	QuickLink 160-pin
Probe recognition	Automatic[a]
On-probe setup and memory	Available on probes with QuickLink connector
Frequency range	5 Hz – 7 MHz
Maximum generator output	5 Hz - 3 MHz: 20 Vpp 3 - 5 MHz: 18 Vpp 5 - 7 MHz: 16 Vpp
Receiver Gain	63 dB range 23 – 86 dB

Data resolution	16 bits
Acquisition / sampling rate	100 000 sample/s

[a]The Ignite uses an ID device found in Eddyfi probes. This ID device contains information that helps set up acquisitions and confirm compatibility between setup and probe.

7. Inputs and Outputs (I/O)

I/O connector	16-pin LEMO
I/O types	6 inputs 3 outputs
I/O via QuickLink connector	4 inputs 3 outputs
Alarms	4

Chapter 7

Maintenance & Troubleshooting

1. Preventive Maintenance

Due to its design, the Ignite only requires minimal maintenance. The instrument has no moving parts, therefore the Ignite also does not require any preventive maintenance by the user. Only a regular inspection of the instrument is recommended, to ensure that it is properly grounded. Eddyfi strongly recommends an annual calibration and factory-performed preventive maintenance by an officially qualified Eddyfi technician.

Cleaning the Instrument

The Ignite external surfaces (i.e., casing, and front panel), can be cleaned when necessary.

This section explains the procedure to appropriately clean the instrument.

To clean the instrument:

1. Make sure that the instrument is off and that the power cord is disconnected.
2. To bring the instrument back to its original finish, clean the casing and the front panel with a soft cloth.

WARNING!



Do not clean the instrument with a spray or water jet.
If you do, connector contacts can remain wet and produce short circuits when connected.

3. To remove stubborn stains, use a cloth moistened with soft soapy solution. Do not use abrasive products or powerful solvents as they can damage the finish.
4. Wait until the instrument is completely dry before connecting the power cord and cables.

2. Troubleshooting

To troubleshoot the Ignite, you must first connect it to a workstation running Magnifi®.

Troubleshooting information is found in the Magnifi documentation.

3. Firmware Corruption

If the Ignite firmware crashes, the instrument will attempt to load a spare image; if successful it will trigger a reboot otherwise it will have to be returned for repair. If the user wants to boot intentionally to the spare firmware, he must press the fallback button for about 50ms at the back of the instrument.

Appendix A

Accessories

1. Probes and Encoders

Eddyfi offers a variety of designs for probes and encoders, to suit your ECA surface inspection requirements, ensuring high-quality results.

2. Connector Adapters

Probes, encoders and accessories used on Eddyfi's Ectane or Reddy instruments may have connectors (e.g. 18-pin Amphenol or 12-pin Fischer) that are not readily compatible with Ignite. You may also have specific needs to adapt existing accessories with the Ignite connectors.

Eddyfi offers a comprehensive array of adapters to suit your needs. Contact your Eddyfi representative for more information about pricing and availability.

3. QuickLink Bolts

The Ignite ECA connector comes with a set of two spare bolts for QuickLink ECA probes, to lock them in place when connected. If lost or damaged, additional spare bolts can be purchased in a set of two.

4. Protective Caps

Ignite connectors come with protective caps. If lost or damaged, additional protective caps can be purchased.

Appendix B

Legal Notice

1. Limited Warranty

The limited warranty applicable to the product is contained in Eddyfi's applicable Sales & Rentals Terms and Conditions (https://www.eddyfi.com/en/salesterms) at the time of purchase (the "Ts&Cs").

For illustrative purposes only, and except as otherwise provided in the Ts&Cs at the time of publication, mechanical products, spare parts, probes, and cables are warrantied to the original customer only for use solely by customer or direct affiliate, against defects in material and workmanship for a period of 12 months from the date of delivery.

Additional coverage may be provided under any Customer Success Program (CSP) purchased by the customer. Probes and cables are considered consumable and require periodic replacement due to wear. Eddyfi does not guarantee the service life of probes, cables, and other consumables. Eddyfi does not warrant any products against damages or defects caused by wear and tear, negligence, misuse, abnormal operating conditions, alterations, or damage caused by events beyond the control of Eddyfi.

Eddyfi shall not be liable for product defects caused by or resulting from any inaccuracies in any drawing, description or specification supplied by the customer, as applicable.

Upon customer's request during the warranty period, Eddyfi, at its discretion, will repair or replace defective products within a reasonable time. The original term of warranty applies, without extension, for repaired or replacement products. All defective products shall be sent to Eddyfi freight prepaid by customers in appropriate packaging to prevent damage in transit.

The Limited Product Warranty does not apply to periodic calibration or minor maintenance as described in this user guide or any other product manual or information.

All customer paid repairs performed by Eddyfi are warranted against defects in materials and workmanship for 90 days from the completion of repair.

Upon customer's written notice of defect within the 90-day period, Eddyfi will replace the defective part(s) and/or re-perform the service. This warranty is limited to failures in areas directly related to the repair performed.

2. Disclaimer

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