



Technical
Specifications

IGNITE

Fueling Faster Inspections *with Confidence*

Move beyond manual inspections. Ignite combines advanced ECA, automation, and intuitive software in a lightweight, robot-ready platform designed to deliver fast, repeatable inspection results. Open by design, it integrates easily into existing inspection, production, and quality workflows.

FASTER INSPECTIONS. CONSISTENT RESULTS.

Ignite is a digital ECA inspection platform that brings data acquisition, analysis, and automation together in a single solution for surface inspections. From field-deployable inspections to fully automated systems, it helps teams achieve more consistent results with less manual effort.

APPLICATIONS

- Turbine disks, blades, and rotating components
- Composite overwrapped pressure vessels (COPVs)
- Surface crack detection on critical aerospace and manufacturing parts
- ECA weld inspections (orbital, ERW, friction-stir, DSAW, etc.)
- Crawler-based inspections systems
- Complex inspections requiring custom ECA probes

Delivering fast,
repeatable, and reliable
surface ECA inspections
built to scale.



BUILT FOR SURFACE ECA

Ignite is purpose-built for high-speed surface inspections. Its compact, lightweight, battery-free design makes it easy to carry into the factory, mount on crawlers, or integrate into robotic inspection systems.

With eight inputs supporting high-speed inspections, a broad frequency range, operation in temperatures up to 50°C (122°F), and multiple channel configurations, Ignite delivers the coverage and flexibility needed to inspect more surface area in less time.

- 6 lb (2.8 kg) compact design
- 8 inputs
- Up to 50 kHz acquisition speed
- 64, 128, or 256 channels, upgradable
- Support for up to 128-sensor array probes
- 5 Hz to 7 MHz operating range
- Rated for temperatures up to 50°C (122°F)

KEY BENEFITS

- Compact and lightweight, purpose-built for surface ECA
- Eight inputs for high-speed inspection and large array coverage multiplexing
- Scalable from manual to fully automated inspection
- Robot-ready with extended digital I/Os and real-time flaw signaling
- QuickLink connector with embedded memory for setup and procedure files
- Open data export for seamless integration into your own systems
- System Performance Verification (SPV) for field-ready confidence, on demand
- Backed by the field-proven Eddyfi ecosystem and improved Magnifi software

BUILT FOR AUTOMATION

Whether you're integrating a robotic cell, production line, or custom inspection system, Ignite is designed to fit seamlessly into your workflow. Real-time communication with robots, PLCs, and peripheral equipment enables high-speed inspections without slowing production, while Magnifi Control provides the stability needed for continuous unattended operation.

- Comprehensive digital I/Os with 10 inputs, 6 outputs, and 4 real-time alarms
- Real-time filtering
- Flaw signaling
- Data recording
- PLC integration
- 24/7 unattended operation



Figure 2: Ignite leverages years of Magnifi development in a new, seamless user experience with Magnifi Ignite.



Figure 1: Ignite features.

POWERFUL ECA MADE EASY

Magnifi Ignite was designed to help users become productive faster. A redesigned interface from the powerful Magnifi software places frequently used tools within easy reach, reducing training requirements and simplifying advanced ECA inspections. Built-in automation features such as one-button calibration, real-time filtering, and real-time flaw signaling help accelerate inspections while reducing manual effort.



Figure 3: Robot-ready with extended digital I/Os and real-time flaw signaling.

THE RIGHT SETUP EVERY TIME

QuickLink connectors store setup files, inspection procedures, and supporting documentation directly with the probe. Connect the probe, and everything needed for the inspection is immediately available, reducing setup time and minimizing the risk of using the wrong procedure.

Existing Eddyfi ECA probes remain fully compatible with Ignite.

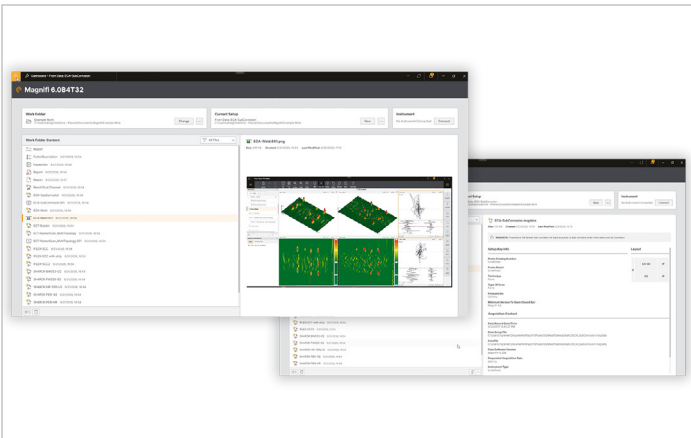


Figure 4: Magnifi Ignite simplifies advanced ECA inspections while maintaining the same level of data acquisition.

BUILT FOR CONTINUOUS OPERATIONS

For automated environments, Magnifi Control provides a streamlined acquisition engine designed for reliable 24/7 operation. It communicates directly with PLCs and production systems, delivering the stability needed for unattended inspection workflows.

CUSTOMER SUCCESS PROGRAM

When the job doesn't stop, neither should your equipment. Eddyfi Technologies' Customer Success Program is designed to keep Ignite calibrated, protected, and ready to deliver—long after deployment. Support options are available to match your specific inspection needs and operational priorities.

- Priority technical support with 4-hour first-response time and 24/5 access
- Annual instrument calibration, with as-found-as-left option available
- Quick, on-demand calibration checks with System Performance Verification Tool
- Full access to expert assistance for application tuning, data analysis, and signal interpretation
- Online training credentials through Eddyfi Academy
- Accidental damage coverage and extended warranty options
- Refurbishment service after calibration to keep instruments looking and working like new
- Multi-year program available (1, 3, or 5 years) with bundled pricing benefits

SPECIFICATIONS

INSTRUMENT

Dimensions (W x H x D)	199 x 68 x 202 mm (7.8 x 2.7 x 8.0 in)
Weight	2.9 kg (6.3 lbs)
Volume	2.7 L (165 in ³)
Power Requirements	100 - 240 VAC, 50-60 Hz
Power Consumption	50 W
Power Supply	Direct VAC
Compliance	EN 61010-1, CE, FCC Part 15B, ICES-003, AS/NZS, CISPR 22, RoHS, ASME
IP Rating	Designed for IP65
Operating Temperature	0 - 50°C (32-122°F)
Operating Humidity	95%, non-condensing
Cooling	Sealed and fanless *Consider external cooling above 40°C
Encoders	3 axes, quadrature
Connectivity	Industrial Gigabit Ethernet (1000BASE-T) with locking RJ45 interface
Probe Recognition	Automatic
On-Probe Setup and Memory	Available via QuickLink probe connector
I/O Connector Type	16-pin LEMO
I/O Connector	6 inputs 3 outputs
I/O via QuickLink Connector	4 inputs 3 outputs
Alarms	4
Sync Connector For Daisy Chaining	Yes

EDDY CURRENT ARRAY

Sensors	128
Channels	64, 128 or 256
Eddy Current Inputs	8
Simultaneous Frequencies	"Up to 128 channels: 5 frequencies Up to 256 channels: 2 frequencies"
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 bit
Acquisition/Sampling Rate	Up to 50 000 sample/s
Connector	QuickLink 160-pin Array
Multiplexer	SmartMUX
Magnifi Compatible Version	Magnifi Ignite

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