

Technical
Specifications

PANTHER 2

The ultimate solution for industrial inspections with PAUT and TFM

Combining unrivalled speed and performance, Panther™ 2 by Eddyfi Technologies is the exceptional phased array ultrasonic testing instrument offered in a compact format.

QUALITY REVEALED FASTER

For integrators, manufacturers, industrial labs, and NDT service providers, Panther 2 by Eddyfi Technologies is the ultimate phased array ultrasonic testing (PAUT) instrument with a complete total focusing method (TFM) toolbox delivering data results faster than any other commercially available solution.

DESIGNED FOR INDUSTRIAL ENVIRONMENTS

Well suited for a wide range of diverse inspection applications common across industries such as aerospace, oil and gas, and metallurgy, the second-generation Panther is built to perfection and built for perfection. This is evident with:

- Reinforced bumpers that offer unit protection and convenient stackability.
- Casing that incorporates external fans for optimized heat dissipation with no air intake.
- Flexible toolbox that enables adaptability for unique inspection requirements.
- Automation to streamline the inspection process.
- Exclusive flash mode that fits industrial productivity requirements.

Advanced inspection data results are made accessible with a complete software ecosystem to suit specific needs, including an open software development kit (SDK), Panther 2 is your go-to for flexible and scalable testing requirements.



FASTEST DATA THROUGHPUT

Panther 2 is distinctly equipped for ultra-fast ethernet delivering a 10 Gigabit-per-second high speed link for the fastest data throughput possible:

- up to 30m (98ft) with RJ45 copper cable.
- or up to 200m (656ft) with optic fiber durable enough to handle inspections in even the harshest conditions.

READY, SET...DONE!

We understand that time is money and optimizing your quality assurance investment starts with high productivity. That's why Eddyfi Technologies introduced "flash" modes making Panther 2 an astounding eight times faster than any other commercially available phased array instrument. Why settle for anything less?

PROBE NUMBER LIMIT: NONE

With configurations from 32 up to 2,048 elements, the adaptability of Panther 2 enables scalable automated inspections. The compact unit can be daisy-chained to drive 256 elements simultaneously with up to 16 units in parallel, offering a substantial increase in inspection speed.

ON COMMAND AND IN CONTROL

The control is in your hands, even with a hands-off approach: users can completely automate their process, customize displays, create unique supervision software, develop specific analysis features, and monitor productivity with established benchmarks all thanks to our readily available software development kit (SDK).



Figure 1: Panther 2 can be daisy-chained to drive 256 elements simultaneously with up to 16 units in parallel.

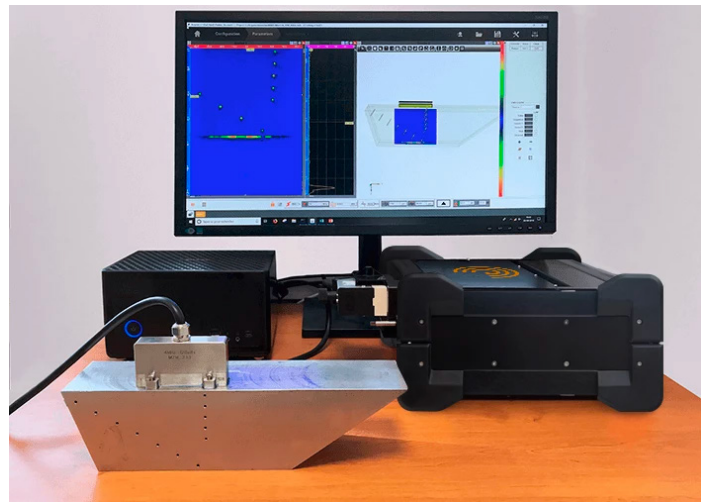


Figure 2: Eddyfi Technologies offers the complete PAUT solution.

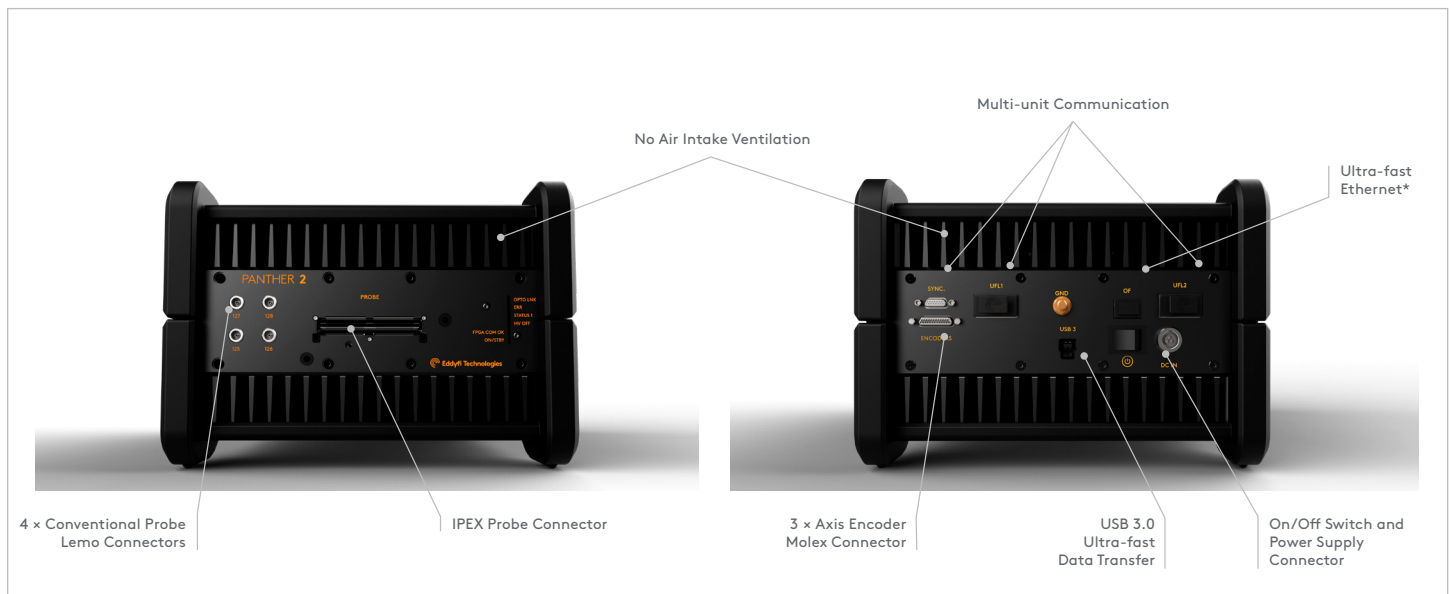


Figure 3: Annotated breakdown of Panther 2 showing its key features.

STAY IN THE KNOW WITH DESKTOP TFM

Acquire™ is Eddyfi Technologies' acquisition software dedicated to advanced phased array ultrasonic testing (PAUT), total focusing method (TFM) settings, and imaging. It was designed for both industrial and laboratory applications, also allowing research and development teams to create customized techniques and new inspection methods.

Acquire software includes a huge PAUT and TFM toolbox, powered by CIVA NDT simulation software. It works with:

- Various type of components including 2D and 3D import
- Most PAUT probe types (including matrix, sparse array, daisy, DLA/DMA, etc.)
- Highly customizable TFM setups to evaluate your own ideas including PWI pitch/catch, full matrix capture (FMC), image fusion, tailored propagation modes, conversion modes, adaptative reconstruction, etc.
- Elementary A-scan access at your convenience
- CIVA simulations to experiment acquiring your own data.

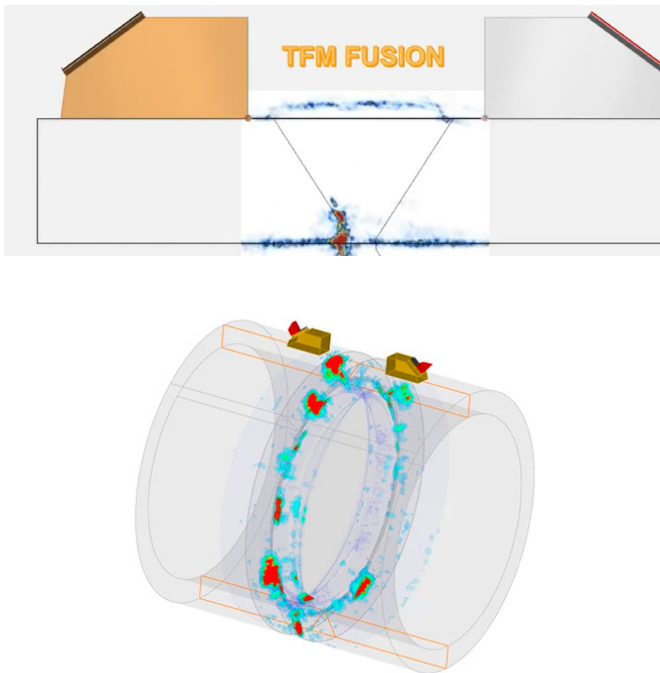


Figure 4: CIVA NDT simulation software.

NO NEED TO LEARN THE HARD WAY: SOFTWARE YOUR WAY

Eddyfi Technologies' software development kit (SDK) is a high-level library that allows users to quickly develop their own applications to control Panther 2 (access any acquisition parameters), access real-time conventional, PAUT, and TFM data or saved data for post processing.

SDK advantages include:

- Hardware abstraction layer: customer code does not depend on model, revision, and number of devices connected to Acquire
- Stable API that enables a future Acquire upgrade without software modification
- It's very fast to develop very basic automation
- OS/language independent: it can be developed from any system able to communicate with TCP/IP socket (PC under Windows, PC under Linux, Mac OS, Android smartphone, PLC, etc.).
- CIVA simulations to experiment acquiring your own data.

A COMPLETE SOFTWARE ECOSYSTEM

Acquire software partly embeds CIVA software for both simulation and setups; it is fully compatible with CIVA and ULTIS for advanced analysis.

Capture™, the proven streamlined software already powering the portable Mantis™ and Gekko® instruments, is now compatible with Panther 2 for both acquisition and analysis. It enables higher productivity and can read Acquire data files.

Panther 2, powered by industry-leading software, let's you tackle any type of inspection.



Figure 5: Capture advanced phased array software compatible with Mantis, Gekko and Panther 2 instruments.

SPECIFICATIONS

INSTRUMENT	
Dimensions (W × H × D)	298 × 220 × 159mm (11.7 × 8.7 × 6.3in)
Weight	6kg (13.2lb)
Operating Temperature	-10-50°C (14-120°F)
Storage Temperature	-10-60°C (14-140°F)
IP Rating	IP20 (IP54 with accessory)
Power Supply	110-240 VAC, 50-60 Hz
Configurations	32:128PR, 64:64PR, 64:128PR, 256:256PR <i>with or without TFM</i>

PULSERS	
128 Phased Array Channels*	
Bipolar Square Pulse Width	30 ns to 2,000 ns
Voltage Amplitude	Maximum 100 V with 1 V step
Maximum PRF	Up to 30 kHz

RECEIVERS	
128 Phased Array Channels*	
Input Impedance	50 Ω
Frequency Range	0.4-20 MHz
Maximum Input Signal	1.8 Vpp
Gain	Up to 120 dB (0.1 dB step)
Crosstalk Between Two Channels	< 50 dB
Analog Amplifier	Ultralow noise amplifier

ACQUISITION	
A-scan/Peak Data Recording	800% amplitude range
Inspection Data File Size	Hard drive limit
Acquisition Triggers	Time, event, encoder
Data Transfer	USB3, ultra-fast ethernet 10 Gbit with fiber optic or RJ45 cable

ANALYSIS	
Views	A-scan, B-scan, C-scan, D-scan, echodynamic, top, side, front, 3D
FMC/PWI Data Acquisition Post-Process TFM Reconstruction	CAD geometry with CIVA™**
Software Compatibility	Capture, CIVA and ULTIS™**
Amplitude Range	Up to 800%

ANALYSIS	
CAD Part Geometry	Plate, cylinder, T or Y section, nozzle
CAD Weld Geometry	Butt weld
Customizable Inspection Report	Yes

PHASED ARRAY	
Configurations	Linear scanning, sectorial scanning, parallel shooting, ultrafast mixed modes (flash modes)
Scan Modes	Linear scanning, sectorial scanning, parallel shooting, ultrafast mixed modes (flash modes)
Scalable	Up to 16 Panther units (2,048 channels)
Active Aperture up to 256 Elements*	Delay-law computation for standard and parametric components
Probes	Linear, matrix, DLA and DMA, annular, daisy, and sparse array
Number of Probes	Unlimited probes, no group limitation, up to 8,192 focal laws
Focusing Modes	True depth, sound path, projection

REAL-TIME TFM, FMC, PWI (WITH TFM OPTION)	
Reconstruction Channels	Up to 128 (up to 256 with two Panther 2 units)
Maximum Refresh Rate	Up to 500fps (depending on pixel numbers)
Maximum Pixels for Reconstructed Image	More than one million
Sound Paths	Direct (L or S), indirect and converted modes, fusion modes

DIGITIZER	
Summed A-scan Digitizing	Digitizing and real-time summation on 128 channels (256 with 256:256PR configuration)
A-scan Signal Processing	Rectified, RF, envelope
Adjustable Filters	FIR and IIR filters
Maximum Delay	1.6 ms
Resolution	14 bit Dynamic: 16 bit
Maximum Sampling Frequency	125 MHz
Digitizing Depth (TFM)	Up to 16k points
Digitizing Depth (Phased Array)	Up to 65k points

WIZARDS

Type	CAD overlay and 3D view
	Real-time phased array calculator
	Wedge calibration (angle, height), amplitude calibration, TCG
	Amplitude balancing
	Probe and weld geometry designs

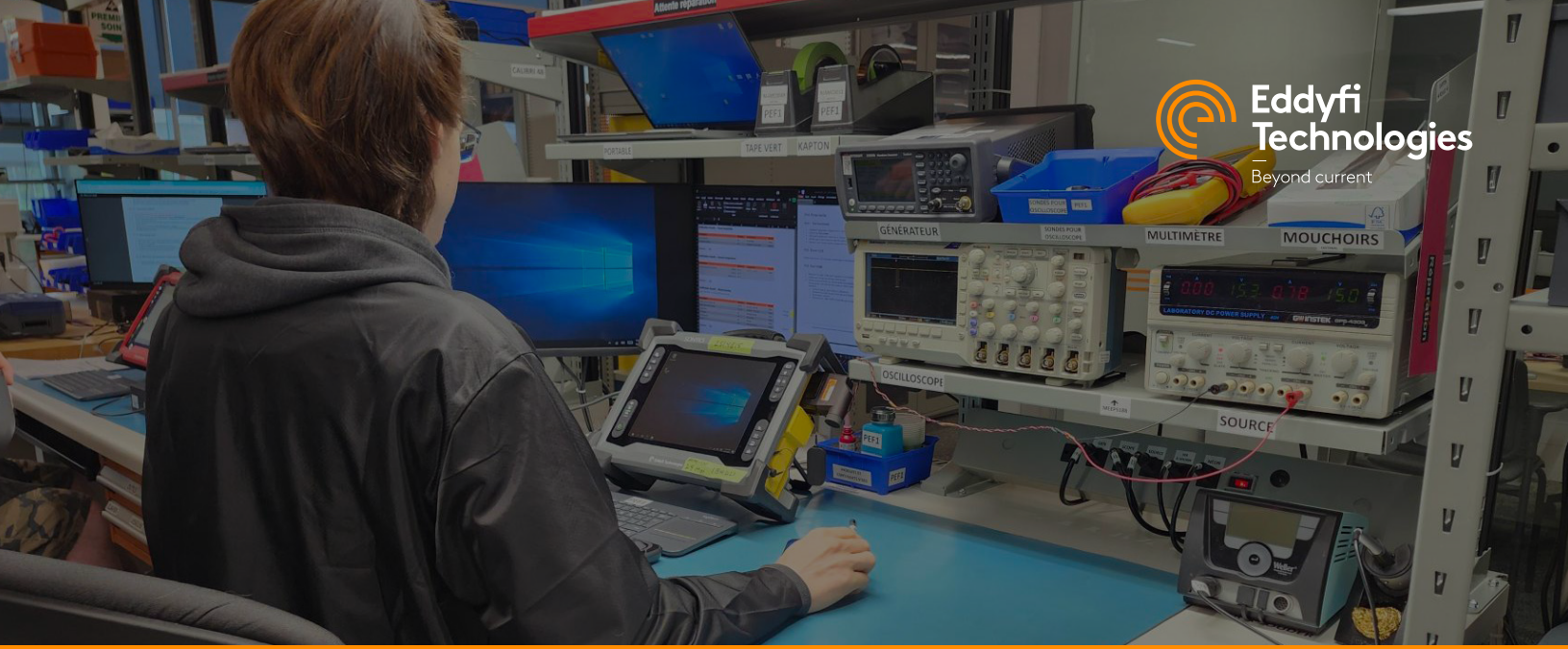
I-O

Connector Type	1 IPEX for phased array
	1 USB 3.0
	4 Gbit/sec (330 Mbyte/sec)
	1 Ultra-fast ethernet: RJ45 or fiber optic
	10 Gbit/sec
	4 LEMO-00
	3 encoder inputs
	1 external trigger
	1 ultra-high-speed summation port (for summation between units)

*Dependent on configuration: 256-channel unit is built using two 128-channel units.

**CIVA is a trademark of CEA, and ULTIS is a trademark of TESTIA.

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CUSTOMER SUCCESS PROGRAM

Built-In Confidence. Backed by Eddyfi.

ONE PARTNER. STRATEGIC OUTCOMES.

The Customer Success Program (CSP) is Eddyfi Technologies' operational enablement framework designed to support long-term inspection success across our portfolio of instruments. Rather than offering one-size-fits-all coverage, the CSP delivers flexible access tailored to your team's risk profile, performance goals, and inspection maturity.

By combining expert support, technical training, data analysis tools, and system verification capabilities, our CSP helps inspection teams stay inspection-ready, productive, and protected – no matter the environment.

Access options include:

- **Essential:** Ideal for teams that prioritize connectivity, digital tools, and expert-backed support
- **Standard:** Designed for customers who require performance assurance and ongoing compliance readiness
- **Premium:** Tailored for high-uptime operations where risk mitigation and asset protection are critical.

This isn't a subscription or support package. It's the operational arm of our customer promise: **You succeed. We support.**

Your key to sustained
confidence.



TECHNICAL SUPPORT

Every Eddyfi customer has access to responsive technical assistance, regardless of location, product, or Customer Success Program access level.

Support is available through multiple channels, including:

- Email at support@eddyfi.com
- Online at eddyfi.com/contact
- The Customer Portal at portal.eddyfi.com, which also includes a searchable Knowledge Base
- The Get Assistance tool integrated into most Eddyfi software platforms
- For customers enrolled in the CSP, support goes beyond standard help.

All CSP tiers include a faster, more proactive experience with the following enhancements: CSP access includes a first response time target of four business hours and priority routing through our technical services team.

Customers also benefit from a broader enablement ecosystem, including collaborative inspection planning, self-service resources, and integrated tooling.

The table below outlines additional CSP inclusions by access level.



Figure 1: Not just support but partnership in action.

FEATURE	ESSENTIAL	STANDARD	PREMIUM
Application Assistance	X	X	X
e-Learning	X	X	X
Desktop Companion	X	X	X
Connectivity Tools	X	X	X
Calibration		X	X
Remote Performance Verification*		X	X
Refurbishment			X
Accidental Damage Protection			X
Extended Warranty			X

*Services offered may vary by product line. For details on the specific services available for each product line, please refer to the table on page 6.

APPLICATION ASSISTANCE

CSP access includes one of the most valued resources Eddyfi offers: expert insight from experienced NDT professionals. Application assistance connects customers with technical specialists who provide personalized support for inspection planning, setup optimization, and data interpretation.

This benefit is designed to help teams succeed in complex or unfamiliar scenarios—whether they’re adopting new instruments, tackling advanced inspection techniques, or working with challenging geometries or materials. The goal is to shorten the learning curve, improve inspection reliability, and support confident decision-making.

Customers can submit application assistance requests through the Eddyfi Customer Portal. Each request is handled by a member of our technical team, who may assist by reviewing data files, offering setup recommendations, helping interpret results, or advising on NDT method selection and parameter tuning.

Application assistance is available across all CSP tiers and is especially impactful during onboarding, first deployments, or application transitions.

E-LEARNING

Every CSP access level includes training support through Eddyfi Academy—our dedicated platform for online learning. Designed to accelerate onboarding and deepen expertise, the platform provides structured, self-paced training aligned with each customer’s enrolled instrument

CSP includes ten eLearning credentials per year, which can be redeemed anytime during the program term. These credentials unlock full access to curated course packages that may include foundational theory, software operation, workflow demonstrations, and advanced application modules.

Once activated, each course remains accessible for one year, allowing users to revisit content as needed and reinforce knowledge at their own pace. Courses are especially valuable for training new technicians, cross-training team members, or maintaining skills in high-turnover or distributed teams.

To redeem credentials, customers can complete the form included in their CSP activation email. Additional credentials may be requested if needed. Eddyfi Academy is available at academy.eddyfi.com.

This training resource helps CSP customers remain confident, capable, and inspection-ready—no matter the application.



Figure 2: Example of Lyft e-Learning.

DESKTOP COMPANION

The Desktop Companion—also referred to as CPN software—lets teams manage inspection data and workflows away from the instrument. This means more flexibility in how and where analysis happens, reducing instrument downtime and increasing team efficiency.

With Companion software, users can open and review data files, perform off-instrument analysis, and in some cases, create and refine inspection setups in advance. It’s particularly valuable for multi-project environments or teams with remote analysts and subject matter experts.

Customer Success Program access includes a specific number of Companion licenses depending on the selected tier.



Figure 3: Magnifi Desktop Companion Software.

CSP ACCESS	ESSENTIAL	STANDARD	PREMIUM
Number of Licenses	1	3	5

Licenses are transferable and can be used concurrently, making them easy to deploy across teams and devices. Companion software is available for the following instruments:

INSTRUMENT	SOFTWARE
Amigo2	Assist-CPN
Cypher	Cypher-PC
Gekko/Mantis	Capture-CPN
Lyft	Lyft-CPN
Reddy	Magnifi-CPN
Sonyks	Sonyks-CPN



Figure 4: From the lab to the field, our experts are with you every step of the way.

CONNECTIVITY TOOLS

Connectivity tools help teams collaborate more effectively and make inspection workflows more seamless—whether users are in the field, at a desktop, or supporting remotely. Included in all CSP access tiers, these tools are built into most Eddyfi portable instruments and enable real-time data sharing, remote assistance, and centralized documentation.

These features include:

OneDrive integration allows inspection data to be synchronized and shared directly to the cloud as it's collected. This makes it easy for teams to access files from anywhere and ensures secure backup of inspection records.

Zoom integration allows inspectors to initiate live sessions where they can share their screen and grant control of their instrument to participants. This is especially useful when training teams remotely, mentoring new technicians, and/or troubleshooting issues in the field.

The Eddyfi mobile app connects directly to supported instruments and enables users to upload photos or notes tied to specific data files or indications. These contextual insights are automatically embedded in the project record, improving communication and traceability.

These features are available through the Connectivity tab in the backstage menu of the instrument software. Availability may vary by product and region; consult your Software Licensing Agreement. For more details, visit eddyfi.com/get-connected and contact your local Eddyfi representative.

CALIBRATION

Standard and Premium access to the Customer Success Program includes one annual calibration per instrument, performed by an authorized Eddyfi service center. This ensures that your system maintains peak performance and remains aligned with manufacturer specifications.

All Eddyfi service centers are equipped with the tools and expertise needed to conduct thorough calibrations with minimal turnaround time. If the instrument does not meet required tolerances, certified technicians will make the necessary adjustments and revalidate performance before returning the unit.

“As-found/as-left” calibration options are available for customers operating under specific codes or internal quality programs. These may be requested at the time of booking. ASFAL variants of the Standard and Premium CSP access are also available for purchase.

Customers are responsible for shipping their instrument to the service center. To initiate a calibration request, please use one of the recommended channels: the Eddyfi portal, email support at support@eddyfi.com, or contact your local Eddyfi representative.

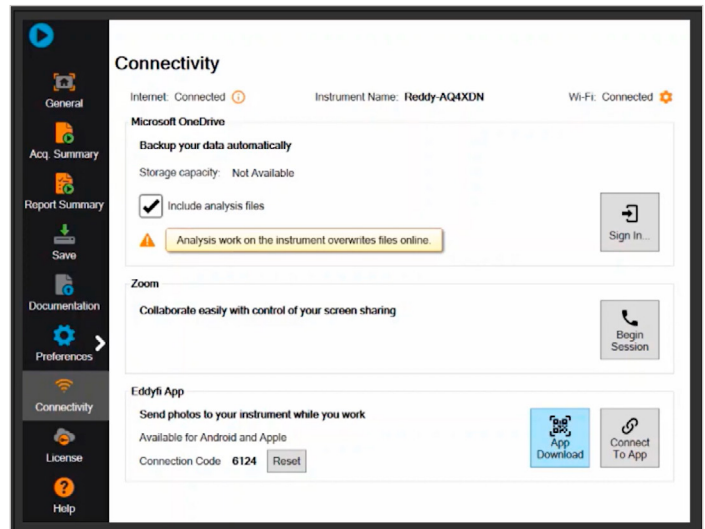


Figure 5: Connectivity software menu.



Figure 6: Connected where it counts - real-time data sharing, remote control, and smarter collaboration built into every inspection.

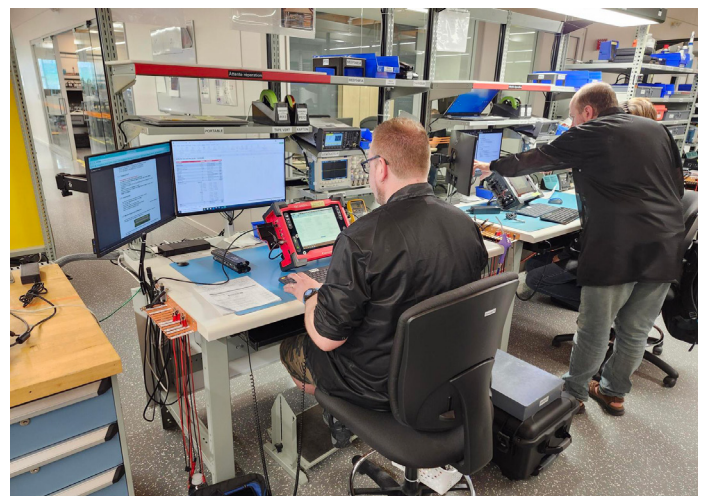


Figure 7: Confidence, calibrated. Each instrument is tested and adjusted by certified Eddyfi technicians to meet performance standards.

REMOTE PERFORMANCE VERIFICATION

Remote performance verification (RPV) enables Cypher users with Standard or Premium CSP access to check instrument performance without interrupting operations. This functionality helps team maintain peak performance and reduce downtime by running diagnostic tests directly from the system interface.

Tests are based on ISO18563-1 Group 2 requirements and include:

- Transmitter pulse voltage
- Pulse rise time
- Pulse duration
- Linearity of time delay (transmitter)
- Noise level
- Vertical display linearity
- Time delay linearity (receiver)
- Channel gain variation

RPV tests only take a few minutes and can be repeated as often as needed. Once per year, results may be submitted to Eddyfi for review and certification. The verification report will then be uploaded to the customer's portal account.

REFURBISHING

For customers with Premium CSP access, annual calibration includes a full refurbishing service to restore the instrument's physical condition and extend its operational life. This service is designed for high-use environments where cosmetic wear or physical damage may occur over time.

Refurbishment is carried out at the time of calibration and includes both external cleaning and replacement of worn or damaged components. The scope may vary by product, but typically includes:

- Cleaning of the exterior
- Replacement of fasteners, bumpers, and handles
- Inspection and replacement of battery doors, connector doors, and buttons
- Reconditioning or replacement of stands and external connectors
- New self-adhesive membranes, touch screen protectors, and screen assemblies
- Replacement of internal mechanical components and wiring as needed
- Seal replacement to preserve ingress protection
- Evaluation and servicing of accessories such as power packs and batteries

Any replaced parts are itemized in the calibration certificate and test report provided to the customer.

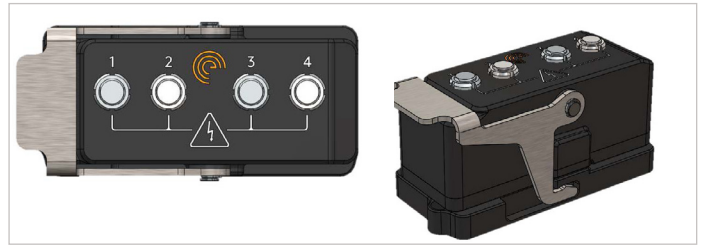


Figure 8: Validated in the field, Cypher's RPV tool enables ISO-aligned performance checks without sending the system in. Available starting September 2025.

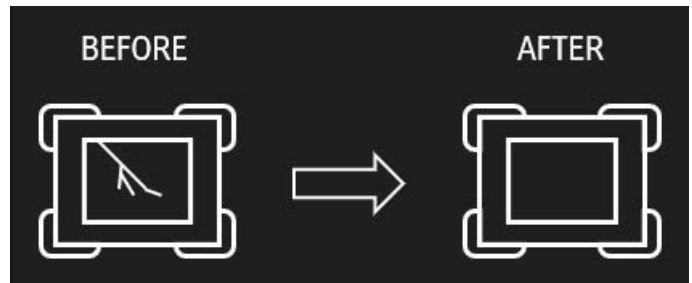


Figure 9: From worn to like new, refurbishment restores your instrument's exterior during calibration to keep it inspection ready.

ACCIDENTAL DAMAGE PROTECTION

For teams working in demanding environments, Premium CSP access includes accidental damage protection—covering one incident of physical or liquid damage per instrument, per year.

If a system is damaged during normal operation due to an accidental drop, impact, or exposure to water, Eddyfi will repair the affected unit to restore full functionality. This protection is designed to reduce unplanned downtime, eliminate unexpected repair costs, and give customers peace of mind in high-pressure situations where productivity and schedule adherence are critical.

To initiate a damage assessment and coverage claim, customers should report the incident through the Eddyfi portal or by contacting their local support team. All cases are reviewed to confirm eligibility and ensure fast turnaround.

EXTENDED WARRANTY

Premium CSP access includes extended operational coverage, providing added assurance for customers who rely on their systems every day. This coverage protects against faults resulting from workmanship or electrical failure and remains in effect for the full duration of the CSP agreement.

If an instrument experiences a qualifying issue, Eddyfi will repair or replace the affected unit to restore performance in alignment with original specifications. This protection helps reduce repair costs, minimize administrative effort, and ensure continuous inspection readiness.

SERVICE AVAILABILITY BY PRODUCT

The following table indicates the service available by product

PRODUCT	APPLICATION ASSISTANCE	E-LEARNING	DESKTOP COMPANIONS	CONNECTIVITY TOOLS	CALIBRATION	REFURBISHING	ACCIDENTAL DAMAGE PROT.	EXTENDED WARRANTY
Amigo2	X	X	X	X	X	X	X	X
Cypher	X	X	X	X	X	X	X	X
Ectane3	X	X			X	X	X	X
Emerald	X				X	X	X	X
FloormapX	X	X		X	X			
Gekko	X		X		X	X	X	X
Lyft	X	X	X	X	X	X	X	X
Mantis	X		X		X	X	X	X
Panther2	X				X	X	X	X
Reddy	X	X	X	X	X	X	X	X
Sonyks	X	X	X	X	X	X	X	X
Swift-M	X	X			X	X	X	X
Swift-UT	X				X	X		
TOPAZ16	X				X	X	X	X
TOPAZ32	X				X	X	X	X
TOPAZ64	X				X	X	X	X
U41	X	X			X	X	X	X

ACCESS LEVEL AVAILABILITY BY INSTRUMENT

The following table identifies CSP access level available by product

PRODUCT	ESSENTIAL	STANDARD	PREMIUM	STANDARD ASFAL	PREMIUM ASFAL
Amigo2	X	X	X		
Cypher	X	X	X	X	X
Ectane 3	X	X	X	X	X
Emerald	X	X	X	X	X
FloormapX	X	X			
Gekko	X	X		X	
Lyft	X	X	X		
Mantis	X	X	X	X	X
Panther 2	X	X	X	X	X
Reddy	X	X	X	X	X
Sonyks	X	X	X		
Swift-M	X	X	X		
Swift-UT	X	X			
TOPAZ16	X	X	X	X	X
TOPAZ32	X	X		X	
TOPAZ64	X	X		X	
U41	X	X	X		

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Getting Started with **PANTHER 2**



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Registre des versions			
Version	Description	By	Date
A-01	Original version	VFO	2022-12-10
A-02	Complete set-up instructions	TCO	2023-05-31

1.PACKAGE CONTENT



PANTHER



Power supplier

USB 3.0 cable
3mMOLEX to LEMO (scanner)
cable adaptorOptic fiber*
30mcable*Ethernet cable*
10mDocuments
(Measurement report, Warranty,
Getting started guide and
Warnings)

* Optional

2.INTENDED USE

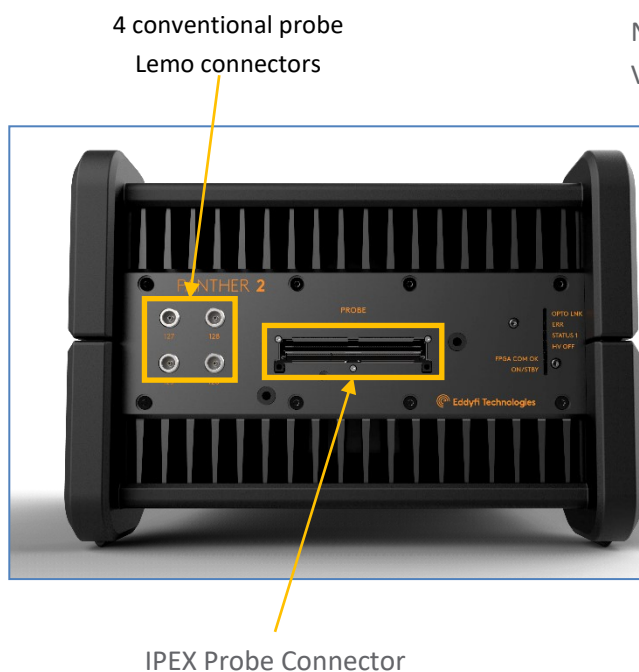
The Panther is designed to perform ultrasonic non-destructive inspections of industrial and commercial materials.

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

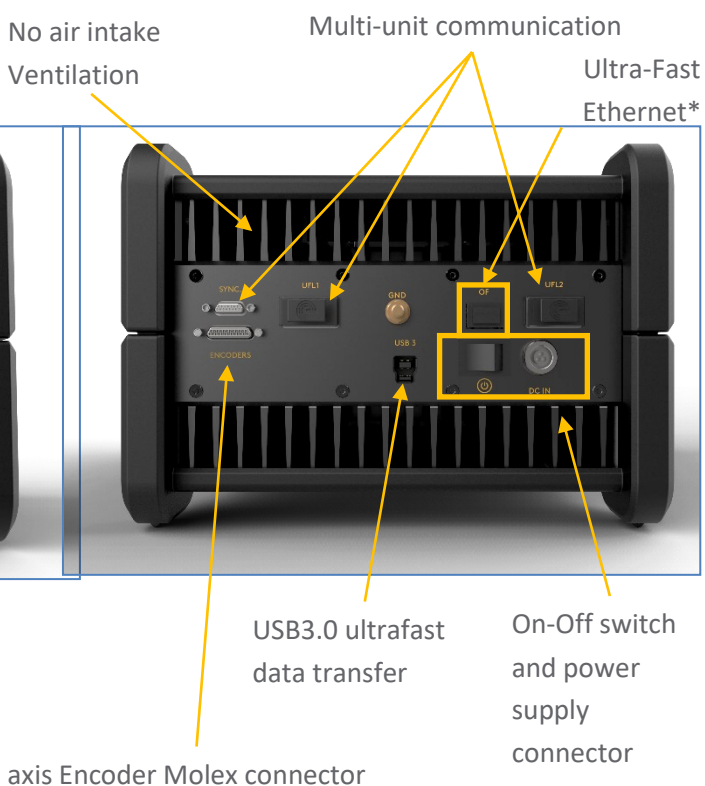
Panther can manage all the conventional, phased array modes and Total Focusing Method (TFM).

3.CONNECTIONS

FRONT PANEL CONNECTORS



REAR PANEL CONNECTORS



* Optional

Connect the Panther to the external DC power supply that is connected to an appropriate AC power source.

To turn ON the Panther, switch the ON-OFF button. The internal fans will turn on.

To turn OFF the Panther, switch the ON-OFF button. The internal fans will turn off.

4. GLOBAL WARNINGS



Do not use the device for purposes other than those for which it was designed.

Do not inspect parts of the human body or animal body with PANTHER systems.

The use of non-compatible devices can cause device failure.

To avoid personal injury or property damage, do not disassemble, modify or attempt to repair the unit.

Carefully read the instructions in the user's manual before turning the unit on.

Obey all safety warnings on the unit and those contained in the User Manual.

Do not install substitute parts or do not make modifications not allowed on the device.

Repair instructions, if any, are for qualified technical staff. Do not attempt to service this product unless you are qualified to do so to avoid the risk of electric shock. If you have any problems or questions regarding this product, please contact EDDYFI TECHNOLOGIES or an authorized representative of EDDYFI TECHNOLOGIES.

Before turning on power, connect the ground of the device to the protective conductor of the power cord. The plug must be inserted only into an AC mains socket outlet with ground contact. You should never cancel function protection using an extension cord (power cable) without a protective conductor (grounding).

When the protective grounding seems damaged, you must power down the unit and prevent unintentional operation.

The device must only be connected to a power source of the type described in the annex below.

Prior to trash PANTHER system, make sure to comply with local laws.

In accordance with European Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE), this symbol indicates that this product should not be disposed of with other household waste but should be collected separately. Please contact your local EDDYFI TECHNOLOGIES representative for instructions on how to take this product back, or to find out about collection facilities in your country.

The probes connected to the PANTHER must be equipped with reinforced insulation.

Avoid touching the inner conductor of I-PEX and LEMO connectors to reduce the risk of electric shock. The tension of the inner conductor of UT connectors can reach 160V and the voltage of the inner conductor PA connector can reach 160 V.

To completely disable the system, unplug the AC adaptor.

5. REGULATORY COMPLIANCE

FCC Compliance (USA)

This equipment was tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the user's guide, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case you will be required to correct the interference at your own expense.

IC Compliance (Canada)

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

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

CE Marking (EU)

Hereby, Eddyfi Technologies declares that the PANTHER equipment complies to the essential requirements of the following directives:

- Electro Magnetic Compatibility (EMC, 2014/30/EU)
- Low Voltage (LVD, 2014/35/EU)
- Restriction of Hazardous Substance
(RoHS, 2011/65/EU, 2015/863/EU and 2017/2102)

Please find the full EU Declaration of Conformity on the Eddyfi Technologies website (www.eddyfitechnologies.com).

UKCA Marking (UK)

Hereby, Eddyfi Technologies declares that the PANTHER equipment is in compliance to the essential requirements of Statutory Instruments:

- Electro Magnetic Compatibility (S.I. 2016 No. 1091)
- Electrical Equipment Safety (S.I. 2016 No. 1101)
- Restriction of Hazardous Substances
(RoHS, S.I. 2012 No. 3032 and S.I. 2021 No. 422)

Please find the full UKCA Declaration of Conformity on the Eddyfi Technologies website (www.eddyfitechnologies.com).

WEEE Compliance (Waste)



This 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).

6. SUGGESTED COMPUTER - LAPTOP

To benefit from the high throughput that the PANTHER can deliver, here are the 2 minimum suggested configurations:

LAPTOP Configuration – for USB use

Intel Core i9-11950H (8 Core, 24MB Cache, 2.60GHz to 5.00GHz, 45W, vPro)
 Monitor 17.3" IPS FHD, 1920x1080, 60Hz.
 32Go, 2x16Go, DDR4
 SSD 512 Go, PCIe x4 NVMe Gen 3
 SSD 1 To, PCIe x4 NVMe Gen 3
 Battery, 95 Wh
 NVIDIA GeForce RTX 3080 (ou RTX A5000) w/16 GB GDDR6
 240W Power Adapter
 Wireless Intel Wi-Fi 6E AX210 with Bluetooth 5.2
 Keyboard & Touch PAD

Software

Windows 10 Professional, 64 bits

To use the PANTHER with Ultra-Fast Ethernet 10 Gbit, add the following Eddyfi items

Ultra-Fast Ethernet USB-C converter = UFastEtherThunderBModule
 + Optic Fiber or RJ45 Copper cable option

Optic Fiber

x2 Ultra-Fast Ethernet module Optic fiber = x2 UFastEtherModule-OF
 Optic Fiber cable = CAB-UFastEther-OF-10m or CAB-UFastEther-OF-50m or
 CAB-UFastEther-OF-100m

RJ45 with copper cable

x2 Ultra-Fast Ethernet module = x2 UFastEtherModule-RJ
 RJ45 copper cable = CAB-UFastEther-RJ45-3m
 or CAB-UFastEther-RJ45-7.5m
 or CAB-UFastEther-RJ45-20m



Optic fiber cable



RJ45 cable



Ultra-Fast Ethernet – USB-C
Converter



Optic Fiber module

(2 required)



RJ45 module
(2 required)

7. SUGGESTED COMPUTER - DESKTOP

To benefit from the high throughput that the PANTHER can deliver, here are the 2 minimum suggested configurations:

DESKTOP CONFIGURATION – for USB use

Intel® Core™ i9-10900X (19.25 MB cache, 10 cores, 20 threads, 3.70 GHz to 4.70 GHz Turbo, 165)
 Monitor 23" FHD, 1920x1080, 60Hz
 32Go, 2x16Go, DDR4
 SSD 512 GB, PCIe NVMe
 SSD 1 TB, PCIe NVMe
 NVIDIA GeForce RTX 3080
 Tower 950W Chassis, with USB3.0 and Ethernet 1 Gbit
 Keyboard & Mouse

Software

Windows 10 Professional, 64 bits

To use the PANTHER with Ultra-Fast Ethernet 10 Gbit, add the following Eddyfi items

Ultra-Fast Ethernet UPcle board = UFastEtherPCIModule

+ Optic Fiber or RJ45 Copper cable option

Optic Fiber

x2 Ultra-Fast Ethernet module Optic fiber = x2 UFastEtherModule-OF – Quantity = 2

Optic Fiber cable = CAB-UFastEther-OF-10m or CAB-UFastEther-OF-50m or
 CAB-UFastEther-OF-100m

RJ45 with copper cable

x2 Ultra-Fast Ethernet module = UFastEtherModule-RJ45 – Quantity = 2

RJ45 copper cable = CAB-UFastEther-RJ45-3m
 or CAB-UFastEther-RJ45-7.5m
 or CAB-UFastEther-RJ45-20m



Optic fiber cable



RJ45 cable



Ultra-Fast Ethernet – USB-C
 Converter



Optic Fiber module



RJ45 module
 (2 required)

8. COMPUTER SETTINGS

The computer can be used with a USB3 connection.

It can also be used with a 10-Gbit Ethernet connection. To set up your computer, follow the procedure described in the [annex](#) at the end of this document.

9. ACQUIRE SOFTWARE

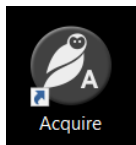
Acquire is the PANTHER operating software dedicated to conventional UT, TOFD, Phased-Array, TFM settings and acquisition.

LAUNCHING ACQUIRE

If a computer has been delivered by Eddyfi with your Panther system, ACQUIRE can be accessed from the Acquire Icon located on the windows desktop icon or by double clicking on the C:/Acquire/Go_Acquire_US.bat

INSTALLING ACQUIRE

If no computer has been delivered with your Panther system, please download Acquire from the support



section (see <https://www.eddyfi.com/en>). Please check the installation guide for Eddyfi Panther in the documentation section.

LAUNCHING ACQUIRE IN SIMULATION MODE

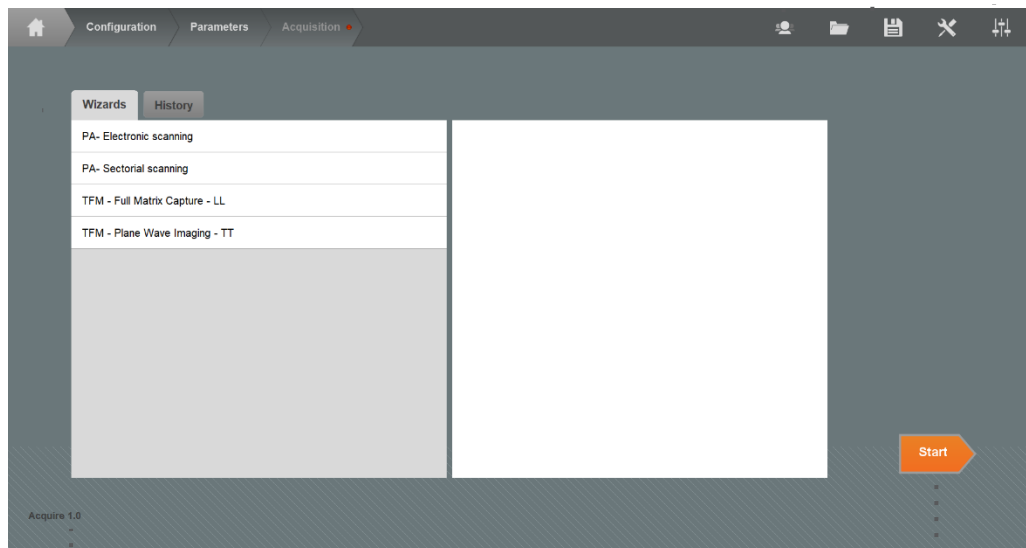
Acquire software can be launched in simulation mode (i.e. without the Panther hardware connected) by double-clicking on C:/Acquire/Go_Acquire_Simulation.bat

10. ACQUIRE QUICK START

HOME PANEL

Advanced settings (license management, data export, hardware, remote controls) _____
 Tools (screen copy, bug report generation) _____
 Save a configuration file _____
 Load a configuration file _____
 Operator/Administrator account management _____

Wizards,
History tabs
(see below
details)



Release number _____

Start button _____

WIZARDS

Wizards are files containing basic configuration allowing to create easily and inspection setup.

HISTORY

History contains the list of the last files previously used within Acquire.

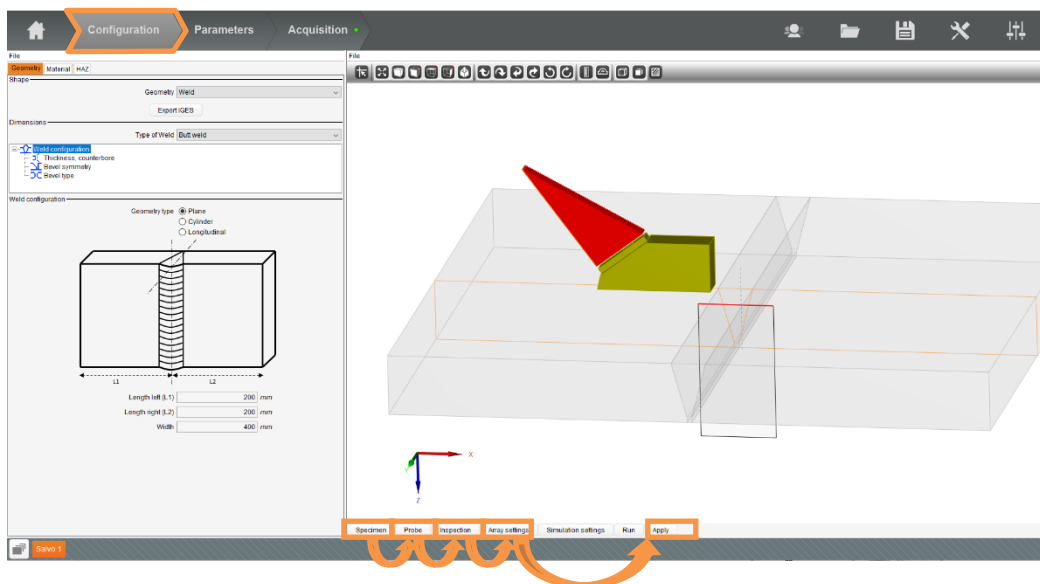
CONFIGURATION PANEL

CONFIGURATION PANEL

The configuration panel allows to setup a configuration (conventional PE, TOFD, Phased Array, TFM...).

It is based on the CIVA simulation software, the full CIVA manual can be accessed by **pressing F1**.

The configuration should be entered as carefully as possible as most of the imaging system of Acquire is using the CIVA configuration.



Basically, a CIVA configuration is setup by clicking successively on the Specimen, Probe, Inspection, Array Settings panels. The phased array or TFM modes (Linear Scanning, Sector Scan, Pitch-Catch, FMC/TFM, PWI/TFM....) are defined in the Array settings panel.

Once the configuration is managed, the phased array modes are applied by clicking on the Apply button.

Beam simulation can be carried out and visualised thanks to the Simulation settings and Run buttons.

11. SPECIFICATIONS

ENVIRONMENT	
Size (L x W x H)	298mm x 220mm x 159mm (11.73 in x 8.66 in x 6.25 in)
Weight	6,6 Kg (14,5 lbs)
Power supply	External AC/DC power supply: 240V/50Hz - 110V/60Hz 0.75A - 1.5A Instrument: 24 VDC 3.75 A
IP rating	IP20 (IP54 with accessory)
Operating temperature	0 to 45°C (32 to 113°F)
Storage temperature	-20 to 70°C (-4 to 158°F)
Max altitude	2000 m
Indoor/Outdoor use	Indoor only
Maximum relative humidity	90% condensing
Pollution degree	2

CONNECTIVITY	
Phased-Array	IPEX (x1) – up to 128 channels
UT-TOFD	LEMO-00 (x4)
Encoder Input*	MicroD25 connector Up to 3 Quadrature or clock/dir 5MHz max
Synchro Input/Output*	Internal use only
USB3	Up to 3 Gbits/sec
Ethernet/Optic fiber*	Up to 10 Gbits/Sec

* Depending on the configuration and options

AVAILABLE CONFIGURATIONS

1 PANTHER	32:128PR
	64:64PR
	64:128PR
	128:128PR
2 PANTHER	64:256PR
	128:256PR
	256:256PR

Phased-Array

Pulser

Number of channels	Up to 128
Pulse type	Bipolar square pulse
Amplitude	From 20 to 100V
Pulse width	Pulse width from 20 to 2000 ns False time < 6 ns

Receiver

Number of channels	Up to 128
Input impedance	50Ω
Frequency range	Frequency range 0.3 to 20MHz
Max. input signal	2 Vpp
Gain	0 to 120 dB – 0.1dB step
Active aperture	Up to 128 elements

Compliant with EN ISO 18563-1

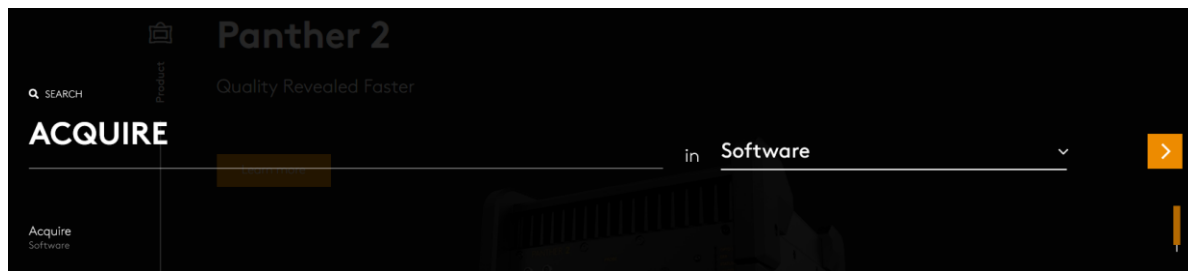
12. LOCAL REPRESENTATIVE

Eddyfi Europe SAS 21 Av. du Québec 91140 Villebon-sur-Yvette Tel: +33 160 923 965 https://eddyfi.com/en	Eddyfi UK Ltd. Clos Llyn Cwm Swansea Enterprise Park Swansea SA6 8QY Tel: +44 1792 798711 https://eddyfi.com/en
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DOWNLOAD PLATFORM

The Eddyfi Technologies support website gives access to the last software versions of ACQUIRE and CAPTURE, documentation, procedures.

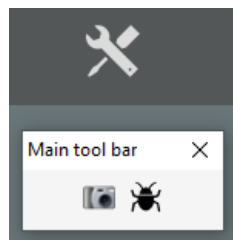
With the search tool, search for 'Acquire' in 'Software'.



SUPPORT

To share feedback, remarks, or problems, do not hesitate to contact us at support@eddyfi.com.

In case of ACQUIRE or CAPTURE crash, please report us as many details as possible such as application files, inspection files, screenshot and bug reports generated with the following bug report tool:



ANNEX 1 - 10-Gbit Ultra-Fast Ethernet CONFIGURATION

This procedure is intended to provide instructions to configure a computer and use the PANTHER 2 with a 10-Gbit Ethernet connection.

This procedure is an example with a specific PC configuration, as described below.

Computer configuration.

- Computer:

Nom	Modèle	Distributeur
Laptop Qwerty	DELL Mobile Precision Workstation 7760 CTO - Qwerty	DELL
Laptop Azerty	DELL Mobile Precision Workstation 7760 CTO - Azerty	DELL
Desktop	Tour Dell Precision 5820 XCTO	DELL

- Accessories:

Nom	Modèle	Distributeur
Adaptateur Ethernet 10 Gb SFP+ Solo10G Thunderbolt (SFP+ SR inclus)	SOLO10G-SFP-TB3	SONNET
Carte PCIe Presto SFP+ 10Gb Ethernet à 2 ports (SFP+ non inclus)	G10E-SFP-2XA-E2	SONNET

- Connector:

Nom	Modèle	Distributeur
Transmetteur SFP+ 10GBASE-T - RJ45 Cuivre (30m)	G10E-SFP-T	SONNET
Transmetteur SFP+ 10GBASE-SR Short Range (300m)	G10E-SFP-SR	SONNET

Settings

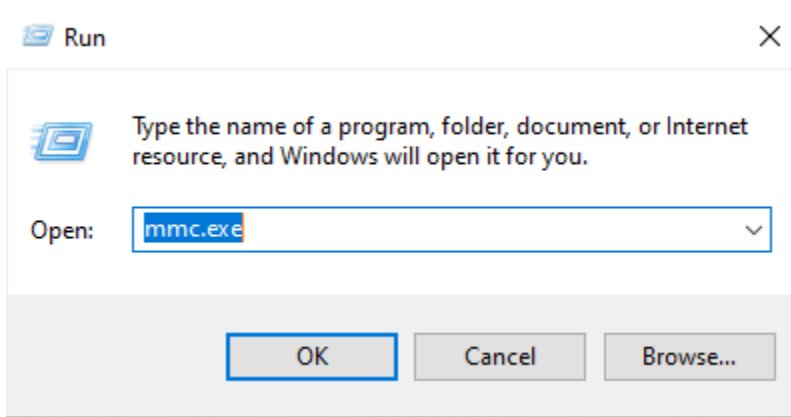
The following instructions here below describe the minimum parameters that must be set up to properly configure the computer.

Please follow these instructions.

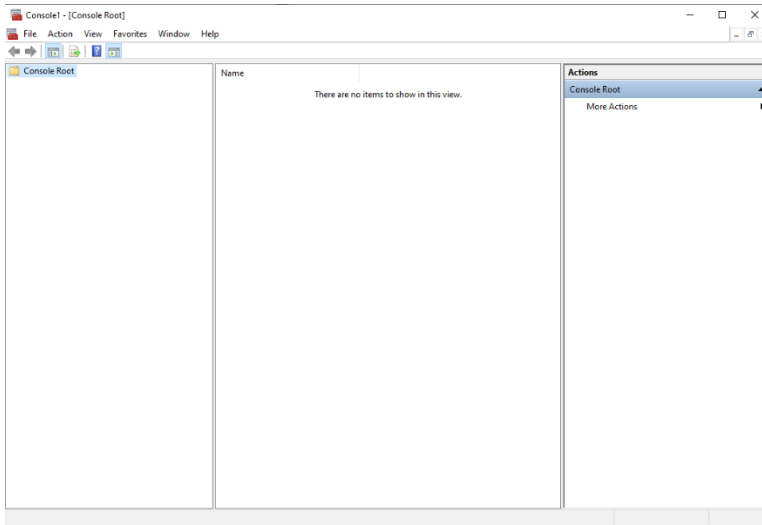
1. Authorization to enable UDP ports with PANTHER EVO

Launch the Run window (Win + R).

Execute the mmcc.exe into it.

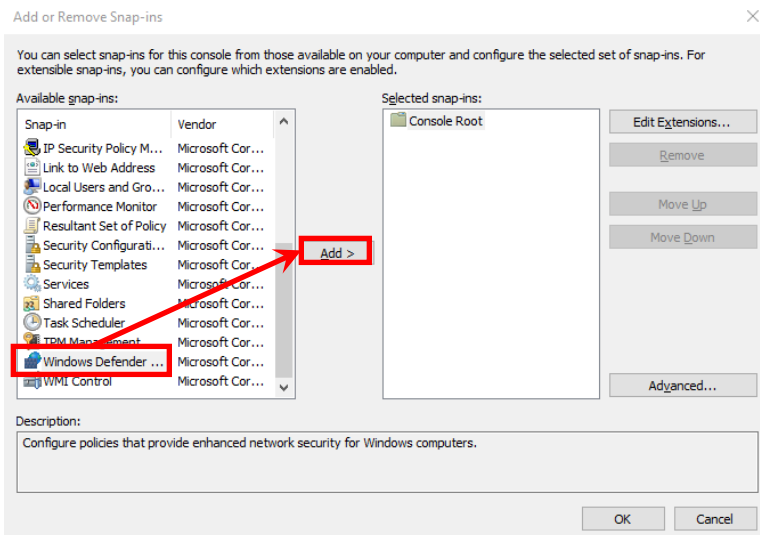


This window appears.

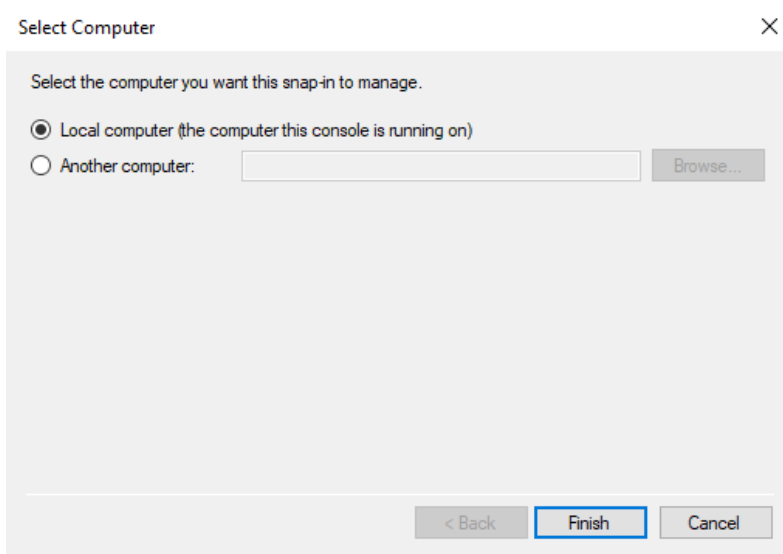


Please click on the Ctrl + M button on your keyboard.

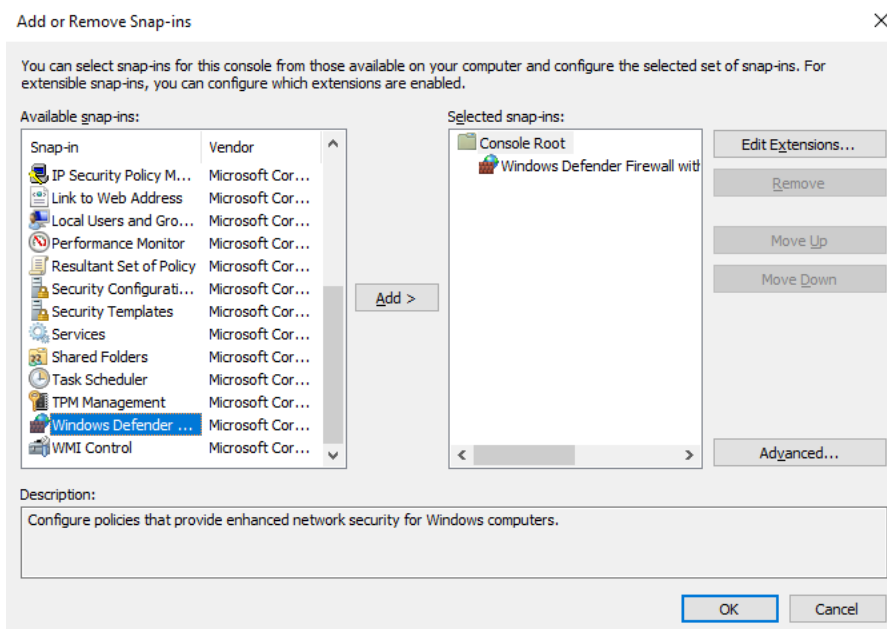
Select “Windows Defender...”, click on the “Add” button.



This window appears, click on the “Finish” button.

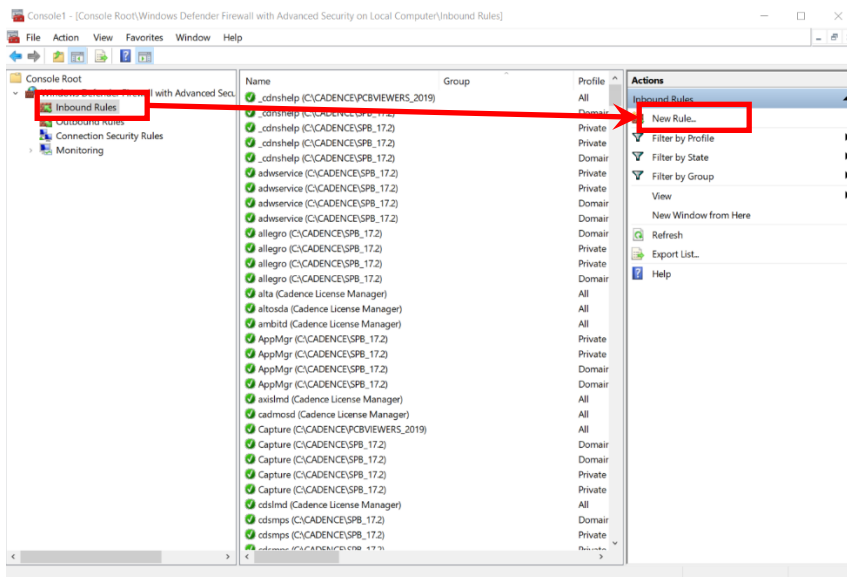


Then, click on the “Ok” button.

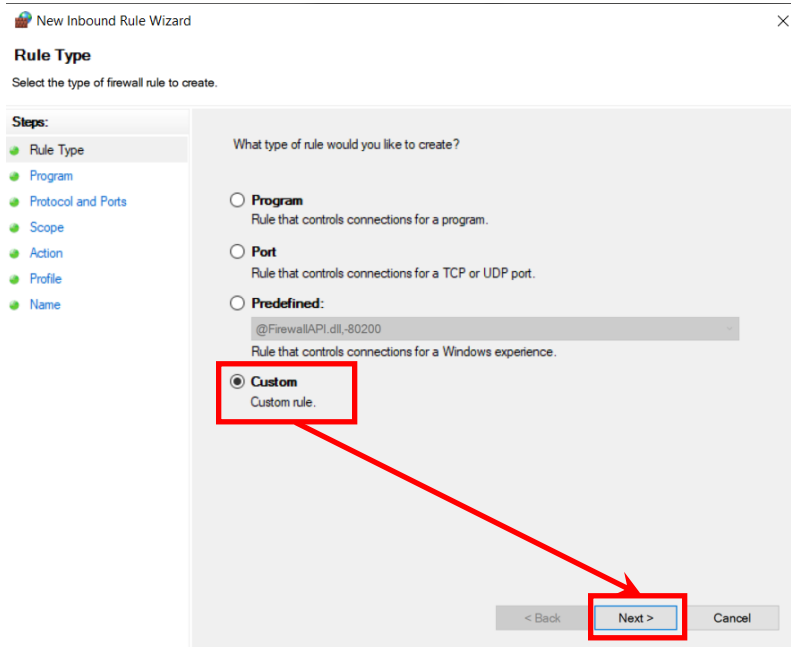


Open the tab “Windows Defender firewall...”

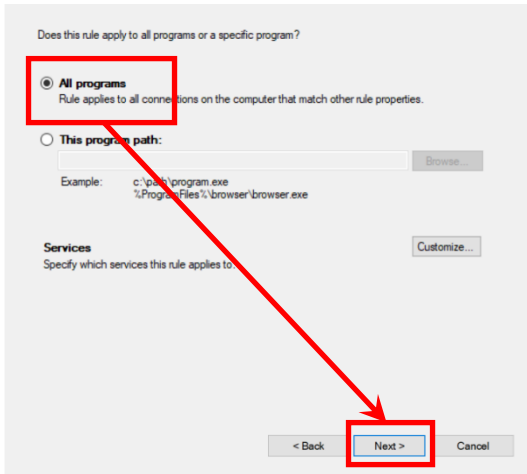
Click on “Inbound Rules” and select “New Rules”.



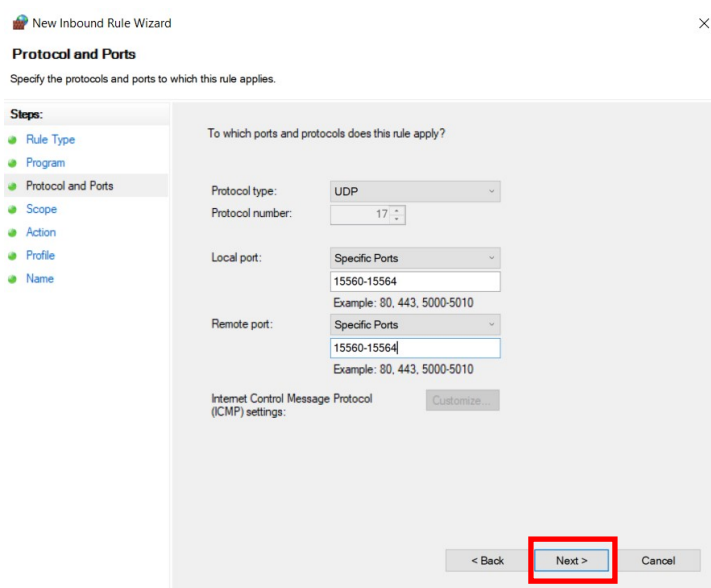
Choose the “Custom” option.



Select “All programs”.

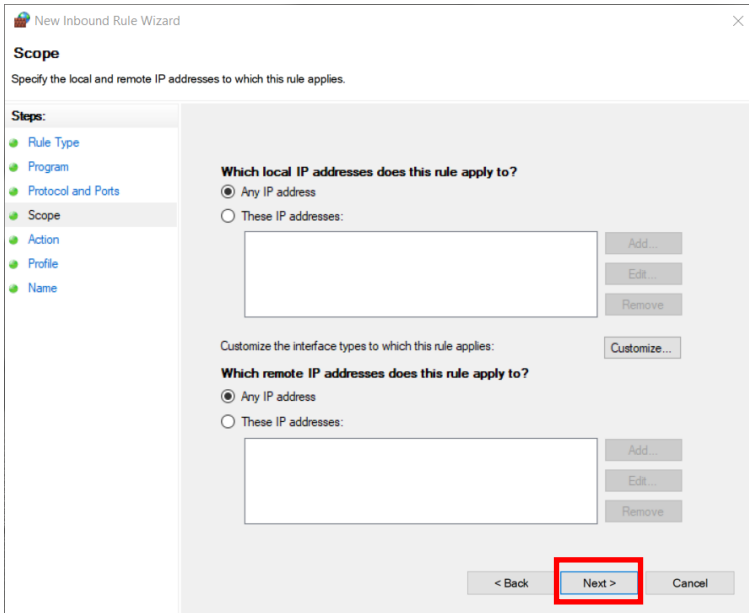


Fill in the parameters as shown in the picture below:



Click on “Next” button.

Click on “Next” button.



New Inbound Rule Wizard

Scope

Specify the local and remote IP addresses to which this rule applies.

Steps:

- Rule Type
- Program
- Protocol and Ports
- Scope
- Action
- Profile
- Name

Which local IP addresses does this rule apply to?

☒ Any IP address

☐ These IP addresses:

Add... Edit... Remove

Customize the interface types to which this rule applies: [Customize...](#)

Which remote IP addresses does this rule apply to?

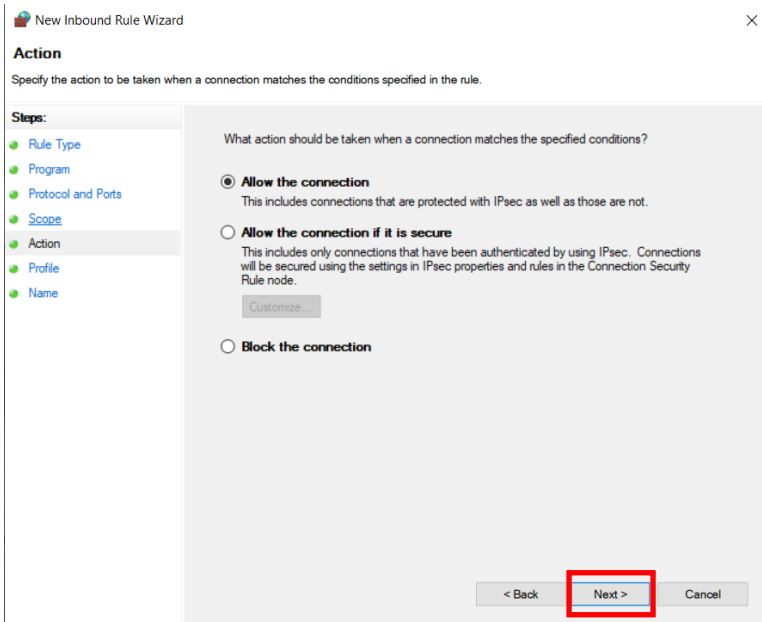
☒ Any IP address

☐ These IP addresses:

Add... Edit... Remove

< Back **Next >** Cancel

Click on “Next” button.



New Inbound Rule Wizard

Action

Specify the action to be taken when a connection matches the conditions specified in the rule.

Steps:

- Rule Type
- Program
- Protocol and Ports
- Scope
- Action
- Profile
- Name

What action should be taken when a connection matches the specified conditions?

☒ **Allow the connection**

This includes connections that are protected with IPsec as well as those are not.

☐ **Allow the connection if it is secure**

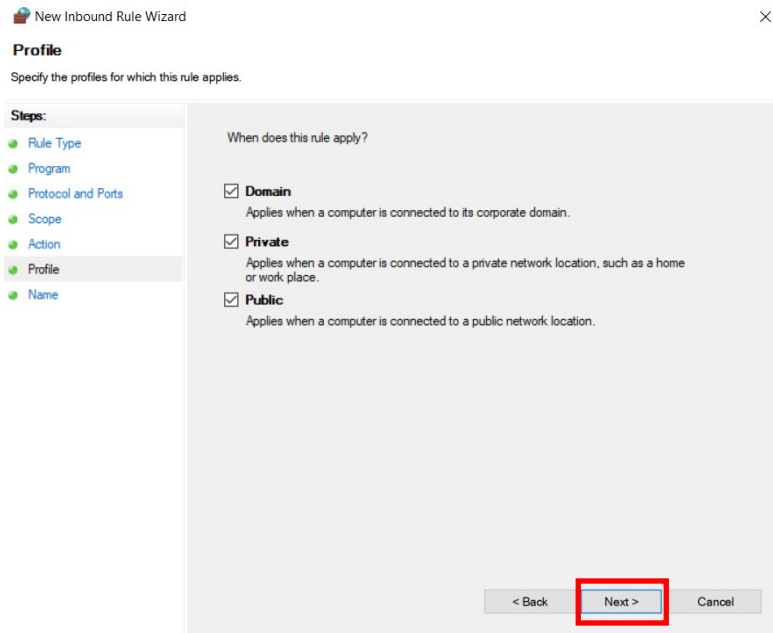
This includes only connections that have been authenticated by using IPsec. Connections will be secured using the settings in IPsec properties and rules in the Connection Security Rule node.

[Customize...](#)

☐ **Block the connection**

< Back **Next >** Cancel

Click on “Next” button.



New Inbound Rule Wizard

Profile

Specify the profiles for which this rule applies.

Steps:

- Rule Type
- Program
- Protocol and Ports
- Scope
- Action
- Profile**
- Name

When does this rule apply?

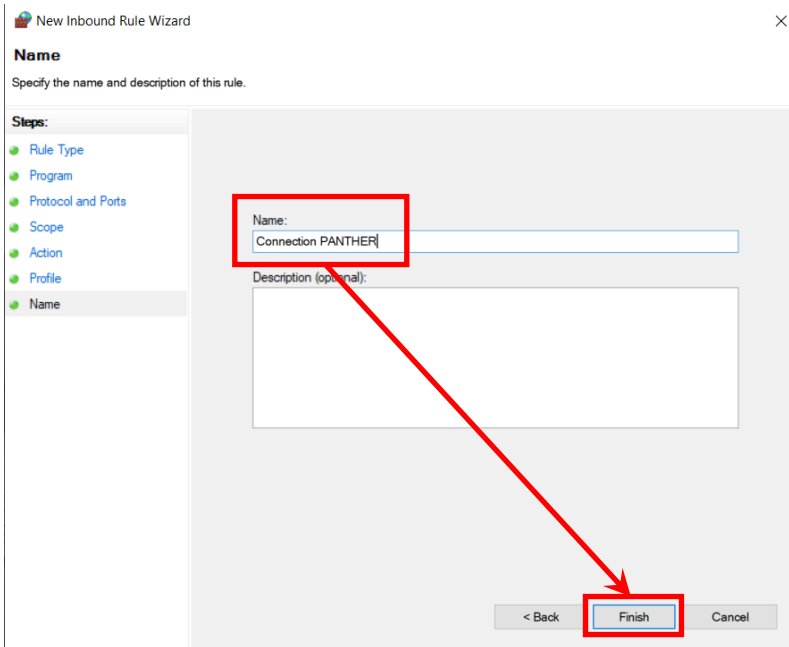
☒ **Domain**
Applies when a computer is connected to its corporate domain.

☒ **Private**
Applies when a computer is connected to a private network location, such as a home or work place.

☒ **Public**
Applies when a computer is connected to a public network location.

< Back **Next >** Cancel

Give a name to the new rules; example: “Connection PANTHER” and click on “Finish” button.



New Inbound Rule Wizard

Name

Specify the name and description of this rule.

Steps:

- Rule Type
- Program
- Protocol and Ports
- Scope
- Action
- Profile
- Name**

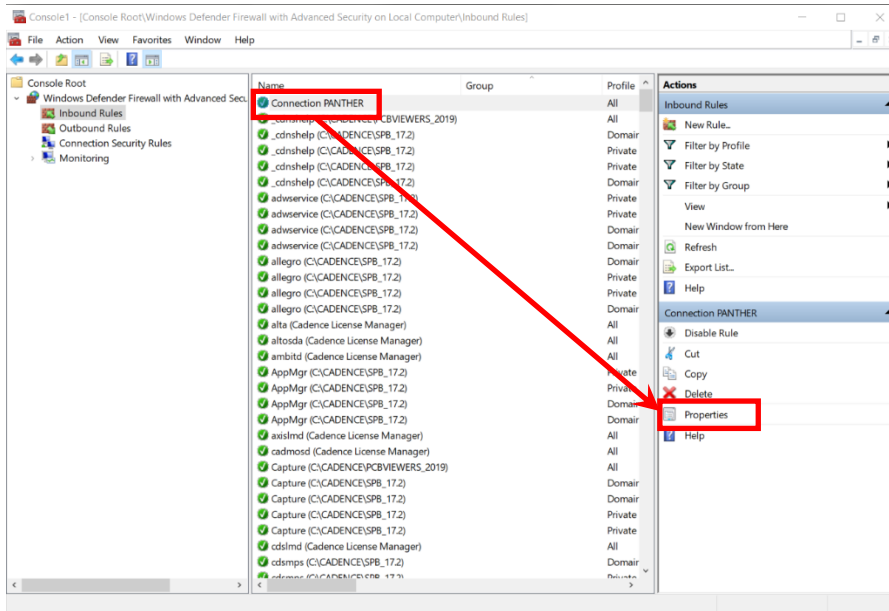
Name:
Connection PANTHER

Description (optional):

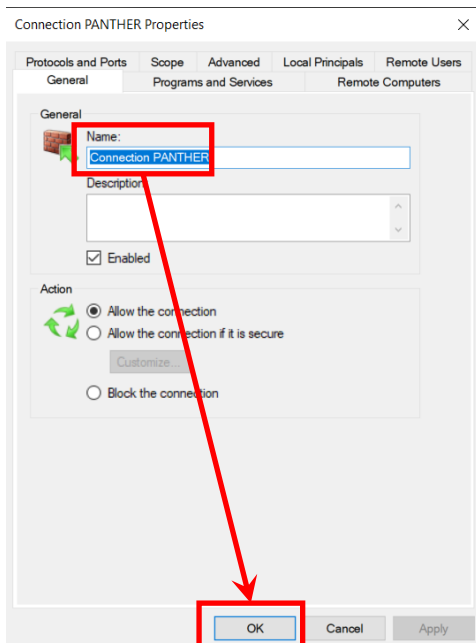
< Back **Finish** Cancel

Option:

If you want to change the name of the rules, you can click on the properties button of the rules.



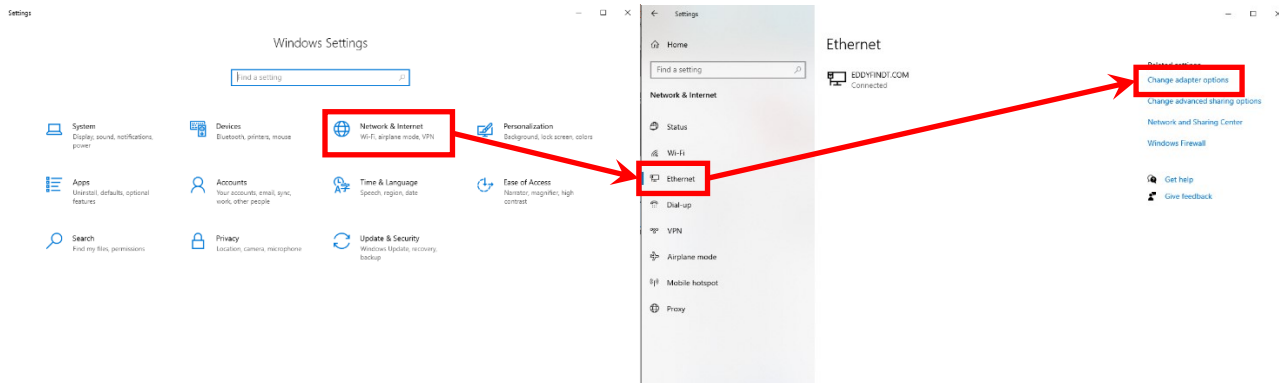
Change the name in the “General” tab, then click on the “Ok”.



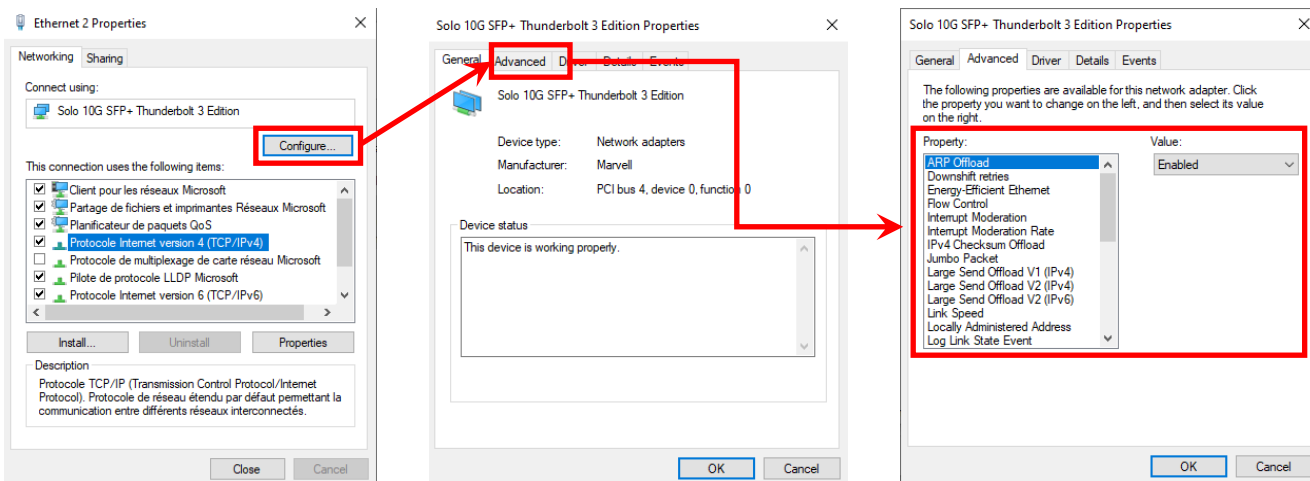
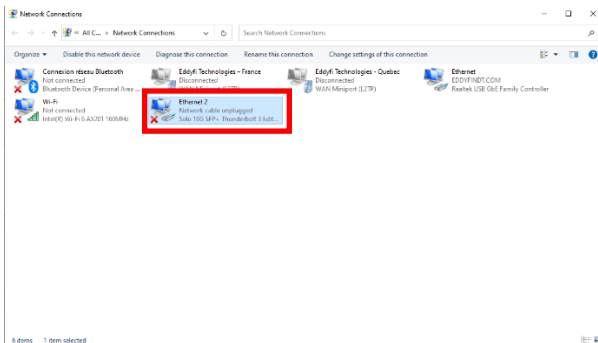
2. Configuration

Click on the Windows startup icon, then on the settings button (gear wheel).

Please follow the instructions below:



Right click on “Solo 10G SFP+ Thunderbolt Edition” and select “Properties”.



Please find below a tab with all the parameters:

Directly on the computer, set only the following items.

Property	Value
Flow Control	Rx & Tx Enabled
Interrupt Moderation	Enabled
Interrupt Moderation Rate	Adaptive
IPsec Offload	Auth Header & ESP Enabled
IPv4 Checksum Offload	Rx & Tx Enabled
Jumbo Packet	9014 Bytes
Large Send Offload V2 (IPv4)	Enabled
Large Send Offload V2 (IPv6)	Enabled
Locally Administered Address	Not Present
Log Link State Event	Enabled
Maximum Number of RSS Queues	8 Queues
Priority & VLAN	Packet Priority Enabled
Receive Buffers	4096
Receive Side Scaling	Enabled
Speed & Duplex	10 Gbit/s Full Duplex
TCP Checksum Offload (IPv4)	Disabled
TCP Checksum Offload (IPv6)	Disabled
Transmit Buffers	Max value (4096, 8184, 16384, ...)
UDP Checksum Offload (IPv4)	Rx & Tx Enabled
UDP Checksum Offload (IPv6)	Rx & Tx Enabled

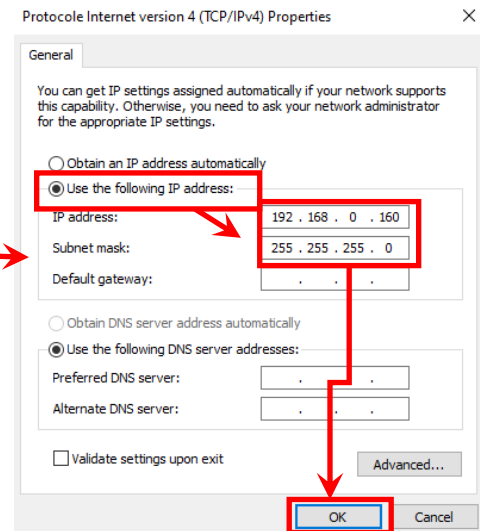
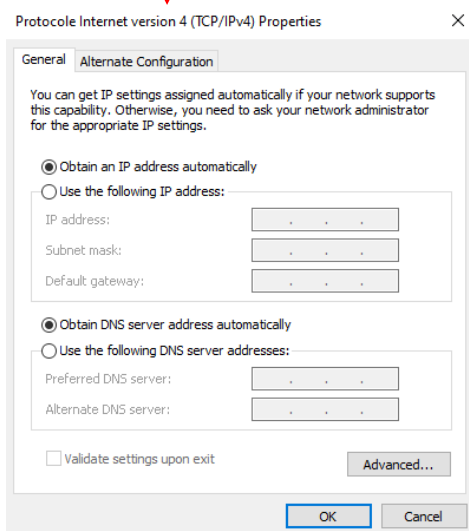
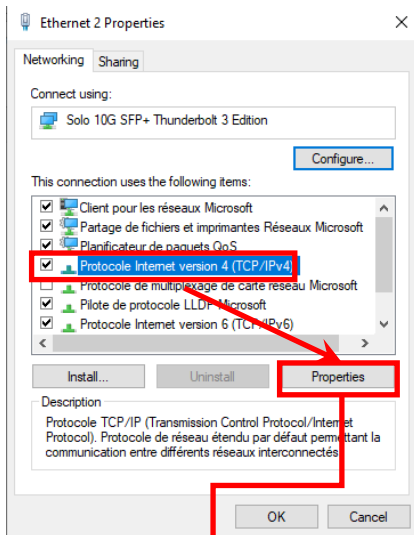
Computer with Adaptor SFP/USBC, set only the following items.

Property	Value
Flow Control	Rx & Tx Enabled
Interrupt Moderation	Enabled
Interrupt Moderation Rate	Adaptive
IPv4 Checksum Offload	Rx & Tx Enabled
Jumbo Packet	9014 Bytes
Large Send Offload V2 (IPv4)	Enabled
Large Send Offload V2 (IPv6)	Enabled
Link Speed	10G
Locally Administered Address	Not Present
Log Link State Event	Enabled
Maximum Number of RSS Queues	8 Queues
Priority & VLAN	Packet Priority Enabled
Receive Buffers	4096
Receive Side Scaling	Enabled
TCP/UDP Checksum Offload (IPv4)	Rx & Tx Enabled
TCP/UDP Checksum Offload (IPv6)	Rx & Tx Enabled
Transmit Buffers	Max Value (4096, 8184, 16384, ...)

3. Parameters for the Ethernet IP address

You need to set an address IP on the port SFP 10G.

Please follow the instruction below (you must set the address IP : 192.168.0.160):

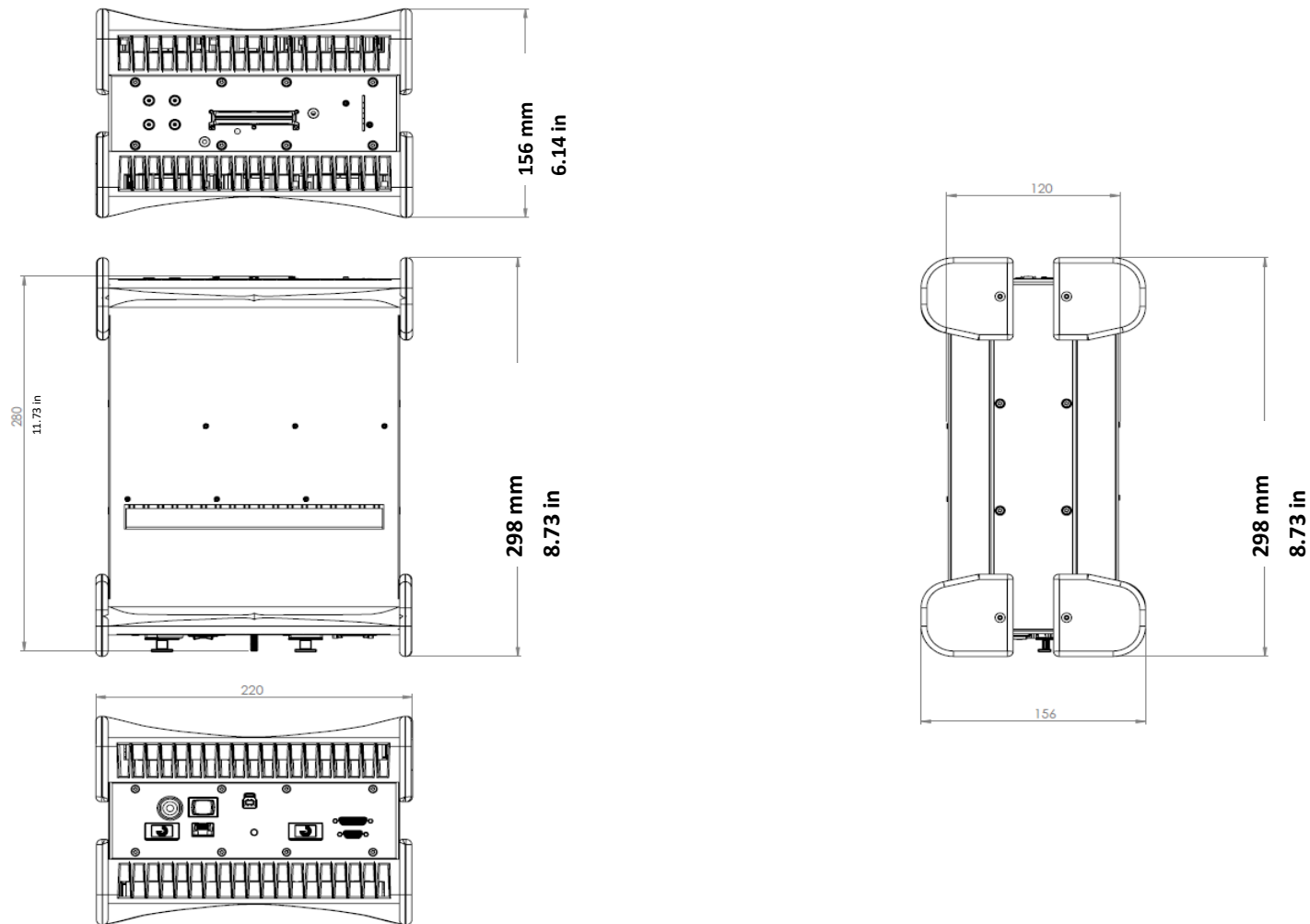


If you have several ports on your computer, please repeat the procedure (from point 2) for each port.

Set the IP addresses as follow:

- 192.168.0.161
- 192.168.0.162
- 192.168.0.163
- 192.168.0.164

ANNEX 2 - MECHANICAL DRAWING



ANNEX 3 - CONNECTOR INFORMATION

1. PHASED ARRAY CONNECTOR

Connector Location



Connector Information

Supplier: I-PEX

Reference: 30046-160T-F

Connector function

- Plug Phased-array IPEX probes
- Connect probe splitters or probe adaptors
- Compatible with IPEX easy-latch adaptor frame:
IMP_0061-EASYLATCH-ADAPT

Matching Connector

Supplier: I-PEX

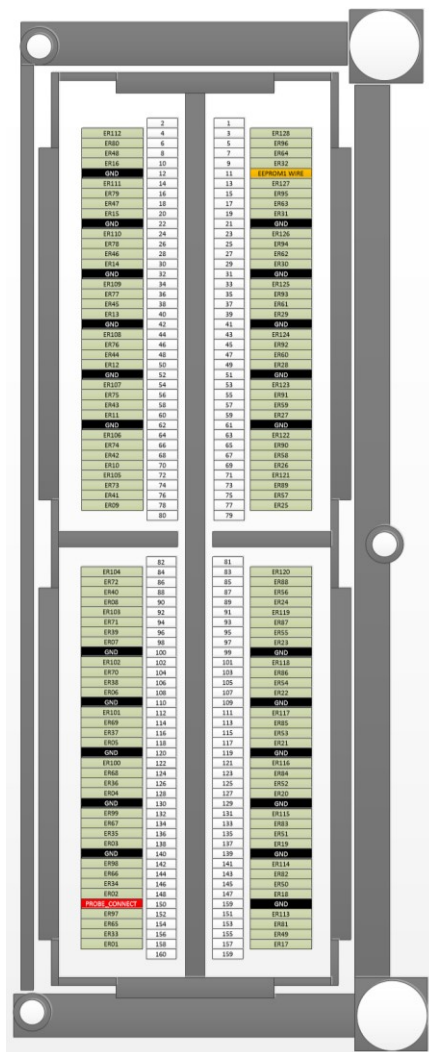
References:

- straight: 30056-160T-F
- right angle: 30047-160T-04F



For electric safety reasons, only accessories approved by Eddyfi Technologies can be used with Panther systems. Before purchasing any probe, please contact us.

Connector Mapping (female side)



Connector Signal Description

Signal Name	Description	User matching signal
ER1 to ER128	Phased-array channel number 1 to 128	Phased-array probe channel 1 to 128*
GND	Ground pin	For better ultrasound result, all GND pin have to be connected to probe ground.

2. UT CONNECTORS

Connectors Location



Connector Information

Supplier: LEMO

Reference: ERN.00.250.CTL

Matching Connector

UT connector is NimCAMAC standard.

Supplier: LEMO

Reference: FFA.00.250.CTAC31

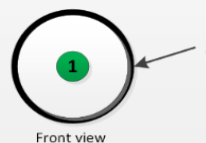
Connector function

4 P/R LEMO allowing to use :

- 4 conventional UT probe in pulse-echo mode
- 2 pairs of TOFD or 2 Dual element probes

Connector Mapping (female side)

Pin number	Pin signification
1	U.T
2	GND



For electric safety reasons, only accessories approved by EDDYFI can be used with Panther systems. Before purchasing any probe, please contact us.

3. ENCODER CONNECTOR

Connector Location



Connector Information

Supplier: GLENAIR

Reference: 654-M83513/01-DC

Matching Cable (male)

Supplier: MOLEX

Reference: 8



Description	Value	Internal 330 Ω
Maximum admissible input current	20 mA.	8 V
Recommended "ON" value	10 mA	4.8 V
Minimum "ON" value	5 mA	3.1 V ($V^+ - V^-$)
Maximum "OFF" value	250 μ A	1,45 V
Maximum reverse value	-20 mA	8 V
Maximum Frequency	5 MHz	Recommended 400KHz max

Connector function

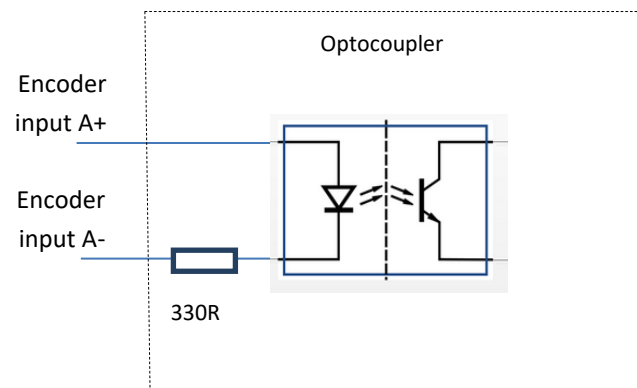
- CONNECT UP TO 3 DIFFERENT ENCODERS:
 - 5V optocoupled*
 - quadrature mode or clock/dir mode
 - Number of available encoders: 2 or 3 depending on software setup and option.
 - Encoder 3 can be used to reset encoder 1 and 2

optocoupled* : A photoelectric diode transfers the encoder signal. This protects the Panther system from too high voltage or too high intensity or ground noise.
Common mode max = 50V

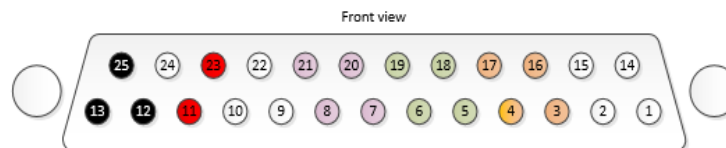
Connector Mapping

PIN Number	I/O	I/O Type	Pin feature in Quadrature mode	Pin feature in Clock+Dir mode
1	-		Not connected	Not connected
2	-		Not connected	Not connected
3	IN	Optocoupler	Encoder 3 Phase /A-	Encoder 3 /Clock-
4	IN	Optocoupler	Encoder 3 Phase /B-	Encoder 3 /Direction-
5	IN	Optocoupler	Encoder 2 Phase /A-	Encoder 2 /Clock-
6	IN	Optocoupler	Encoder 2 Phase /B-	Encoder 2 /Direction-
7	IN	Optocoupler	Encoder 1 Phase /A-	Encoder 1 /Clock-
8	IN	Optocoupler	Encoder 1 Phase /B-	Encoder 1 /Direction-
9	-		Reserved / Do not connect	Reserved / Do not connect
10	-		Reserved / Do not connect	Reserved / Do not connect
11	OUT		DC 5V	DC 5V
12	OUT		GND	GND
13	OUT		GND	GND
14	-		Not connected	Not connected
15	-		Not connected	Not connected
16	IN	Optocoupler	Encoder 3 Phase A+	Encoder 3 Clock+
17	IN	Optocoupler	Encoder 3 Phase B+	Encoder 3 Direction+
18	IN	Optocoupler	Encoder 2 Phase A+	Encoder 2 Clock+
19	IN	Optocoupler	Encoder 2 Phase B+	Encoder 2 Direction+
20	IN	Optocoupler	Encoder 1 Phase A+	Encoder 1 Clock+
21	IN	Optocoupler	Encoder 1 Phase B+	Encoder 1 Direction+
22	-		Reserved / Do not connect	Reserved / Do not connect
23	OUT		DC 5V	DC 5V
24	-		Reserved / Do not connect	Reserved / Do not connect
25	OUT		GND	GND

Encoder Input



Connector (female side)



Signal Name	Description	User matching signal
Encoder Phase A/B	5V optocoupled	- Absolute Max current 20 mA - Max frequency = 5MHz

4. SYNCHRO CONNECTOR

Connector Location



Connector Information

Supplier: MOLEX
Reference: 836129024

Connector function

- **This connector is used to synchronize two PANTHERs either for:**
 - Multi-system: 2x PANTHER XX:128
 - Multi-module: 1x PANTHER XX:256
- **This connector shall be not use for any other purpose.**

Matching Cable

Supplier: MOLEX
Reference: 0834229007
EDDYFI Reference: CAB_0115-SYNC-PANTHER-256

5. I/O CONNECTORS (USB 3.0)

Connector Location

Connector function

- The USB 3.0 is used to transfer data from the Panther to the computer running Acquire Software.

Connector description

USB

- 1x USB3.0: high-speed USB

Matching Cable

EDDYFI Reference :

- Cable 3m = CAB_0119_CABLE USB3 BLINDE – 3m
- Cable 5m = CAB_0120_CABLE USB3 BLINDE – 5m



USB 3.0



Only high-quality USB cables must be used for proper operation.

6. POWER CONNECTOR

Connector Location



Connector function

- This connector is the global system power supply.
- When plugged in, the external power supply is used to power on the system.
- Only use the external power supply supplied by EDDYFI with the PANTHER system.

Connector Information

Supplier: LEMO

Reference: EEG.0K.303.CLN

Matching Cable

Supplier: LEMO

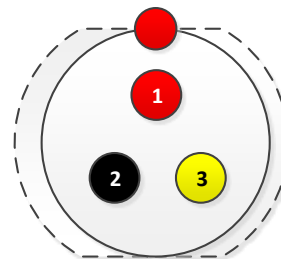
Reference: FGG.0K.303.CLAC45Z

EDDYFI Reference: CAB_0098-POWER-PANTHER

Connector Mapping (female side)

Pin number	Pin signification
1	+24V
2	GND
3	GND (EARTH)

Front view :



*When the power cable is plugged in, the position of the system should allow the plug to be easily unlocked.
This is so that the unit can be switched off in case of emergency.*

Description	Value
Minimum Voltage	16 V DC.
Maximum Voltage	30 V DC
Power max	90 W
Power typical	70 W

Protect the unit from EMC interference by using a ferrite on the power cable.

Use a regulated power supply.

Use the correct cable diameter for the current consumption.

Connect to earth and check the quality of the connection for the safety of the user and the correct functioning of the equipment.

Input protected by internal fuse.

7. UFL CONNECTORS

Connector Location



Connector function

- These connectors allow the ultrafast communication between two systems to transfer elementary A-scan, in particular for 256:256 configuration.

Connector Information

Supplier: MOLEX

Reference: 1704650002

Matching Cable

Supplier: MOLEX

Reference: 1110251200

EDDYFI reference: CAB_0139-UFL-PANTHER



This connector is not rugged and designed for regular plug-unplug (certified 250 operations), it must be handled with care.

8. Ultra-Fast Ethernet, 10 Gbit CONNECTOR

Connector Location



Connector Function

Delivers 10 Gbit/sec up to 810 Mbytes/sec

Requires SFP+ module

- Optic Fiber
- RJ45



Optic Fiber module



RJ45 module

Connector Information

Supplier: SAMTEC

Reference:

Optic Fiber

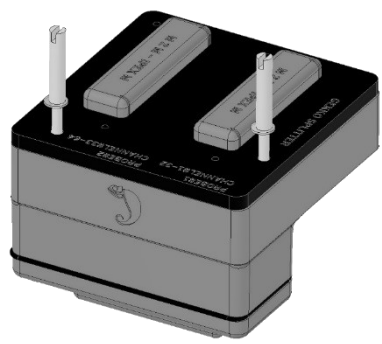
UFastEtherModule-OF

RJ45

UFastEtherModule-RJ45

ANNEX 4 - Accessories

Accessory Name	Description	Picture
Easy-Latch EDDYFI ref : IMP_0061-EASYLATCH-ADAPT	This accessory allows the connection of a probe with an EASY_LATCH connector to PANTHER system.	
Hardware Dongle protection for « Acquire » software	This accessory is the protection dongle that allows the use of « Acquire » software on a computer. A software dongle can be also proposed.	

Accessory Name	Description	Picture
IPEX FRB Adaptor EDDYFI ref: ADAPT_IPEX_FRB_V2	This adaptor allows connection of a probe with an HYPERTRONICS (FRB) connector to the PANTHER system.	
Available splitter models : SPLITTER 1x64 -> 2x32 SPLITTER 1x128 -> 4x32 SPLITTER 1x128 -> 2x64 SPLITTER 1x64 -> 2x30 + 4 LEMO SPLITTER 1x128 -> 2x62 + 4 LEMO EDDYFI ref : CAB_0109-SPL-FRB128-4X32	The PANTHER channels are split between 2 different I-PEX connectors and LEMO-00 connectors (optional).	

Accessory Name	Description	Picture
Adaptor for LEMO16 connector scanners EDDYFI ref : <i>CAB_0037-ENC-GEKKO-LEMO16</i>	This cable allows connection of scanners with LEMO16 (MOLEX) encoder connector to PANTHER system, MicroD25	
Adaptor for SUBD15 connector scanners EDDYFI ref : <i>CAB_0017_ENC-GEKKO-DE15</i>	This cable allows connection of scanners with SUBD15 encoder type to PANTHER system, MicroD25	
Adaptor for SUBD25 connector scanners EDDYFI ref : <i>CAB_0065-ENC-GEKKO-DE25</i>	This cable allows connection of scanners with SUBD25 encoder type to PANTHER system, MicroD25	

Accessory Name	Description	Picture
Adaptor for SUBD25 connector scanners EDDYFI ref : <i>CAB-UFastEther-RJ45-xxm</i>	This cable allows connection of a PC or a switch/hub with Ultra-Fast Ethernet, RJ45 connector, to a PANTHER 2 with RJ45 module – 10 Gbit	
Optic Fiber cable EDDYFI ref: <i>CAB-UFastEther-OF-xxm</i>	This cable allows connection of a PC or a switch/hub with Ultra-Fast Ethernet, Optic Fiber connector, to a PANTHER 2 with Optic Fiber module – 10 Gbit	
Optic Fiber Ultra Fast Ethernet module EDDYFI ref: <i>CAB-UFastEther-OF-xxm</i>	This module is a transceiver that can be inserted in the PANTHER 2 or a PC module for a connection with Ultra-Fast Ethernet, Optic Fiber connector – 10 Gbit	
RJ45 Ultra Fast Ethernet module EDDYFI ref: <i>UFastEtherModule-2RJ45</i>	This module is a transceiver that can be inserted in the PANTHER 2 or a PC module for a connection with Ultra-Fast Ethernet, RJ45 connector – 10 Gbit	

Accessory Name	Description	Picture
PCI Express board EDDYFI ref : <i>UFastEtherPCIModule</i>	This module can be installed in a PC for a connection with Ultra-Fast Ethernet (10 Gbit). Does not the Optic Fiber or RJ45 module (to be added).	
Optic Fiber cable EDDYFI ref: <i>UFastEtherThunderBModule</i>	This module can be connected to a PC for a connection with Ultra-Fast Ethernet (10 Gbit) to a PANTHER 2. Does not the Optic Fiber or RJ45 module (to be added).	

Accessory Name	Description	Picture
<i>Adaptor to increase IP rating</i> EDDYFI ref : PANTHER-IP54-BOX	Cable protection box for PANTHER, for outdoor use.	

The information in this document is accurate as of its publication. Actual products may differ from those presented herein.

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**Eddyfi
Technologies**
Beyond current



Quotation

Quote Number	Quote Name	Prepared on	Salesperson
Q-00140150	Panther 2 + splitter	September 12, 2025	Vadim Zeleniuk

Eddyfi International FZE

P.O. Box 341236, Light Industrial Unit 7, Dubai Silicon Oasis, 77536, United Arab Emirates
Orders: vzeleniuk@eddyfi.com

Specific Terms and Conditions

Expiration Date: October 12, 2025	Incoterm 2020: FCA
Payment Terms: Payment before Manufacturing	Lead Time: 14.2 weeks

Contact Information

Contact Name: Miroslav Milkov	Email: mimilkov@gmail.com
Bill To: Kozloduy NPP EAD	Ship To: Kozloduy NPP EAD
NPP Kozloduy,	NPP Kozloduy,
Kozloduy	Kozloduy
3321	3321
Bulgaria	Bulgaria

Row	Name	Description (details)	Sales Price	Qty	Total	Shipping Origin
1	SPLIT-IPEX-16UT-0.5M	Splitter - IPEX Male connector (to connect a GEKKO/MANTIS/PANTHER unit) to 16 LEMO-00 connectors (channels 1 to 16 of the IPEX connector). Box with 0.5m cable length.	USD 4,580.00	1.00	USD 4,580.00	Eddyfi Quebec Plant
2	PANTHER2-128:128PR-TFM	PANTHER2™ Phased Array system 128:128PR, with real time TFM128. Includes USB3 (3m), 3 encoders, IPEX connector, 4 Lemo00. AC adapter. CAPTURE & ACQUIRE compatible. PC-GPU & software & other cables not included.	USD 125,970.00	1.00	USD 125,970.00	Eddyfi Quebec Plant
3	UV-3-ADV	UltraVision 3 Classic Software - Advanced Version - USB Hard Key - Ultrasound data acquisition and analysis software, supports advanced phased array and conventional UT applications - Includes User Manuals.	USD 36,665.00	1.00	USD 36,665.00	Eddyfi Quebec Plant

Subtotal: USD 167,215.00

Total (excl. taxes)*: USD 167,215.00

Remarks

- ° Please issue your purchase order to the entity and send to email above to ensure prompt order processing.
- ° Clerical errors are subject to correction. Changes, additions, or deletions to this quotation may be subject to pricing adjustments
- ° Lead time is for reference only and will be confirmed at the time of order
- ° Prices are quoted based on the specified incoterm
- ° When required, customer must provide a courier account number prior to shipment release
- ° All prices are subject to applicable taxes. Total applicable taxes will be calculated and appear on the Order Acknowledgment form and/or Invoice.
- ° The Client agrees not to transship, reexport, resale or otherwise transfer the goods to any end-user, third party or country that has not been declared to Eddyfi on the Client's Purchase Order. Any violation of this provision, sanctions or export control laws may result in immediate termination of any agreement between Eddyfi and the Client, including any warranty, and the Client shall be held responsible for any resulting damages or liabilities.
- ° Orders are accepted based on Eddyfi's general sales terms and conditions which can be downloaded at <https://www.eddyfi.com/salesterms/>