

ZIRCON™ Brilliant Performance

Features & Benefits

- **Battery-Operated**
The ZIRCON and a laptop make the perfect pair: with up to 8 hours of battery life, you get the job done.
- **Rugged with No Air Intake**
Compact and robust to be successfully deployed in the field, even in contaminated areas.
- **32/128PR + 2 UT**
Up to 128 channels total with 32 active elements, and because Transmit-Receive is a true benefit, you have the PR mode; in addition: 2 conventional UT channels.
- **Superior Signal Quality**
State-of-the-art electronics because ZETEC is known for high-quality and outstanding SNR.
- **UltraVision® 3 Controlled**
3D in a small box: ZETEC's acquisition and analysis software is the most feature-rich companion you can imagine for the ZIRCON.



Portable Phased Array UT Data Acquisition Unit

ZETEC's long history of high-quality products is continuing, only to be smaller and more portable. This next-generation instrument for Phased Array UT inspections is the most compact we have ever designed, with no compromise on signal quality. Because ZETEC is known for high-performance, quality products, we have imagined the ZIRCON.

This data acquisition unit is a rugged 32/128PR instrument pulsing at 75V (into 50Ω) equipped with 2 conventional UT channels pulsing at 200V (into 50Ω) for pulse-echo, pitch-catch or TOFD inspections.

First engineered to fulfill the requirements of one of the most challenging NDT markets, the nuclear industry, the ZIRCON is the instrument of choice for any mission-critical ultrasonic application.

Controlled by UltraVision 3, the ZIRCON is the best portable PA UT data acquisition unit for automated or semi-automated inspections: welds, turbines components, castings, piping and aerospace applications.

The ZIRCON is a high-quality instrument designed for demanding inspections and real-life conditions. The ZIRCON offers automatic probe detection, self-diagnostics, an impressive data throughput, up to 1024 focal laws and a rock-solid, fanless casing.

Get the full benefit out of phased array UT, from the leading supplier of mission-critical NDT solutions.

ZIRCON™

High-Performance Phased Array UT that is Field Ready...

Feature	Z-Scan PA	ZIRCON™
Size (H × W × D)	4.5 × 12.3 × 14.8 in (11.4 × 31.3 × 37.7 cm)	4.3 × 11.4 × 12.8 in (11.0 × 29.0 × 32.2 cm)
Weight	11 lb (5 kg)	11.5 lb (5.2 kg)*
Air Intake	Yes	No
Battery Operation	No	Yes
Phased Array Connector	I-Pex	Custom ZIF with latch
Phased Array Channels	up to 64/128 PR	32/128PR
UT Channels	4 PE or 2 P&C	2 PE or 2 P&C
Digitizing Frequency	up to 100 MHz	up to 100 MHz
Amplitude Resolution Phased Array signal	8 or 10-bit	16-bit
Network Interface	100Base-T	1000Base-T
Maximum PRF	20 kHz	12 kHz
Global Data Throughput	up to 4 MB/sec	up to 10 MB/sec
Max. Pulsar Voltage (50 Ohm load)	< 60 V PA UT < 60 V UT	75V PA UT 200V UT
Bandwidth (-3 dB)	from 0.75 to 18 MHz	from 0.5 to 15 MHz
Real-time Data Compression	Yes	Yes
Rectification	Digital	Digital
Filtering	Digital (FIR)	Analog/Digital (FIR)
Smoothing (video filter)	Digital	Digital
Self Check	No	Yes
Automated Probe Detection	No	Yes
Dynamic Depth Focusing (DDF)	Yes	Yes
# Focal Laws	256	1024
Maximum Number of Samples	8,192 max	16,380 (over 200,000 points can be evaluated)
Amplifier	LIN	LIN
Encoder Interfaces	2 quadrature-type	2 quadrature-type
PC Software Control	Yes	Yes
Data Acquisition	UltraVision® 1	UltraVision® 3.2 or higher
Data Analysis	UltraVision® 1 & 3	UltraVision® 3.2 or higher
Maximum Data File Size	1 Gb	20 Gb

* Without batteries

GENERAL SPECIFICATIONS

Voltage: 120 VAC or 240 VAC
Frequency: 50 Hz or 60 Hz
Maximum power: 75 VA

Operating Temperature Range:
32°F to 104°F (0°C to 40°C)
Storage Temperature Range:
-4°F to 158°F (-20°C to 70°C)
Relative Humidity: 95%, non-condensing

CE mark approves the conformity with all applicable directives and standards of the European Community. The ZIRCON is an instrument of Class 1 and installation category II.

ENVIRONMENTAL TESTS* As per MIL-STD-810G:

Cold Storage - 502.5 Procedure I
Cold Operation - 502.5 Procedure II
Hest Storage - 501.4 Procedure I
Heat Operation - 501.4 Procedure II
Temperature Shock - 503.5 Procedure II
Vibration - 514.6 Procedure I
Transit Drop - 516.6 Procedure IV

*Targeted

ORDERING INFORMATION:

System purchase includes: Acquisition and basic analysis UltraVision software, 2 batteries 1 battery charger, 1 carrying case, 1 shoulder strap, 1 power cable (North America), 1 power cable (Europe), 1 AC Adapter, 1 Ethernet cable and user manual.

ZIRCON 32/128PR - Brilliant PA UT System, up to 32 simultaneous active channels and 128 in total - Can use the same 32 channels as transmitters and receivers or 32 channels as transmitters and 32 others as receivers - Custom ZIF connector with latch + 4 LEMO 00 connectors - includes accessory kit



ZETEC holds ISO 9001:2008
and ISO/IEC 17025:2005
certifications

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