

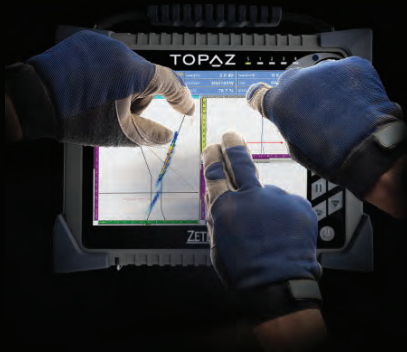
TOPAZ

The first **fully-integrated** high-performance phased array UT device with multi-touch screen

topaz.zetec.com

ZETEC

MULTI-TOUCH SCREEN.



RUN IT WITH A TOUCH

A true user experience revolution. Interact just like you would with a smartphone or a tablet. Navigate the interface easily, smoothly and efficiently.



ULTRA-BRIGHT MULTI-TOUCH DISPLAY

The TOPAZ has a high-resolution ultra-bright multi-touch display designed to be used indoors or outdoors. The 1024 x 768 pixel resolution of the 10.4" screen is 64% better than that of standard displays. Its optimized format offers 33% more surface than 16:9 displays with the same diagonal. Dedicated outdoor color scheme for amazing outdoor visibility.



THUMBS UP

Operate the TOPAZ system using only the sensitive control knob and the 3 press buttons.

ACTION BUTTONS

Action buttons give direct access to the most commonly used functions.

STURDINESS. PORTABILITY. CONNECTIVITY.



NO AIR INTAKE

The TOPAZ housing is designed so there is no air intake. The removable external fan optimizes heat dissipation. Closed housing design prevents dust, humidity or contamination from getting inside, making it a true field-ready instrument.



PORTABILITY

Only 6 kg in a robust magnesium housing.



CONNECTIVITY

Connectivity ports 4 USB 2.0 ports and gigabyte LAN.

UT channels 2 high-quality UT channels for conventional UT (pulse echo, pitch-and-catch or TOFD).

Quality PAUT connector with solid probe latch Robust connector for fast, easy and low-noise probe connections with secured and solid latch.

A NEW MEMBER IN THE FAMILY!



ULTRAVISION® 3 KEY FEATURES

The TOPAZ is fully compatible with UltraVision® 3, opening the door to solving the most challenging applications. Data files can be directly loaded in UltraVision® 3, to benefit from the advanced and 3D features. Advanced setups can also be prepared with UltraVision® 3 and directly used with the TOPAZ.



ULTRAVISION TOUCH™ EMBEDDED

The TOPAZ is the most versatile portable PA unit available today. Powered by the same software engine as the entire Zetec UT product family, use it as a standalone unit, connected to a PC with UltraVision Touch™ or driven by UltraVision® 3 for extended capabilities.



Z-SCAN UT

High-performance multi-channel UT system for up to 16 simultaneous pulse echo and TOFD channels.



ZIRCON

32/128 PR portable and battery-operated phased array instrument with 2 individual UT P/R channels.



DYNARAY LITE

High-performance 64/64 PR phased array instrument.



DYNARAY

High-performance modular phased array instrument.
- 64/256 PR multiplexed
- From 64/64 PR to 256/256 PR non-multiplexed

FULLY-INTEGRATED IN

1

PREPARATION

The visual feedback of the on-board shape editor and advanced focal law calculator allows easy setup creation and optimization. With TOPAZ, everything you need to efficiently and intuitively build your setup is in the box!



2

ACQUISITION

The calibration process is made easy with a complete calibration tool. And the superior hardware specifications allow for the most efficient encoded data acquisition process of any portable PA system on the market.



SPECTION PROCESS

3

ANALYSIS

A full set of basic (cursors, readings) and advanced (merge, gate selectors, volumetric contour, thickness thresholding, etc.) analysis tools are available on-board with fully-configurable display layouts.

4

REPORTING

Ready-to-print custom PDF reports, including hardware settings, scan plan and indication information, are generated in a single touch. Keep your paperwork to a bare minimum.



HIGH PERFORMANCE

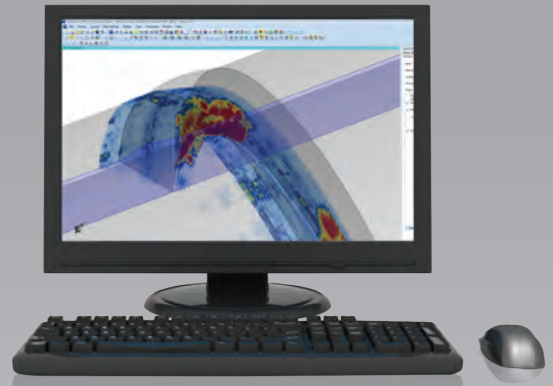


Image generated with UltraVision® 3 and 3D package

ON-BOARD FOCAL LAW CALCULATOR

The on-board advanced calculator allows to configure inspections on complex specimens like axial welds on pipes or K welds.

HIGH PERFORMANCE IN ACQUISITION AND PROCESSING

The 700-MB data file size capability allows for efficient inspections on large components. Create as many inspection groups as needed with up to 512 focal laws.

16-BIT AMPLITUDE RESOLUTION

The amplitude scaling of up to 800% FSH or the software gain can be used to prevent any re-scan due to acquired signal saturation.

IMPROVED DATA ACQUISITION SPEED

Computing power and SSD (solid-state drive): perform challenging inspections with large data files without compromising acquisition speed.

ON-BOARD DATA MERGING

Data acquired from different channels (groups) can be merged directly on the instrument without requiring advanced post-processing software.

ULTRAVISION TOUCH™ EMBEDDED

The embedded advanced focal law calculator with visual feedback allows for easy setup preparation. On-board volumetric merge and measurement tools enable powerful data analysis and inspection report generation.



HIGH-PERFORMANCE PHASED ARRAY UT AT YOUR FINGERTIPS

TOPAZ

FEATURE	ZIRCON™	TOPAZ™
Size (H × W × D)	4.3 × 11.4 × 12.8 in. (11.0 × 29.0 × 32.2 cm)	5.2 × 10.3 × 12.8 in. (13.2 × 26.0 × 32.6 cm)
Weight	14.3 lb. (6.5 kg)*	13.9 lb. (6.3 kg)*
Multi-Touch Display	No	10.4 in. - 1024 × 728 pixels
Air Intake	No	No
Battery Operation	Yes	Yes
Phased Array Connector	ZPAC connector (custom ZIF with latch)	ZPAC connector (custom ZIF with latch)
Phased Array Channels	32/128 PR	32/128 PR
UT Channels	2 PE or 2 P&C	2 PE or 2 P&C
Digitizing Frequency	up to 100 MHz	up to 100 MHz
Amplitude Resolution	16 bits	16 bits
Measurement Gates	2 gates + 1 synchronization gate	4 gates + 1 synchronization gate
Data Interfaces	Ethernet 1000 Base-T	Ethernet 1000 Base-T & 4 × USB 2.0
Maximum PRF	12 kHz	12 kHz
Global Data Throughput	up to 10 MB/sec	up to 10 MB/sec
Max. Pulser Voltage (Open Circuit)	105V PA UT / 215V UT	105V PA UT / 215V UT
Max. Applied Voltage (50 ohms)	75V PA UT / 200V UT	75V PA UT / 200V UT
Bandwidth (-3 dB)	from 0.5 to 15 MHz	from 0.5 to 18 MHz
Real-time Data Compression	Yes	Yes
Rectification	Digital	Digital
Filtering	Analog/digital (FIR)	Analog/digital (FIR)
Smoothing (Video Filter)	Digital	Digital
Self Check	Yes	Yes
Automated Probe Detection	Yes	Yes
Dynamic Depth Focusing (DDF)	Yes	No
# Focal Laws	1024	512, 1024 (remote - UltraVision® 3)
Maximum Number of Samples	16,384	8,192 16,384 (remote - UltraVision® 3)
Maximum Data File Size	20 Gb	700 Mb 20 Gb (remote - UltraVision® 3)
Encoder Interfaces	2 quadrature-type	2 quadrature-type
PC Software Control	No (remote with UV3)	UltraVision Touch™ embedded
Serves as Protection Key	Basic license for UltraVision® 3	License for UltraVision Touch™
Data Acquisition & Analysis	UltraVision® 3.3 or higher	UltraVision Touch™ UltraVision® 3.5 or higher
Embedded Hard Drive	No	120 GB SSD
Video Output	No	DVI (digital and analog)

GENERAL SPECIFICATIONS*

Voltage: 100 VAC or 240 VAC
 Frequency: 50 Hz or 60 Hz
 Maximum power: 100 VA
 Operating temperature range:
 32 °F to 113 °F (0 °C to 45 °C)
 Storage temperature range:
 -40 °F to 158 °F (-40 °C to 70 °C)
 Relative humidity: 80% non condensing
 CE mark is an attestation of the conformity
 with all applicable directives and
 standards of the European Community.
 The TOPAZ 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
 Heat 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

ORDERING INFORMATION

System purchase includes: TOPAZ unit
 with UltraVision Touch™ embedded,
 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.

* With one (1) battery



SEE IT IN ACTION



TOPAZ

The first **fully-integrated**
high-performance phased array UT device

FOR ADDITIONAL INFORMATION:

topaz.zetec.com

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