**Professional-Grade Phased Array Systems**

**Eddyfi Technologies Mantis Series**

The **Mantis 16:64PR** platform dominates the mid-range market with two configurations:

* **Base model (PAUT/UT/TOFD):** $21,995 [[1]](#fn1)[[2]](#fn2)
* **Advanced model (PAUT/UT/TOFD/TFM):** $29,995 [[1]](#fn1)[[3]](#fn3)

Key pricing factors:

1. **TFM capability** adds $8,000 premium
2. **Multi-year service plans** cost $10,365-$18,730 [[1]](#fn1)
3. **Probe compatibility:** Dual matrix probes (16x2 elements) cost $16,240-$16,750 [[1]](#fn1)

Technical specifications:

* 16 pulsers/64 receivers
* PRF up to 20 kHz for high-speed inspections [[3]](#fn3)
* IP65-rated ruggedized design [[2]](#fn2)

-----------------------------------------------------------------------------------------------------------------------

**Entry-Level and Refurbished Systems**

**Olympus OmniScan MX2 32:128PR**

* **New systems:** Discontinued, replaced by newer models
* **Refurbished units:** $5,800-$6,150 [[4]](#fn4)[[5]](#fn5)
* Key features:
  + 32 pulsers/128 receivers
  + 10.4" touchscreen interface
  + Multi-group inspection capabilities

**Zetec TOPAZ32**

* **Current pricing:** $4,750-$6,322 [[6]](#fn6)[[7]](#fn7)
* Market position: Budget-friendly 32-channel system
* Notable features:
  + 64-bit processing architecture
  + Magnesium alloy housing (6.3 kg)
  + UltraVision touch software suite

---------------------------------------------------------------------------------------

**Phased Array Transducer Pricing**

**Sensor Networks Offerings**

|  |  |  |
| --- | --- | --- |
| Configuration | Price Range | Key Specifications |
| 16-element linear array | $2,984.55 [[8]](#fn8) | 0.4mm pitch, 6.25mm elevation |
| 2x15/5x3 matrix array | $5,163.48 [[9]](#fn9) | 1.5MHz, dual matrix design |
| 7.5MHz low-profile array | $3,218.70 [[8]](#fn8) | 16 elements, 0.38" footprint |

Customization options:

* **Cable lengths:** 2.5m standard (8.2ft) [[9]](#fn9)[[10]](#fn10)
* **Connectors:** ZPAC/IPEX/Phasor (+$150-$400)

---------------------------------------------------------------------------------------

**Emerging Technology Premiums**

**Total Focusing Method (TFM) Systems**

* **Eddyfi Mantis TFM64:** 64-element live TFM adds 36% cost premium vs base model [[1]](#fn1)
* **Sonatest Veo3:** $9,250 base price with real-time TFM/PAUT/TOFD [[11]](#fn11)[[12]](#fn12)
* Performance metrics:
  + 128GB SSD storage (Veo3)
  + 10MB/s data transfer rates [[11]](#fn11)

---------------------------------------------------------------------------------

**Price Determinants in PAUT Market**

1. **Channel architecture:**
   * 16:64 systems = $20k-$30k
   * 32:128 systems = $30k-$45k [[4]](#fn4)[[14]](#fn14)
2. **Software capabilities:**
   * Basic PAUT packages: Included
   * Advanced TFM/FMC: +$7k-$12k
3. **Environmental ratings:**
   * IP65 certification adds 15-20% cost [[2]](#fn2)[[3]](#fn3)

---------------------------------------------------------------------

**Conclusion**

While the specific QD and ZH-series sensors remain unlisted, current PAUT pricing follows clear technological tiers. Buyers should consider:

* **<$10k:** Refurbished 32-channel systems (Zetec TOPAZ32)
* **$20k-$30k:** New 64-channel systems with TFM (Eddyfi Mantis)
* **>30k:** High-channel-count matrix array solutions

**Reference Links**

1. <https://store.eddyfi.com/technologies/phased-array-tfm-and-conventional-ut/mantis.html>
2. <https://content.eddyfi.com/m/1d79c66f249d22d2/original/Mantis-Technical-Specification-Sheet.pdf>
3. <https://www.eddyfi.com/doc/LiteratureDownloadables/Mantis-specifications-sheet-02-01.pdf>
4. <https://www.globalfastertech.com/product/olympus-omniscan-mx2-32128-phased-array-flaw-detector/>
5. <https://www.superindotech.com/used-olympus-omniscan-mx2-pa-flaw-detector---sale>
6. <https://www.primeanalyzerstore.com/product/zetec-topaz32-phased-array-ut-flaw-detector/>
7. <https://www.multiglobaldevice.com/product/zetec-topaz32-32-channel-phased-array-instrument/>
8. <https://irss.ca/product/sensor-networks-ultrasonic-phased-array-transducer/>
9. <https://www.splitter.com/products/sensor-networks-2x15-5x3-element-matrix-2d-phased-array-15mhz>
10. <https://www.splitter.com/products/sensor-networks-16-element-small-footprint-phased-array-75mhz>
11. <https://stratosprecision.com/products/Sonatest-Veo3-Phased-Array-Flaw-Detector.html>
12. <https://sonatest.com/application/files/7717/1292/2300/A027-PAUT-Butt-Weld-Inspection-Utilising-VEO3.pdf>
13. <https://beta3dscannersell.com/eddyfi>
14. <https://gp-technical.com/product/m2m-eddyfi-technologies-mantis-1664pr-phased-array-flaw-detector-with-tfm-64ch/>