

Global Thru-Hole Crystal Oscillator Market 2026 by Manufacturers, Regions, Type and Application, Forecast to 2032

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Abstracts

According to our (Global Info Research) latest study, the global Thru-Hole Crystal Oscillator market size was valued at US\$ 854 million in 2025 and is forecast to a readjusted size of US\$ 1290 million by 2032 with a CAGR of 6.1% during review period.

In 2025, global sales of Thru-hole Crystal Oscillators were approximately 680-720 million units, with an average selling price of approximately USD 1.1-1.3 per unit and a gross profit margin of approximately 22%-30%. A Thru-hole crystal oscillator is essentially a complete clock source module that encapsulates a quartz crystal resonator, a dedicated oscillation IC, power supply regulation, and buffer drive circuitry within a DIP/HC-49 or other through-hole package. It outputs a fixed-frequency or selectable-frequency TTL/CMOS square wave signal via a 5V/3.3V DC power supply, providing a reference clock for MCUs, PLCs, communication boards, industrial controllers, measuring instruments, and more. Typical frequency range: 32.768 kHz-125 MHz (mainstream concentrated in 1-50 MHz), frequency accuracy: $\pm 20-100$ ppm, long-term stability: $\pm 3-10$ ppm/year, operating temperature: $-20 \sim +70$ °C or $-40 \sim +85$ °C (industrial grade), rise time: 5-10 ns, square wave duty cycle: 45-55%, supply current: 10-40 mA, package types: DIP-8/DIP-14, HC-49/U through-hole packages, etc. Typically, 1-3 units are configured on a PLC or industrial control board, 1-2 units on power and communication boards, and 1 unit is sufficient on an instrument or measurement and control module. In the overall oscillator market, through-hole products account for approximately 20% by installation method, with the remainder being surface-mount. The upstream mainly includes quartz crystal blanks (AT-cut / tuning fork), ceramic or metal packaging shells, oscillator/buffer ICs, metal lead frames, solder and packaging materials, etc.; the downstream targets industrial control and power electronic equipment manufacturers, rail transit and railway signaling systems,

aerospace/military electronics, traditional communication and measurement instrument manufacturers, etc.

This report is a detailed and comprehensive analysis for global Thru-Hole Crystal Oscillator market. Both quantitative and qualitative analyses are presented by manufacturers, by region & country, by Pulling Range and by Application. As the market is constantly changing, this report explores the competition, supply and demand trends, as well as key factors that contribute to its changing demands across many markets. Company profiles and product examples of selected competitors, along with market share estimates of some of the selected leaders for the year 2025, are provided.

Key Features:

Global Thru-Hole Crystal Oscillator market size and forecasts, in consumption value (\$ Million), sales quantity (K Units), and average selling prices (US\$/Unit), 2021-2032

Global Thru-Hole Crystal Oscillator market size and forecasts by region and country, in consumption value (\$ Million), sales quantity (K Units), and average selling prices (US\$/Unit), 2021-2032

Global Thru-Hole Crystal Oscillator market size and forecasts, by Pulling Range and by Application, in consumption value (\$ Million), sales quantity (K Units), and average selling prices (US\$/Unit), 2021-2032

Global Thru-Hole Crystal Oscillator market shares of main players, shipments in revenue (\$ Million), sales quantity (K Units), and ASP (US\$/Unit), 2021-2026

The Primary Objectives in This Report Are:

To determine the size of the total market opportunity of global and key countries

To assess the growth potential for Thru-Hole Crystal Oscillator

To forecast future growth in each product and end-use market

To assess competitive factors affecting the marketplace

This report profiles key players in the global Thru-Hole Crystal Oscillator market based on the following parameters - company overview, sales quantity, revenue, price, gross margin, product portfolio, geographical presence, and key developments. Key companies covered as a part of this study include ECS, Abracon, TXC Corporation, NDK, Fox Electronics, Epson, Raltron, Microchip Technology, Kyocera, IQD Frequency Products, etc.

This report also provides key insights about market drivers, restraints, opportunities, new product launches or approvals.

Market Segmentation

Thru-Hole Crystal Oscillator market is split by Pulling Range and by Application. For the period 2021-2032, the growth among segments provides accurate calculations and forecasts for consumption value by Pulling Range, and by Application in terms of volume and value. This analysis can help you expand your business by targeting qualified niche markets.

Market segment by Pulling Range

?50 ppm

?100 ppm

?200 ppm

Others

Market segment by Voltage

3.3V

5V

Others

Market segment by Maximum Frequency

100 MHz

125 MHz

150 MHz

Market segment by Application

Military Electronics

Rail Transportation

Aerospace

Others

Major players covered

ECS

Abracon

TXC Corporation

NDK

Fox Electronics

Epson

Raltron

Microchip Technology

Kyocera

IQD Frequency Products

QuartzCom

SiTime

AXTAL

Rakon

MURATA

Siward

ACT

Parallax

Market segment by region, regional analysis covers

North America (United States, Canada, and Mexico)

Europe (Germany, France, United Kingdom, Russia, Italy, and Rest of Europe)

Asia-Pacific (China, Japan, Korea, India, Southeast Asia, and Australia)

South America (Brazil, Argentina, Colombia, and Rest of South America)

Middle East & Africa (Saudi Arabia, UAE, Egypt, South Africa, and Rest of Middle East & Africa)

The content of the study subjects, includes a total of 15 chapters:

Chapter 1, to describe Thru-Hole Crystal Oscillator product scope, market overview, market estimation caveats and base year.

Chapter 2, to profile the top manufacturers of Thru-Hole Crystal Oscillator, with price, sales quantity, revenue, and global market share of Thru-Hole Crystal Oscillator from

2021 to 2026.

Chapter 3, the Thru-Hole Crystal Oscillator competitive situation, sales quantity, revenue, and global market share of top manufacturers are analyzed emphatically by landscape contrast.

Chapter 4, the Thru-Hole Crystal Oscillator breakdown data are shown at the regional level, to show the sales quantity, consumption value, and growth by regions, from 2021 to 2032.

Chapter 5 and 6, to segment the sales by Pulling Range and by Application, with sales market share and growth rate by Pulling Range, by Application, from 2021 to 2032.

Chapter 7, 8, 9, 10 and 11, to break the sales data at the country level, with sales quantity, consumption value, and market share for key countries in the world, from 2021 to 2026. and Thru-Hole Crystal Oscillator market forecast, by regions, by Pulling Range, and by Application, with sales and revenue, from 2027 to 2032.

Chapter 12, market dynamics, drivers, restraints, trends, and Porters Five Forces analysis.

Chapter 13, the key raw materials and key suppliers, and industry chain of Thru-Hole Crystal Oscillator.

Chapter 14 and 15, to describe Thru-Hole Crystal Oscillator sales channel, distributors, customers, research findings and conclusion.

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