Timing Modules
Since the early 1930’s quartz crystals have provided the heartbeat of Communication equipment and continue to be the pulse of electronic equipment today. The evolution of quartz based products has been a true innovation in telecommunication industry and has allowed network architectures unprecedented levels of quality and sophistication. Technological advances in crystals and packaging have allowed demanding applications to continue to be robust with expectations of high levels of performance. Vectron International has supplied quartz based products since 1955 and its innovative culture has resulted in cost savings, smaller footprints and performance improvements for its customers and the markets they serve.

As the market leader in Oven Controlled Crystal Oscillators (OCXOs) we are committed to offering the best performing devices to meet the needs of our customers. The core of our Module solutions is our precision oscillators in performance, tighter stabilities and cost reductions has enabled our customers to offer leading edge solutions.

Leveraging on our Core Technology and future innovations we can align our products of today and tomorrow with your current and future product offerings. Today we can help you reduce part count, assembly cost, test time and time to manufacture without sacrificing quality or performance. Tomorrow through innovations we can reduce your footprint, improve overall performance and reduce cost. Together we can develop leading edge products and help you differentiate in the markets you serve.

Vectron's Heritage
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### MD-010 Disciplined Oscillator Module

**Features**
- 1pps and RF (10MHz) Output
- 1pps or RF (10MHz) Input
- Holdover up to 8uSec, 24 hours
- 12v Supply
- Standard Size: 60 x 114.3 x 29.4 mm
- Customized solutions available

**Applications**
- 3G Basestations (WCDMA, CDMA2000)
- WiMax Basestations
- Digital Video Broadcast
- General Timing and Instrumentation

### MD-011 Disciplined Oscillator Module

**Features**
- 1pps and RF (10MHz) Output
- Holdover up to 8uSec, 24 hours
- 12v Supply Standard
- Standard Size: 102 x 139 x 25.4 mm
- Customized solutions available

**Applications**
- 3G Basestations (WCDMA, CDMA2000)
- Digital Video Broadcast
- General Timing and Instrumentation

### Evaluation Kit for MD-010/MD-011 Series

The evaluation kit is available for the C6300 series module. This kit provides for easy hookup and monitoring of the C6300 series module. The C6300 series module is customized per customer and application.

**Included with the kit**
- C6300 Series Module
- Control/Signal Processor Board
- Processor Board (20MHz)
- Status LED's
- LCD Display
- Protective Housing
- Power Supply
- MS Ref. Antenna
- Optional Software

### Rubidium Replacement Module

**Features**
- Accepts 2 reference inputs (8kHz/10kHz)
- Supports Free-run, Holdover, and Locked Modes
- 3 output frequencies (10MHz, 123.5MHz, 250MHz)
- 3.3v Supply
- Standard SMT, Size: 38 x 38 x 8 mm
- Customized solutions available

**Applications**
- Cable Modem Termination Systems (CMTS)

### DOCSIS Module

**Features**
- 3.3V, 5V Supply
- Low Profile <17mm
- Standard Size: 60 x 50 x 17 mm
- Customized solutions available

**Applications**
- W-CDMA/WiMAX
- Test / Measurement

### C6998A-00018

**Features**
- Stratum 3/3E, SMC or SEC Synchronization solution
- Complies with Telcordia and ITU-T recommendations
- Supports Free-Run, Holdover and Lock Modes
- Accepts 2 reference inputs (8kHz/10kHz)
- Automatic 'hit-less' switching
- Generates 2 output frequencies
- Standard Size: 48.3 x 48.3 x 15.2 mm
- Customized solutions available

**Applications**
- Network Element Synchronization (Stratum, SONET, SDH)

### TM-056 Timing Synchronization Modules

**Features**
- Stratum 3/3E, SMC or SEC Synchronization solution
- Complies with Telcordia and ITU-T recommendations
- Supports Free-Run, Holdover and Lock Modes
- Accepts 2 reference inputs (8kHz/10kHz)
- Automatic 'hit-less' switching
- Generates 2 output frequencies
- Standard Size: 2.05 x 1.25 x 0.76 mm
- Customized solutions available

**Applications**
- Network Element Synchronization (Stratum, SONET, SDH)

### TM-096 Timing & Synchronization Modules

**Features**
- Stratum 3, SMC or SEC Synchronization solution
- Complies with Telcordia and ITU-T recommendations
- Supports Free-Run, Holdover and Lock Modes
- Accepts 4 reference inputs
- Automatic 'hit-less' switching
- Simultaneously generates 3 output frequencies
- Standard Size: 1.45 X 1.00 X 0.25 mm
- Customized solutions available

**Applications**
- Network Element Synchronization (Stratum, SONET, SDH)

### Timing Modules

Helping Customers Innovate, Improve & Grow
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Vectron’s Heritage

Flexibility

Customized

Intelligent Subsystems

Customized Solution

Since the early 1930’s, quartz crystals have provided the heartbeat of communication equipment and continue to be the pulse of electronic equipment today. The evolution of quartz-based products has been a true innovation in the telecommunication industry and has allowed network architectures unprecedented levels of quality and sophistication. Technological advances in crystals and packaging have allowed demanding applications to continue to be robust with expectations of the highest levels of performance.

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