



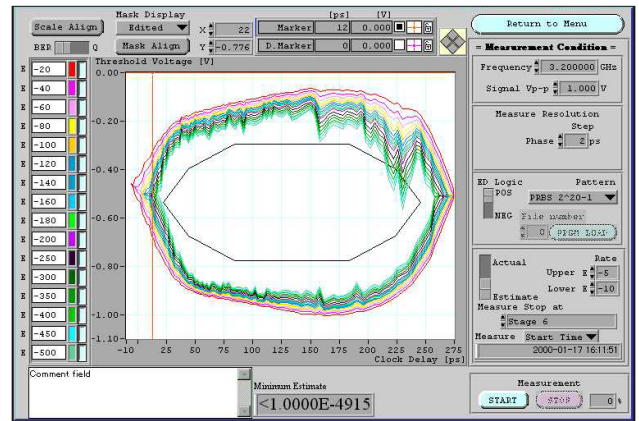
# MX163205A

## Q and Eye Analysis Software

(For MP1632A/C Digital Data Analyzer)

MX163205A controls the MP1632A/C Digital Data Analyzer from the PC to measure Q factor, eye margin, and eye diagram.

- Measures Q factor, eye margin, and eye diagram
- Allows measurement of burst signals
- Saves screen images in picture formats of BMP, JPG, and PNG
- Saves the measured results in CSV format



## Measurement Form

- When using the pulse pattern generator unit and error detector unit



- When using any signal source

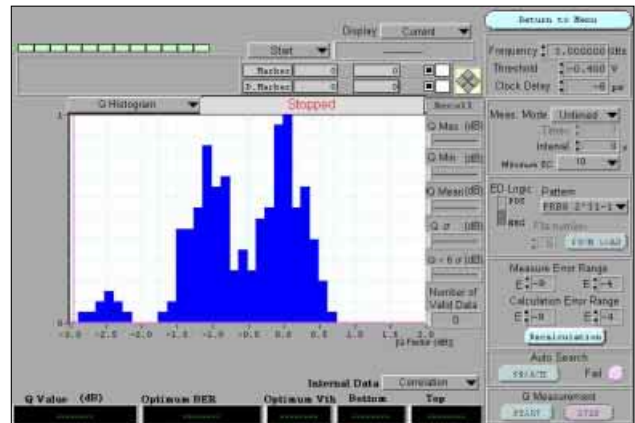


# Q Factor Measurement

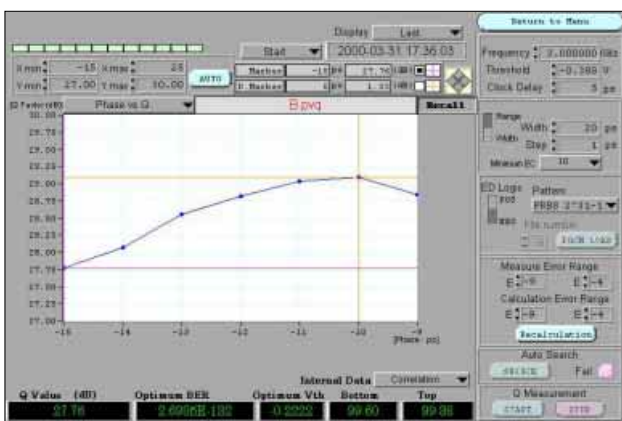
- Conforms to OSFTP-9
- Graphical functions providing 11 kinds of indication including threshold voltage vs. bit error rate, time vs. Q factor, and phase vs. Q factor
- Display functions indicating various measurement data relating Q factor, including optimum bit error rate/threshold voltage, correlation factor for least squares, and Gaussian parameter
- Various parameters for measuring Q factors (bit error rate range, bit error rate measurement accuracy, threshold voltage variation) can be set arbitrary.



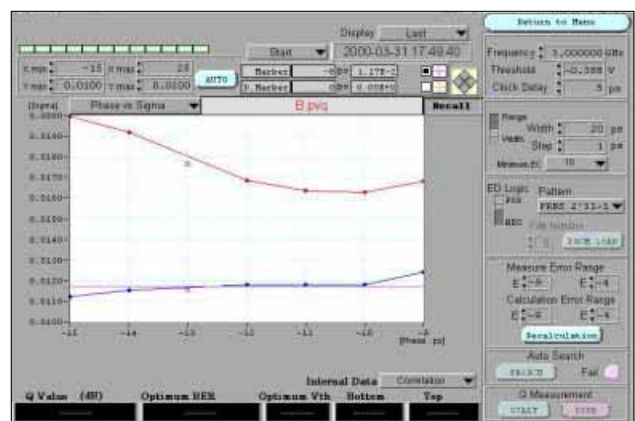
Threshold voltage vs. bit error rate



Histogram



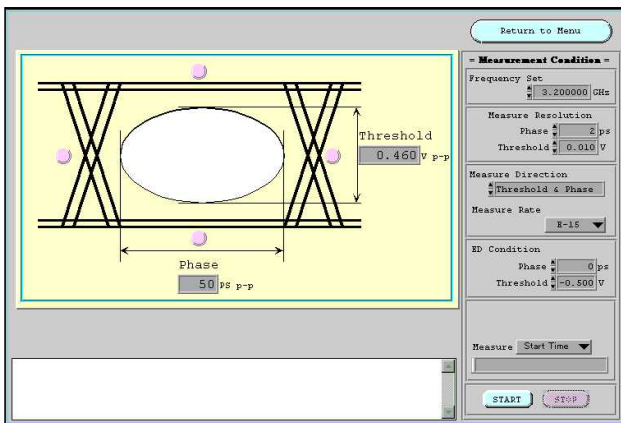
Phase vs. Q factor



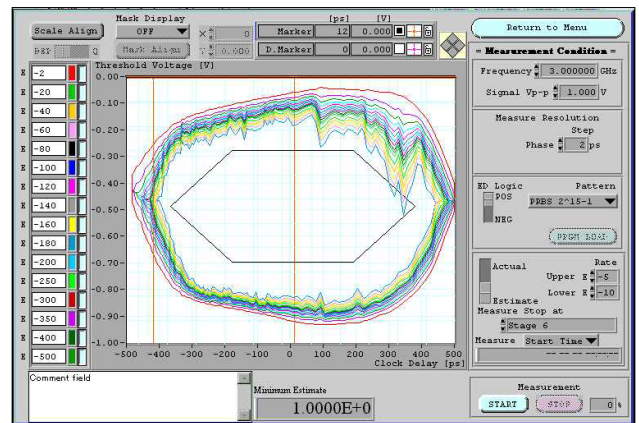
Phase vs.  $\sigma$

# Eye Measurement

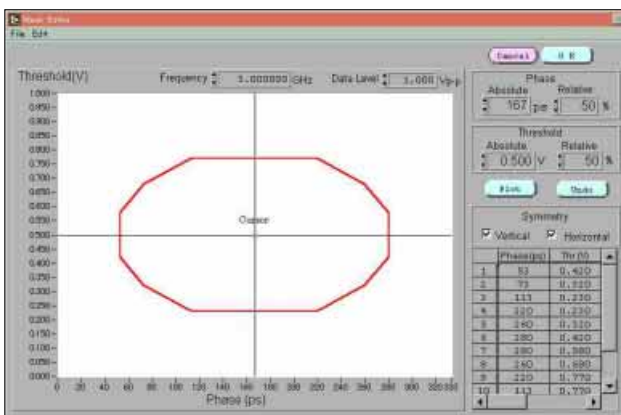
- Margin measurement includes the phase margin (horizontal), threshold voltage margin (vertical) and eye margin measurements
- Eye diagram measurement that gains the bit error rate contour line by connecting the points to gain specified error rate
- Measures eye margins and eye diagrams for E-2 through E-15 (actual measurement)
- By applying the Q factor measurement, an eye diagram up to E-4915 can be measured and estimated (estimate measurement)
- Mask template display and edit function
- Mask test function that realizes a simple pass/fail judgment by measuring the bit error rate of points specifying the template



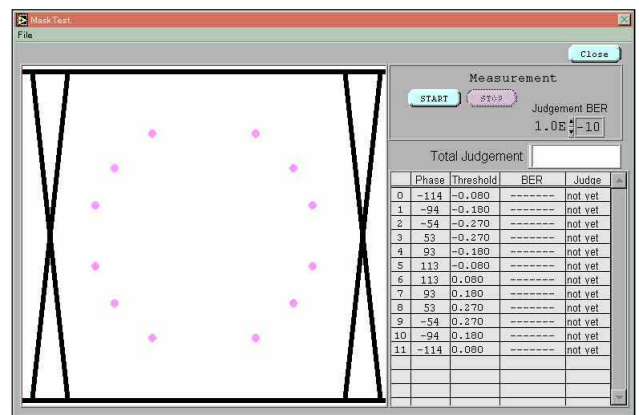
Eye margin



Eye diagram



Mask edition



Mask test

# Specifications

Required system	Computer: IBM-PC/AT or full compatible, OS: Windows 95/98/NT, CPU: Pentium 166 MHz or higher, Memory: 64 MB or more, Hard disk space: 100 MB or more, GPIB: National Instruments made GPIB interface (PCMCIA-GPIB or AT- GPIB/TNT series boards are recommended.) Display Resolution: 800 x 600 or more, Display colors: 256 or more *If two or more applications are running simultaneously, operation cannot be guaranteed.
Function	Measurement frequency: 1 to 3.2 GHz Measurement patterns: PRGM, PRBS 7, 9, 11, 15, 20, 23, 31 Pattern format: Continuous/burst (To be synchronized within 1 s) Eye margin measurement Measurement resolution (threshold): 1 to 10 mV (1 mV steps) Measurement resolution (phase): 2 to 10 ps (2 ps steps) Measurement rate: E-2 to E-15 Eye diagram measurement Measurement resolution (phase): 2 to 10 ps (2 ps steps) Measurement rate: E-2 to E-15 (actual measurement), E-3 to E-12 (estimate measurement) Display rate: E-2 to E-15 (actual measurement), E-2 to E-4915 (estimate measurement) Mask test judgment rate: E-2 to E-15 Q factor measurement Measurement style: Multiple measurements at fixed phase/phase vs. Q factor measurements Bit error rate range: Upper limit at E-3 to E-5, lower limit at E-7 to E-12 Minimum error count (measurement accuracy): 1, 10, 100, 1000 Vth shift width: Automatic, fixed (1 to 10 mV/1 mV steps)

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## Ordering Information

Please specify the model/order number, name and quantity when ordering.

Model/Order No.	Name
MX163205A	<b>Software</b> Q and Eye Analysis Software
W1739AE	<b>Standard accessory</b> MX163205A operation manual: 1 copy

# Anritsu

Specifications are subject to change without notice.

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