

# Model MS-12 PC-based 12-Input, 100 MHz Scaler Card, Quad Dig. Ratemeter



## FEATURES

- 12-Input scaler card
- Four scalers can be displayed as digital ratemeters
- Continuous display of the status of all scalers
- Individual gate inputs for each scaler
- Common gate input
- 100 MHz max. counting rate
- 32 bit counting capacity
- two presettable scalers
- Scaler #1 can be configured as a timer with 10 ns time resolution
- Selectable carry out on Scaler #1 for 64 bit preset count capacity
- Crystal timebase
- Common Start/Stop or synchronisation via the "GO-line" input.
- Up to four MS-12 cards can be operated in one PC
- Compatible with the FAST ComTec Model MPA-3 Multiparameter System and MCD4LAP Multichannel Analyzer
- DLL for LabVIEW and Visual Basic

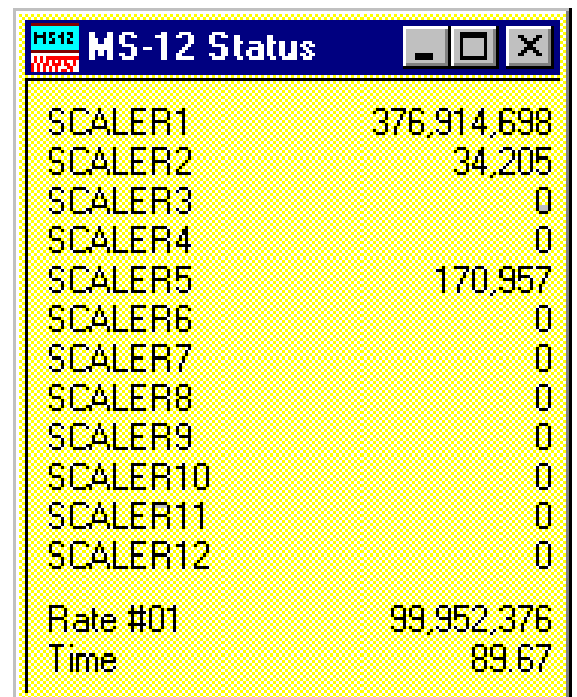
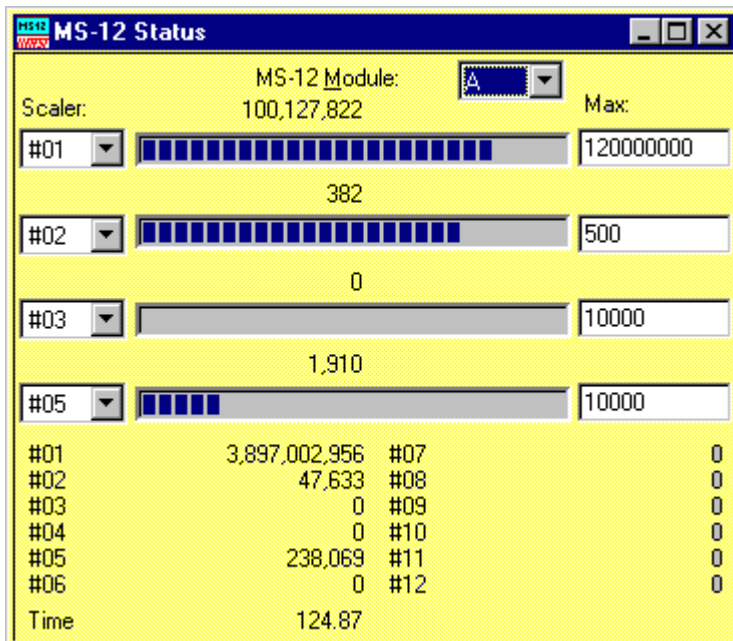


## DESCRIPTION

The Model MS-12 is a multi input scaler that provides on a single ISA card 12 scalers. The first scaler can be configured as a timer with 10 ns time resolution (crystal time base). Two scalers can be preset. Utilizing the carry-out function a 64 bit preset capability is available. The 12 inputs are designed to accept TTL or positive NIM pulses at rates of up to 100 MHz - the pulse-pair resolu-

## APPLICATIONS

- Fast counting channels for multiparameter systems or multichannel analyzers
- other general purpose use



MS-12 February 1999

tion is 10 ns. A 1 kOhm or 50 Ohm input impedance can be selected.

All 12 scalers are connected to a common GATE and a LOAD (to start value / reset) line. The start and stop function can also be synchronized by the "GO"-Line as used by the new Model MPA-3 Multiparameter System. Each scaler has its own gate input, a common gate is also provided.

Up to four MS-12 can be operated in one PC and the status of all scalers displayed in one window.

A very useful feature is the four channel digital ratemeter display where four scalers of a MS-12 card can be selected to show the counting rate in a bargraph display.

## SPECIFICATIONS

### Inputs

Scaler 1 to 12: TTL or pos. NIM, rising edge sensitive, +1.65V to +5.5V  
 Input Impedance: 1 kOhm / 50 Ohm, selectable via SIL resistors  
 Common Gate: 1 kOhm / 50 Ohm TTL, pos. NIM, active high/low software selectable  
 Individual Gates: 4,7k Ohm pullup to 5V  
 Input Voltages:  $V_{Hi}$  min 1.65V  
 $V_{Hi}$  max. 5.5V  
 $V_{Lo}$  min -0.5V  
 $V_{Lo}$  max 1.1V  
 Common Load: 1kOhm/50 Ohm TTL, pos. NIM

### Outputs

Carry Out: TTL  
 Bidirectional GO-line: Compatible with MPA-3

### Power

provided by PC

### Size

PC-card, half length, ISA-Bus connector

### ISA Address

200, 210, ..., 270, 300, 310, ..., 360 hex, selectable by rotary switch

### PERFORMANCE

Count Capacity: 32 bit  
 Count Rate: 100 MHz max.  
 Pulse Pair Resolution: 10 ns

Two scalers are presettable  
 Scaler #1 can be programmed to provide a selectable carry-out.

Connected to the input of Scaler #2 a 64 bit preset capability is achieved

Scaler #1 can be defined as a timer with 10 ns resolution

Four scaler cards can be placed in one computer and the status displayed in one screen.

A max. of four scalers can be selected to indicate the input counting rate like a digital rate meter.

### Software

The MS-12 is delivered complete with software operating under WIN-95/98 and WIN-NT. A DLL for LabVIEW and Visual Basic will be available shortly.

### Ordering Information

Order Number	Version
MS12	MS-12 Scaler Card with 12 inputs
MS12001	Fan-In Cable
MSS01	DLL for LabVIEW and Visual Basic