MT9928 xm
High Speed Gravity Handler

Applications:
- Automotive power devices
- RF and communication
- Logic, amplifier and linear
- Flash memory
- MEMS and temperature

Solution for:
- Medium and small size SO and MLF
- Packages with a pitch down to 0.4 mm
- Device length from 2 mm to 21 mm

Facts:
- Up to 8 contact sites
- Tri-temp from -55 °C to +175 °C
- Fast and reliable kit exchange for SO and MLF/QFN packages
- Throughput up to 28,000 uph
- Contacting: standard, high frequency and Kelvin
- Tube and metal magazine loading and unloading
- Bowl feed loading and bulk unloading
- Installed MT99x8 base: more than 1,000 systems
- Extended modularity: configure to end user’s need
1. Base System
1.1 Available Versions
- Ambient
- Ambient hot (+35°C, +375°C optional, +200°C on request)
- Tri-temp (55°C to +155°C, +375°C optional, +200°C on request)
- 4 or 8 contact sites
- Loading: tube or metal or bowl
- Unloading: tube or metal or bulk
1.2 Available Options (Selection)
- IEEE 488.2
- Power monitoring
- Ground fault monitoring
- Fast conversion unloader

2. Package Style Conversion
2.1 Conversion Kits/Package Style Conversion
- Mechanical package style conversion: typically takes 1-2 hours (depending on skills, number of persons and use of “fast conversion option”)
2.2 Adjustment/Calibration Necessary after Conversion
- Adjustment (i.e. device length in singulator) may be necessary (depending on package type)
- Software change to new package/kit typically takes 5 min
- Change from STD to VAC (or vice versa) takes approx. 20 min

3. Packages
3.1 Possible Package Styles
- SOT, SQ, MLF, TO
- SO packages: S0150, S0200, S0300, S0400, TSSOP127, TSSOP240, MS0218, MS0200
- Leadless packages: MLF3, MLF5, MLF3.5, MLF6, MLF7, MLF8, MLF9, MLF10, MLF11, MLF12, MLF14
3.2 Min. and Max. Size of Packages
- Device width: MLF: 2 mm to 14 mm, SO: 1.6 mm to 11 mm
- Device height: 2 mm to 21.3 mm
- Device thickness: down to 0.5 mm
3.3 Min. Lead Pitch
- Down to 0.4 mm

4. Loading/Unloading
4.1 Possible Loading Material and Size
- Tubes: 120 mm to 560 mm, max. 20 mm width, 8 mm height
- Metal magazine: width up to 67 mm, length: 520 to 540 mm
4.2 Available Loader Types/ Capacity
- 36 tubes (for 8 mm wide tubes)
- 30 metal magazines (for 6 mm thick magazines)
4.3 Possible Unloading Material
- Tubes: 170 mm to 560 mm, max 20 mm width, 8 mm height
- Metal magazines (width up to 67 mm, length: 520 mm to 540 mm
4.4 Available Unloader Types/ Capacity
- 36 tubes (for 8 mm wide tubes)
- 30 metal magazines (for 6 mm thick magazines)

5. Contacting
5.1 Number of Contact Sites
- 1, 2, 4 or 8 contact sites
5.2 Contact Modes
- Ping pong, alternating, parallel synchronous, asynchronous
- Further contact modes and site mapping feature available with option contact site mapping
5.3 Socket Integration Alternatives
- Short contact (tri-temp)
- Standard contact (including thermal insulation)
5.4 Available Contact Socket
- Cohu offers contact socket for all package versions and application, i.e. high frequency, Kelvin and MEMS test

6. Temperature Accuracy
6.1 Test Site Accuracy
- +1/-2°C for STD application
- +1/-5°C for PB application
6.2 Test Site Stability
- +1/-5°C

7. Bin Categories
7.1 Tube Unloader
- 4(7) bins
7.2 Metal Magazine
- 4 bins total or 1 bin per magazine track

8. Docking
8.1 Docking Height
- Octal: 437 mm floor to center of contact unit
- Quad: 467 mm floor to center of contact unit
8.2 Docking Compatible with
- All commonly used docking systems and test heads are supported

9. Performance
9.1 Throughput at a Test Time
- Throughput up to 18,000 uph (for SO50, 5.1 mm, asynchr. mode, octal site)
9.2 Index Time
- STD, PTB:
  - For single cassettes: 550 ms, 650 ms (TSSOP), 620 ms (MSOp8)
  - For dual cassettes: 1000 ms, 1050 ms (TSSOP), 1110 ms (MSOp8)
- VAC:
  - For single cassettes: 880 ms
  - For dual cassettes: 1220 ms

10. Facility Requirements
10.1 Power Supply (Voltage/ Phase)
- 230 V to 250 V, 50 Hz/ 60Hz, 32 Amps, single phase
- 230 V ± 40 V, ±10 %, 50/60 Hz, 2x06 Amps, dual phase
10.2 Power Consumption
- Max. 4 kW
10.3 LNZ Consumption:
- 37 l/h max
10.4 Compressed Air Consumption
- 300 to 570 l/min (depending on configuration)
10.5 Mobility/ Number of People Necessary
- Mobility on Casters / 1-2 persons to move
10.6 Height:
- Incl. signal light: 200 cm
- For transport (without signal light): 194 cm
10.7 Weight:
- Typ.: 600 kg (600 kg to 650 kg depending on configuration)

11. Compliance and Standards
11.1 Compliant to
- CE, SEMI S2-0912, SEMI S8-0701