



docking + interface
dock'n'connect

esmo
semicon

esmo semicon docking + interfacing solutions excellent cost/performance ratio ensuring best testing reliability

All esmo semicon docking and interfacing products come with standardized features for integration into any conventional handler, prober, and tester types.

Additionally, they can be equipped with optional features upon request, including direct-dock solutions.

esmo semicon's design specialists create customized solutions for adapting and integrating test head manipulators, as well as docking and interfacing systems, into both front- and back-end test cells.

By working closely with customers to thoroughly determine and define requirements, esmo Semicon provides comprehensive services, from selecting appropriate equipment to designing entirely new systems to optimize and enhance test cells' efficiency.

get the esmo package deal

specialized and experienced staff to provide excellent design and technical support

reduction of inadvertent damage to testing hardware caused by operating errors

smart design – high quality production – state-of-the-art products – virtually maintenance-free

quick return on investment – reduced set-up times – increased test yields – long-term value

exceptionally short design and lead times plus customized installation/training services

custom-fit solutions for each designated purpose

docking + interfacing systems

dib-changing system

quick + easy
board change
in less than a minute



- highest repeatability due to mechanical test head/handler connection during board change process
- short-term return of investment
- dedicated for final test
- single-sequence operation for docking/undocking
- force deactivation feature
- adjustable z-stack
- touch panel operation – programmable user interface
- cold test applicability
- durable and robust design
- compatible with great variety of test head types

highly
efficient +
time-saving
operations

helios

1-button operation
software-controlled
z-position adjustment



- revolutionary electrical operation functions
- highest repeatability
- z-position teaching feature
- repeatability of +/- 20 µm in z-axis
- repeatability of +/- 25 µm in x- and y-axes
- up to 4 kN locking force (up to 1,000 N per docking module)
- electrical synchronization of docking modules
- 20 mm adjustment of z-position range
- cost-/time-saving operations

electrical
solution

cam-dock

simple + robust
cost-effective

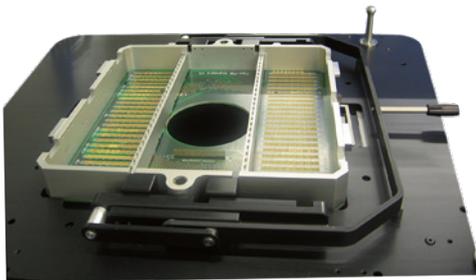


- mechanical docking solution
- precise docking
- repeat accuracy
- fully inTEST compatible
- high docking force
- compatible with existing solutions
- modular + robust design
- no cable break/stretching

low-cost,
mechanical
solution

pib-lock

high locking force
simple + robust
easy board change



- special design for test heads with automatic board
- cost-efficient solution including pre-guide, pre-fix, or k-dock adapter
- locking mechanism (i.e. Teradyne FLEX family, inner pull-down)
- high repeatability

special
design

clamp shell

probe card
easily accessible
safe pogo tower
handling



- hinged probe tower carrier and clamping mechanisms
- facilitated probe card change for top load prober
- hinged probe tower
- linear pin compression
- high repeatability

easy probe
card change

special equipment + accessories

mechanical test head housing

for carrying customized signal tester cards



- fully integrated docking and board locking
- suitable for individual and high-volume production
- standard and customized dimensions
- quick and easy locking and unlocking process for board change
- large application space – load board
- optional number of channel boards as per customer specifications
- docking design in compliance with customer internal docking standards/ dimensions

customized design solutions

available with integrated manipulator

pogo tower planarity + pin compression measurement tool

testing tool for pogo tower positions



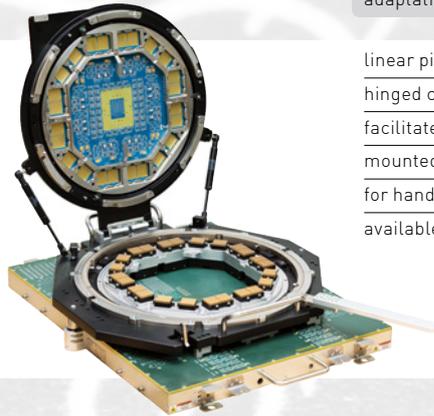
- 66 mm to 48 mm touch screen display
- 4-distance sensor for diagonal/cross measuring
- 0.05 mm measuring tolerance
- USB connection
- measuring results may be saved and transmitted to PC
- stationary installation in some pogo towers possible
- providing precise feedback on docking adjustments – works perfectly in combination with the esmo helios dock system
- eliminating pogo tower or docking open contacts or increased contact resistance – facilitated troubleshooting for customer

easy operating

adaptations for various pogo tower types available

manual test adapter

easy hand test for prober applications



- linear pin compression
- hinged carrier for probe card
- facilitated probe tower positioning
- mounted onto test head stiffener
- for hand-test and debugging
- available for various test head and pogo tower types

debugging made easy

test sockets

socket design as per customer specifications



- high-performance spring probes
- designed for high frequency up to 16 GHz
- 55°C/-67°F to 150°C/302°F temperature range
- one socket base for each insert (3x3 to 9x9 QFN)
- one-click switch from engineering to production socket mode
- more than 500,000 compression cycles
- Kelvin test applicability
- tool-free insert and actuator exchanges
- 0.3 mm minimum lead pitch

quick + easy socket change

QFP extender available

stiffeners

for extended boards with safety covers



- load board stiffener
- probe card stiffener
- cost-efficient and maintenance-free

extended application space

various stiffeners for various test head types

pogo towers

pogo tower triton

universal use –
compatible with
existing solutions



universal use for different tester types
(e.g. ETS-364, Nextest Magnum HV, HD etc.)

- internal ring: 7" - 640 to 1,280 pins
- center ring: 9" - 1,280 pins
- external ring: 11" - 1,280 to 2,496 pins

various types of adapter rings available

up to 1,280 pins for each ring (up to a total of 3,840 pins)

various
configurations

pogo tower midas

universal use –
compatible with
existing solutions



fully compatible with existing pogo towers

designed with standardized units/dimensions for easy assembly/
maintenance, and flexible arrangement/use

pin arrangement allows for standard "pseudo" 50 Ohm

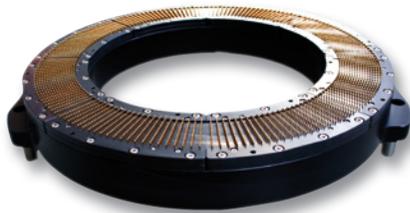
signal pins (each signal pin is surrounded by 4 grounds)

12 pin modules with 160 pins each

field
compatible

pogo tower J750

various pogo pin
module options
on customer demand



available with various pogo pin modules on customer demand

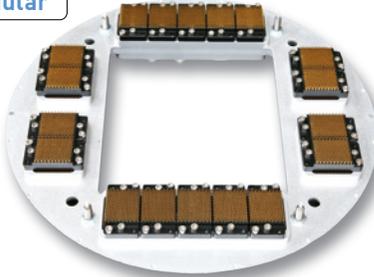
- standard: 1,496 pins
- xt: 1,904 pins
- full: 2,992 pins

compatible with existing pogo towers

Teradyne
standardized

pogo tower FLEX modular

various pogo pin
module options
on customer demand



fully compatible with existing pogo towers

360 / 900 / 1,080 / 1,320 / 1,620 / 2,070 pins

18 pin modules with 90 signal pins each,
and 10 pin modules with 45 signal pins each

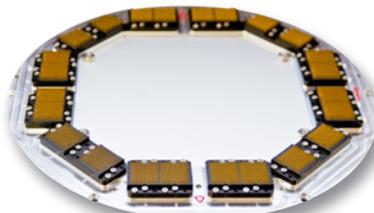
application spaces: 224 cm² and 114 cm²

Teradyne
standardized

combo 350 pogo tower

with cold temp cover

various pogo pin
module options
on customer demand
freely configurable



available with various pogo pin modules on customer demand

configurable from 800 to 4,800 pins

compatible with all standard probers

modular construction allowing for easy pogo pin and block
replacement as well as for facilitated maintenance

extended
application
space

here for you, wherever you are:
 worldwide sales + service network

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