



Sorter

Media Transfer

Lead Inspection

Tape-and-Reel

## APOLLO FlexSort™ System K200 Series



### The Kinetrrix Device Handling System

The APOLLO FlexSort System processes tray-loaded devices in either of two modes. In the backfill mode, the sorter removes bad devices from each tray and backfills with good devices. The other option is media transfer, between the process tray and shipping tray or other transport medium.

Kinetrrix, a subsidiary of Teradyne, has developed a revolutionary new device handling system that delivers unprecedented reliability and throughput to the "back end" of the semiconductor production line.

The Kinetrrix system began with one overriding design objective: to move devices through the test site as fast and as reliably as possible. An obsession with this single goal led quickly to two key design concepts:

(1) ancillary operations (e.g., sorting) should be separated from the mainstream handling operation, so that the best available engineering solution can be brought to bear on each function.

(2) devices should travel through the system in batches, rather than singly, with computer tracking and monitoring of all data. No singulation, no media transfer, no change kits.

The result: The Kinetrrix Device Handling System.

### Key Features

- ⊗ Unprecedented reliability
- ⊗ Supports up to 15 handlers
- ⊗ Dual modes: backfill or media transfer
- ⊗ Network-based tray-mapping software on Windows NT™ platform
- ⊗ Real-time analysis, graphics-based diagnostics
- ⊗ Automated lot-status reporting and accounting via SECSII
- ⊗ Modular design
- ⊗ Linear motor technology

# APOLLO K200 Series

*Teradyne is dedicated to providing unparalleled global service and support with 30 technical support centers located in 15 countries, staffed by more than 900 experienced service team members.*

As a device sorter, the APOLLO exploits the separation of the handling and sorting functions to achieve unprecedented throughput - up to 12,000 units per hour in the backfill mode. Each sorter can support as many as 15 handlers, with the ratio of sorters to handlers optimized for maximum efficiency. Networked-based device-tracking software keeps everything straight and delivers real-time yield analysis and graphics-based diagnostics. Automated lot status reporting and tray mapping (just like wafer mapping) work with the users' data system to let users feed short lots into the sorter non-stop, with the computer handling all the accounting.

Modular design allows the easy addition of lead-inspection, tape and reel loading, and

other media-transfer capabilities. The Windows NT software is designed for quick learning and ease of use.

APOLLO's structural integrity is one of its most impressive features. We are talking heavy metal here, and the kind of toughness one is more likely to find in a bulldozer than in a chip factory. Far from overkill, each of these machines will work more hours per week and add more value over its lifetime than 100 bulldozers. This line of thinking shaped the design of the entire product line, and it is another reason why the Kinetrix Device Handling System is a breed apart.

## SPECIFICATIONS

Devices Handled:	CSP, TSOP (Type I & II), QFP, SOP, TQFP, PQFP, and BGA devices. Consult factory for other types.
Input/Output Media:	Standard thin JEDEC outline tray. Thick JEDEC outline optional.
Operating Modes:	Backfill Mode: (high throughput sorting) Media Transfer Mode: (with or without sort)
Output Configuration:	3 high throughput bays (50 JEDEC tray capacity) 4 low throughput bays (15 JEDEC tray capacity) up to 255 output bins (with tray mapping)
Performance:	Backfill Mode: > 12,000 UPH Media Transfer Mode: > 3,600 UPH
Coplanarity:	< 0.001"
Machine Control:	P200 Windows NT™ 4.0 FlexCIM™ Control Software, Color CRT.
Interface:	RS232, Ethernet (SECSII, GEM Compliant)
Facilities:	Power: 208VAC 30A 1ph Air: minimum 50psi CDA Vacuum: internal or external Dimensions: 56" w x 65" l x 49" h Weight: 1,500 lbs (Approx.)
Safety Compliance:	SEMI S2-93 SEMI S8-95 EN60204-1 1993

# KINETRIX

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