

WHY BE CONTROLLED BY A TIMESHARING SYSTEM WHEN YOU CAN CONTROL A **CLUSTER/ONE?**



Clustersharing is . . . several individual computers sharing a large program library, while preserving the individuality of each machine.

The CLUSTER/ONE™ Concept offers each BASIC user his own computer rather than a small share of one central processor.

Nestar Systems' CLUSTER/ONE creates a new dimension in low-cost computing,

combining the power and economy of individual micro-computers with the ability to store and share a million byte source program library on two full-size flexible diskettes.

To find out more about CLUSTER/ONE, call us at 415/327-0125. Or write to Nestar Systems, Inc., 430 Sherman Avenue, Palo Alto, California 94306.

NESTAR SYSTEMS
INCORPORATED



Cluster/One Storage Unit (CLO-1001)

SPECIFICATIONS

1. Mechanical

Dimensions: 20" (50.8 cm) wide x 10" (25.4 cm) high x 19" (48.3 cm) deep

Weight: 92 lbs (42 kg)

Required Clearances:

Back (for cables and cooling):
3" (7.6 cm)

Front (for loading diskettes):
12" (30.5 cm)

Left side (for Commodore PET console):
19" (48.3 cm)

Cabinet: All steel; off-white with black trim

Access: Removable cover (2 screws)

2. Electrical

Power: 105-125 volts AC, 60 Hz \pm .5 Hz (standard)

Power Consumption: 200 watts maximum

Circuit Protection: 3 amp medium-blow fuse

Power Cord: detachable, with IEC standard connector

3. Environmental

Temperature: 40°F (5°C) to 95°F (36°C), operating
-30°F (-34°C) to 150°F (66°C), storage
(without diskettes)

Relative Humidity: 20% to 80% without condensation, operating
5% to 98% without condensation, storage

Heat Dissipation: 510 BTU/hr, typical

Cooling: forced air, 70 cfm

4. Maintenance

None required

5. Approvals

UL Listing applied for

6. Disk Storage

Formatted Capacity (two drives): 630,734 bytes
(single-sided, CLO-1001)

1,261,568 bytes (double-sided, CLO-1001-2)

Recording Density: approximately 3200 BPI

Number of Tracks: 77 each side

Rotational Speed: 360 RPM

Transfer Rate: 250K bps into Queen Buffer

Latency: 83 msec average

Track Access Time: 6 msec per track

Error Rate: read (recoverable) less than 1 in 10^9 bits
read (non-recoverable) less than 1 in 10^{12} bits

Estimated MTBF: 5000 powered on hours

Media Life: 3.5×10^6 passes/track; 30,000 insertions

7. ClusterBus

Cable: 26-wire flexible flat cable, daisy-chained from Queen

Signal Levels: IEEE Std 488-1975
(ANSI MC 1.1-1975)

Maximum Cable Length: 250 feet (77 meters) from Queen to farthest Drone

Transfer Protocol: packetized blocks with CRC checks (*NOT* IEEE Std 488 compatible)

Addressing Scheme: Proprietary to Nestar Systems, patent applied for (*NOT* IEEE Std 488 compatible)

Maximum Addressing: 15 Drones per channel.
First channel is standard, second channel is an optional feature.

Transfer Rate: approximately 80K bps

8. System Characteristics

A. Typical Performance

Program Size	@ LOAD	@ SAVE
1K bytes	2 sec	3 sec
4K bytes	4 sec	5 sec
8K bytes	5 sec	7 sec

NOTE:

All times are approximate, assume no contention with other drones, and vary due to placement of files on the disk and other factors. Multiple requests are serviced by the Queen with a round-robin queueing discipline.

B. Reliability Features

1. CRC checks on all addresses and data
2. Retransmissions of packets as necessary
3. Timeouts to avoid lockups
4. Periodic CRC checks of system code
5. Automatic verification of all disk writes
6. Sequenced directory updates



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