

Olivetti Computers OH 5500 Series

New Product Announcement

Created by Olivetti in September 1979 to market IBM plug-compatible mainframes (PCM's), Olivetti Computers S.p.A. has announced a second series of PCM's, this one to be manufactured by Hitachi of Japan. To distinguish it from the Olivetti OC 5300 series, manufactured by IPL in the U.S., Olivetti has designated the series the OH 5500.

With the Hitachi-manufactured models, Olivetti Computers is entering the large-scale IBM-compatible mainframe market. The three OH 5500 general-purpose computers are targeted at the middle and upper end of IBM's 303X series. In this way Olivetti is following in the footsteps of its European brother, Siemens, which is marketing the Siemens System 7.800 series of PCM's manufactured by Fujitsu in Japan.

With the launching of this new activity, Olivetti becomes a supplier of equipment ranging from office automation products to complex information systems. Olivetti intends to provide both system support and maintenance services, which will be carried out by highly qualified technicians with long experience in data processing.

Based on the Hitachi M180, the OH 5500 models are the OH 5520, OH 5530, and OH 5545. They are similar to models in National Advanced Systems' new AS/7000 family, also manufactured by Hitachi.

The low end model in the OH 5500 series is the OH 5520, a two-megabyte, six-channel processor expandable to eight megabytes. The OH 5520 has 1.8 to 2.2 times the throughput of the IBM 3031.

The larger OH 5530, a system with approximately 1.2 times the throughput of the IBM 3032, can be ordered as a 4-megabyte, 8-channel basic system expandable to 16 megabytes and 16 channels.

The OH 5545, a dual-processor complex with throughput superior to the IBM 3033, can be ordered as a 4-megabyte, 8-channel basic system expandable to 16 megabytes and 1 channel.

CPU power, in terms of millions of instructions per second (MIPS), is 2.2 for the OH 5520, 3.2 for the OH 5530, and 5.2 for the OH 5545. All three models have a CPU cycle time of 72 nanoseconds and a memory cycle time of 360 nanoseconds on an 8-byte fetch.

One input/output processor is standard. A second I/O processor is optional with the OH 5530 and OH 5545. Each I/O processor can handle two byte multiplexer channels and up to six block multiplexer channels.

The input/output processors on the OH 5545 may be attached to both processors and can be switched from one processor to the other if one processor goes down.

The maximum channel data rate is 1.86 megabytes per second for the block multiplexer, 100K bytes per second for the byte multiplexer, while the aggregate maximum is 10 megabytes per second for one input/output processor and 16 megabytes per second for two.

Large-scale integrated (LSI) semiconductor circuits are used extensively throughout the system, resulting in increased processing speeds, higher reliability, and reduced space and cooling requirements. The central processor uses an LSI version of bipolar emitter-coupled logic (ECL) with very fast chip speeds.

Main memory in the OH 5500 uses metal oxide semiconductor (MOS) LSI circuits and has a cycle time of 360 nanoseconds. Ultra-high-speed bipolar components are used in the cache memory. Cache loading from main memory is performed in 32-byte blocks. Using the maximum, four-way interleaving capabilities, a data transfer rate of one 32-byte block per 144 nanoseconds can be achieved between main memory and the high-speed cache memory.

Among the standard features are error checking and correcting (ECC) memory, program event recording, byte alignment, storage protection, instruction retry, clock comparator, CPU timer, interval timer, time of day clock, high-speed arithmetic (except on OH 5520), extended precision floating point, direct control, channel-to-channel adaptor, service processor, light pen and printer

Olivetti Computers OH 5500 Series

New Product Announcement

adaptor for the video console, System/370 Extended Facility, and Virtual Machine Assist. As an option on all models, an alternate console can be attached. The two-byte interface feature can be added to each input/output processor.

Olivetti Computers has chosen these Japanese-manufactured computers as its second family of PCM's. The entry-level can be either the OC 5320, manufactured by IPL, or the OH 5520. Expandability is the key. To meet future data processing needs, the OH 5520 can be upgraded to the OH 5530 and OH 5545. This gives the user a growth path that allows him to increase performance by up to 250 percent.

Competitive Position

Although price obviously plays a role in an acquisition decision, the most essential ingredient to a successful relationship between customer and vendor is service and technical support. In this area, Olivetti Computers is preparing itself by setting up a network of professionally trained technicians in Italy, its first market for its PCM computers. If successful there, Olivetti will move on to the other European markets.

When this takes place, Olivetti will find stronger competition from the other European vendors such as Siemens of Germany, which now has its own PCM; CII-HB of France, which has introduced its new DPS 7 and DPS 8 ranges; and ICL of the UK, which markets the broad 2900 Series. Competition will also come from the American-owned vendors in Europe such as Honeywell, Univac, Burroughs, Nasco, and Amdahl.

Olivetti, whose expertise is in distributed processing and office systems, has associated companies throughout the world and therefore has a ready-made marketing and aftersales infrastructure if and when it decides to expand outside Europe.

At the time of writing, prices were not yet available, but were expected to be set so that the OH 5500 computers would be extremely competitive.

Specifically, the main competition for the OH 5520 will be from IBM's 3031AP, or 3032, Nasco's AS/7000N, and Siemens' System 7.870. Non-compatible competition will be from Siemens' System 7.762, CII-HB's DPS 7/80 or DPS 8/70, and ICL's 2976.

The OH 5530 will compete against IBM's 3032, Amdahl's 470 V5-2, and Nasco's AS/7000. The OH 5545 with its dual processor will have the IBM 3033N, Amdahl's 470 V6-2, Nasco's AS/7000 DPC, and Siemens' 7.872 to contend with. Non-compatible competition will come from ICL's 2982/20, Univac's 1100/60, and CII-HB's DPS 8/70.

Background

This is not the first attempt by Olivetti to enter the mainframe market. In 1959, the company designed and produced the first Italian mainframe (ELEA). In 1964, this activity was incorporated into a new company, Olivetti General Electric, in which GE (U.S.) had a 75 percent holding. In 1968, Olivetti withdrew from this company to concentrate on the design and production of small data processing systems and terminals.

When ITEL ran into financial problems last year, Olivetti seized its opportunity, appointing Lorenzo Bosio, managing director of ITEL Italia, to head a new Olivetti attempt at capturing a share of the profitable mainframe market. With a 70% IBM-based mainframe market, Olivetti took the decision to market a PCM. Olivetti Computers S.p.A. is completely owned by Ing. C. Olivetti and C. S.p.A., Italy's largest computer company, which employs over 59,000 people worldwide, and has 28 manufacturing and assembly plants throughout the world. Olivetti Computers will receive support and necessary know-how from the parent company. □