MAGNUSON COMPUTER SYSTEMS

M80 Models 32, 42 and 43 Computer Systems

The 4300 Alternative—Now

Magnuson's advanced series computers open new user growth paths with expanded performance through the 4300 series, while maintaining full IBM hardware and software compatibility.

The M80/32 will offer up to 3 times the announced performance of an IBM 4331 processor.

The M80/42 will offer up to 1.1 times the announced performance of the 4341.

The M80/43, will offer up to 1.3 times the announced performance of the 4341.

Magnuson's bus-flexible Strategic Architecture will allow complete field upgradability of Models 3 and 4 to M80 Models 32, 42 and 43.
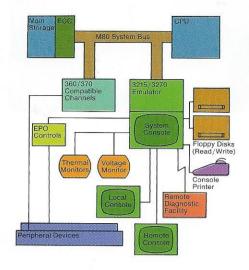
Strategic Architecture provides both increased performance and easy expandability for processor, channels and memory—all completely field upgradable within the framework of the original M80. Magnuson Structural Modularity allows memory and channels to be added incrementally.

Structural Modularity results in a computer system that uses one-fourth the floor space and 71 percent less power than comparable IBM models for significant savings in energy and air conditioning dollars.

The standard M80 system includes a Central Processor, Control Storage, Channels, Processor Storage, Console Display and Keyboard.

Central Processor

All M80 Processors are totally compatible with 360, 370 and 303X software and hardware. The M80 32, 42 and 43 processors offer the new VSE capability and one-level addressing. The central processor contains built-in maintenance and fault-isolation circuitry with a minimum of printed circuit cards.

Control Storage

With 64K bytes of control storage standard, the M80 series retains total software compatibility while also offering ECPS, VMA and VSE assist capabilities. Redundant flexible disks for IMPL and diagnostics are packaged in the console to guarantee maximum availability. Control storage can be increased to 256K bytes as required.

Channels

Magnuson channels will attach to the newly announced 4341 I/O products while maintaining compatibility with existing I/O equipment. The aggregate data rate has been increased to 13.3 megabytes/sec, still retaining 256 unshared UCW's per channel. One-level addressing within the channel also is a standard feature.

Processor Storage

The M80 storage module, utilizing 64K RAM technology, permits incremental upgrades of 2048K bytes on a single printed circuit card to maximum. Any storage module can easily be configured off-line. With complete error check and correction (ECC), memory upgrades can be accomplished with an absolute minimal impact on system up time.

Console Display and Keyboard

The M80 console, in addition to acting as an operator display, functions interactively with the processor to allow increased system monitoring. A CPU monitor is also built in to measure system and CPU activity. Full environmental monitoring and recording are standard. A data link can be established with Magnuson's Technical Support Center for remote diagnosis.

M80/32, M80/42, M80/43 System Specifications

	M80/32	M80/42	M80/43
Software Support			
OS/VS1	Std	Std	Std
OS/VS2 (SVS and MVS)	Std	Std	Std
DOS/VS, DOS/VSE	Std	Std	Std
VM/370	Std	Std	Std
Processor Performance			
CPU Cycle Time	100 ns	100 ns	100 ns
Main Storage Capacity (Bytes)	1M Std, +7M Opt	2M Std, +14M Opt	2M Std, +14M Opt
I/O Channels	3 Std, +3 Opt	3 Std, +13 Opt	6 Std, +10 Opt
Channel Data Rates (Byte Mode)	100K Bytes/Sec	100K Bytes/Sec	100K Bytes/Sec
Channel Data Rates (Burst Mode)	2.5M Bytes/Sec	2.5M Bytes/Sec	2.5M Bytes/Sec
Aggregate Data Rate	13.3M Bytes/Sec	13.3M Bytes/Sec	13.3M Bytes/Sec
Cache Buffer Storage	Opt	16K Bytes	32K Bytes
Features			
Advanced Control Program Support	Std	Std	Std
Audible Alarm	Std	Std	Std
Byte-Oriented Operands	Std	Std	Std
Channels of any Byte/Block Mix	Std	Std	Std
256 Subchannels on each Channel	Std	Std	Std
Channel Command Retry	Std	Std	Std
Channel Indirect Addressing	Std	Std	Std
Channel One-Level Addressing	Std	Std	Std
Channel-to-Channel Adapter	Opt	Opt	Opt
Clock Comparator and CPU Timer	Std	Std	Std
Console File	Std	Std	Std
Control Registers	Std	Std	Std
CPU Activity Monitor	Std	Std	Std
CPU One-Level Addressing	Std	Std	Std
Direct Control and External Signal	Opt	Opt	Opt
Doubleword Buffer	Std	Std	Std
Dynamic Address Translation	Std	Std	Std
3277 Model 2 and 3215 Emulation	Std	Std	Std
Error Check and Correction (Main Storage)	Std	Std	Std
ECPS: VSE Mode, VS1, VM/370	Std	Std	Std
Extended Control Mode	Std	Std	Std
Extended Precision Floating Point	Std	Std	Std
Integrated Console Printer	Opt	Opt	Opt
Interval Timer	Std	Std	Std
Light Pen	Opt	Opt	Opt
Machine Check Handling	Std	Std	Std
Move Inverse Instruction	Std	Std	Std
Program Event Recording	Std	Std	Std
Remote Console	Opt	Opt	Opt
Remote Data Link	Std	Std	Std
Remote Support Facility	Std	Std	Std
SIOF	Std	Std	Std
Storage Protection (Store and Fetch)	Std	Std	Std
S/370 Mode	Std	Std	Std
System/370 Universal Instruction Set	Std	Std	Std
Time-of-Day Clock	Std	Std	Std
Virtual Machine Assist	Std	Std	Std
Physical			
Width	112 in. (285 cm)	112 in. (285 cm)	112 in. (285 cm)
Depth	43 in. (114 cm)	43 in. (114 cm)	43 in. (114 cm)
Height	30 in. (76 cm)	30 in. (76 cm)	30 in. (76 cm)
Weight	820 lb. (372 kg)	820 lb. (372 kg)	820 lb. (372 kg)
Operating			
Voltage	180V–256V	180V–256V	180V–256V
Phase	3Ø, 4-wire	3Ø, 4-wire	3Ø, 4-wire
Freq	50–60 Hz	50–60 Hz	50–60 Hz
Thermal	10,000 BTU/Hr	10,000 BTU/Hr	10,000 BTU/Hr
Environmental			
Ambient Temp Range	60°F–90°F (15°C–32°C)	60°F–90°F (15°C–32°C)	60°F–90°F (15°C–32°C)
Max Wet Bulb Temp	78°F(25.5°C)	78°F(25.5°C)	78°F(25.5°C)
Relative Humidity	20%–80%	20%–80%	20%–80%