

7010 Data Processing System

The following I/O devices may be attached at the same time to the standard data channel on the IBM 7010 System:

One 1414 Input/Output Synchronizer, Model 1, 2, or 7

Model 1 controls up to ten 729 II, IV, or V Magnetic Tape Units in any combination

Model 2 controls up to ten 7330 Magnetic Tape Units

Model 7 controls up to ten 729 II, IV, V, or VI Magnetic Tape Units in any combination

One 1414 Input/Output Synchronizer, Model 3, 4, or 5

Model 3 controls a 1402 Card Read Punch, Model 2, and, if desired, a 1403 Printer, Model 1 or 2

Model 4 controls a 1402, a 1403 if desired, and various combinations of optional features such as:

- Data Transmission Unit Adapter
- Read and Punch Column Binary
- Remote Inquiry Unit Adapter
- Telegraph Input/Output Feature
- Paper Tape Reader Adapter

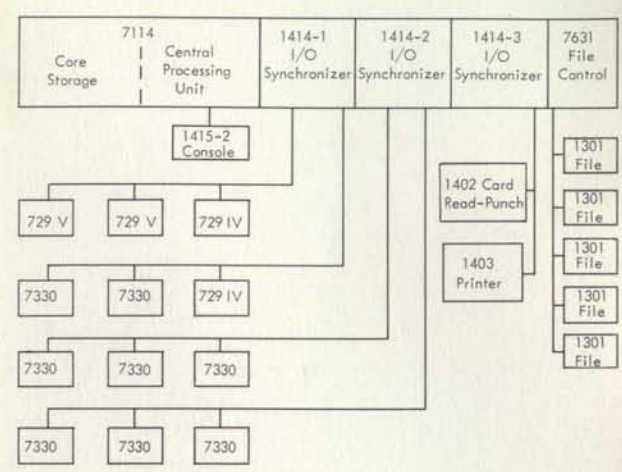
Model 5 controls the various combinations of optional features such as:

- Data Transmission Unit Adapter
- Read and Punch Column Binary
- Remote Inquiry Unit Adapter
- Telegraph Input/Output Feature
- Paper Tape Reader Adapter

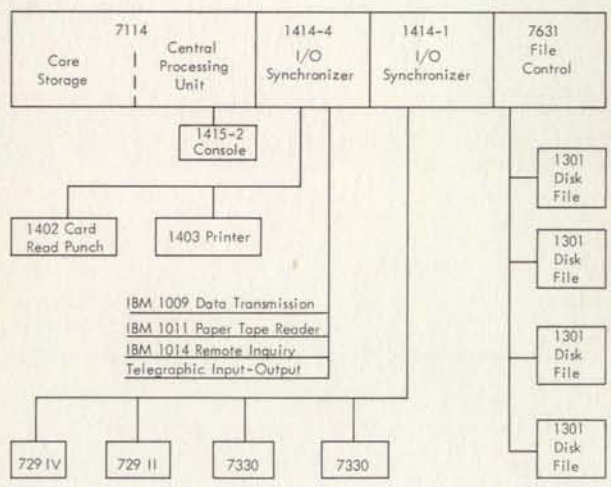
One 7631 File Control, Model 1 or 3

Model 1 handles up to five IBM 1301 Disk Storage units, Model 1 or 2, in any combination

Model 3 is same as Model 1 but is for shared use by a 7010 System and any one IBM 7000 System (except 7072)



A Multiple Channel Configuration



A Communications Oriented Configuration

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CUSTOMER ENGINEERING ANNOUNCEMENT



THE IBM 7010 DATA PROCESSING SYSTEM is the newest addition to the 1401-1410 series of computers. It is a completely variable-field-length, alphameric, serial processing system offering increased performance over the IBM 1410 System. The IBM 7010 is designed so that programs produced by IBM Programming Systems for the IBM 1410 will run on an IBM 7010 without change.

A 7010 system is approximately 3.5 times as fast as a 1410 internally and approximately 2.75 times as fast as a 1410 system with the accelerator feature. Job-time performance is materially improved because of increased internal speed and more efficient handling of input/output data. The following chart shows some of the internal processing speeds of the 7010, 1410, and 1410 with accelerator feature:

	7010	1410 with Accelerator	1410
Add (6 digits + 6 digits)	35.2 μ s	96.0 μ s	121.5 μ s
Multiply (6 \times 3 characters)	260.4 μ s	548.0 μ s	816.8 μ s
Indexing (per address)	9.6 μ s	24.0 μ s	34.5 μ s
Data Move (100 characters)	299.6 μ s	852.0 μ s	1183.5 μ s
Test and Branch	10.8 μ s	34.0 μ s	38.3 μ s

Data flow through the IBM 7114 Processing Unit is similar to that of the IBM 1411 Processing Unit. The greatly increased speed has been attained by using:

A new, high speed (2.4 μ s) core storage that reads out two characters at a time.

Dual B character registers for each storage plane, three A character registers, and a single character Result register to allow the 7114 Processing Unit to take full advantage of the two character parallel storage.

Parallel address modification.

DTL (double diffused transistor logic) circuitry.

The greatly increased speed of the 7114 Processing Unit requires only 12% more power.

Coupled with higher processing speed, the 7010 offers as standard features:

- Compatibility with the IBM 1410 System
- Process Overlap
- Priority Processing
- Indexing – fifteen 5-digit indexing fields in core storage
- 40,000 core storage positions
- Compact, serviceable SMS packaging (rack and panel)
- Error checking circuitry designed to check the validity of data being processed on every major data path.

Optional features include:

- 1401 compatibility feature
- Expanded core storage (up to 100,000 positions)
- A second data channel

The IBM 7010 System uses most IBM 1410 System I/O devices and control units.