

1MM

4361

**Model 3**

New Feature Enhancement  
for all Models of the  
4361 Family

## PRODUCT DESCRIPTION

The 4361-3 is a new model of the 4361 family which offers performance options and a variety of features to make it attractive as both an entry level commercial or an engineering/scientific (E/S) based processor.

### General

- 2 or 4 MB of Processor Storage
- 8K Byte High Speed Buffer Storage
- Internal Performance:
  - Commercial Applications:
    - Equal to the 4331-2
  - Engineering/Scientific Applications
    - Up to 1.4 - 2.2 times of the 4331-2 with special Engineering/Scientific performance package.

### Integrated Channel Busses

Two Integrated Channel busses carry all communications between the processing unit, I/O units, and all common sub-assemblies. Attached to the Integrated Channel (IC) busses are (depending of feature mix):

- DASD/8809 Adapters
- Channel Adapters
- I/O Subsystem - Work Station Adapter
- Communications Adapter
- Support Processor

### Support Processor (SP)

The 4361 model 3 contains an independent Support Processor which is used for:

- Error logging and recovery
- Integrated Reference Code Analysis (IRECA)
- Control of Remote Support Facility
- Initial Microcode Load (IML)
- Problem Finder Facility
- Power-up and Voltage Monitoring
- Control of the display console and console printer and the locally attached displays, printers and diskette drive.

### Programming Support

The 4361 model 3 is supported by applicable releases of DOS/VSE, OS/VS1, VM/370 and SSX/VSE.

### Installability

Installation time of the new 4361 model 3 is projected to be approximately 10 CE hours.

### Upgradeability

The 4361 mod 3 can be upgraded to the 4361 mod 4 and 5. Projected field upgrade time is approximately 8 system hours (depending on features).

### Technology

- Bi-polar large scale integration (LSI) logic
- Field effect transistor-large scale integration (FET LSI)
- Monolithic system technology (MST)
- Early large scale integration (ELSI)
- Ferro-resonant power supplies
- Switching regulator power supplies

### Physical Characteristics

- Office environment
- Environmental conditions
  - Temperature : Class B 20.0 to 32.0 degree C
  - Humidity : 8 to 80 % RH
  - Noise rating : 56 dB
- Power
  - Phases : Single Phase
  - Load : 2.6 kVA
  - Fuse : 16 A (max.)
  - Frequency : 50 Hz or 60 Hz

### Manufacturing Locations

- Havant UK
- Endicott USA
- Yasu Japan

## Standard Features

- 2 MB Processor Storage
- Display/Printer Adapter with 16 Ports
- External Signals
- 128 KB Control Storage
- Standard Power Interface (8 Positions)
- Extended Control Program Support (ECPS):  
VM/370 Assist
- I/O diskette drive (can be used by the customer after IML/IPL)
- Remote Support Facility/Remote Operator Control Facility (standard for microcode only)
- /370 Mode or E-Mode (Operator Selectable)
- Serial OEM Interface (SOEMI)
- Programmable Power-Off
- High precision floating point feature (ACRITH)

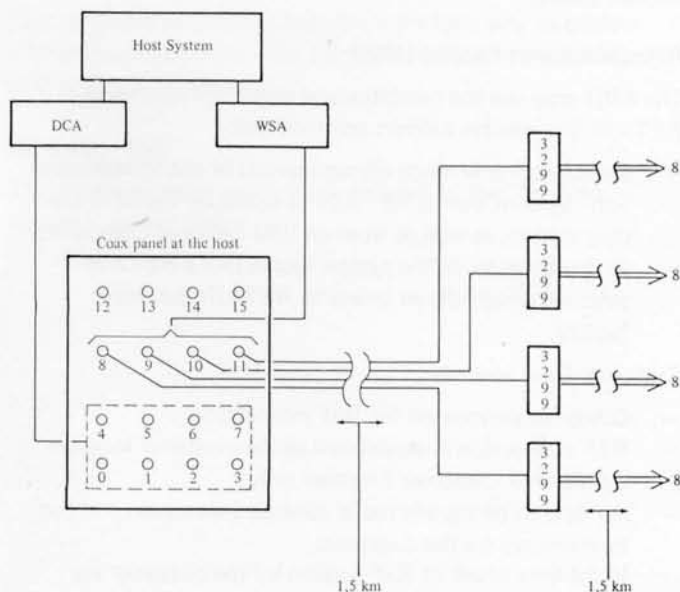
## Optional Features

- Storage Expansion to 4MB
- Communications Adapter (Support up to 8 lines)
- Up to 2 DASD/8809 Adapters
- One Block Multiplex Channel -BMPX- (1.25 MB/Sec)
- One High Speed Block Multiplex Channel -HSC- (1.8 MB/Sec)
- One Byte Multiplex Channel -MPX-
- Work Station Adapter (WSA)
- Auto Start Feature
- X.21 Adapter for Switched Network
- Engineering/Scientific performance package (only installable at the factory):
  - Floating Point Multiply card
  - Elementary Mathematics Library (EML)

## New features which are available for all models of the 4361 family:

- The Serial OEM Interface (SOEMI) - a microcode support for this interface is provided on the Display/Printer Adapter and on the Workstation Adapter. It allows attachment of OEM subsystems and devices to the DPA/WSA ports. There is no hardware provided with this feature. The SOEMI adaptercard is not produced, marketed or serviced by IBM.
- The programmable Power-Off function allows shut down of the processor under program control, using the System /370 Diagnose instruction.
- The Auto Start Feature allows pre-programmed power-on, remote power-on by telephone via ROCF and re-power-on after a power outage. It then loads the microcode, sets the TOD clock from a battery operated clock, and IPL's the system.
- The Workstation Adapter (WSA) - provides through IBM 3299 Multiplexers expanded and improved capabilities for economical direct attachment of up to 32 terminal devices and intelligent workstations like the Displaywriter System and the Personal Computer. When the WSA is installed, the number of ports on the Display/Printer Adapter is reduced from 16 to 8.

The WSA provides 32 ports for native terminal attachments as shown below.



## Maintenance Package

The maintenance package consists of:

- First failure capture for reference code creation and error logging.
- Reference code for PROF1, IRECA and Map entry.
- Problem Finder (PROFI) to be used by the customer.
- Integrated Reference Code Analysis (IRECA).
- System Event Trace (SET).
- System status display.
- Maintenance Analysis Procedure (MAP).
- Microcode inline tests.
- Microcode fix diskette.
- Remote Support Facility (RSF).

### 4361 Problem Finder (PROFI)

The 4361 'Problem Finder' is a facility that can be invoked by the customer at the operator console at any time to search for possible problems and obtain guidance for problem determination and solution where possible.

- Takes the guess-work out of many unclear situations (hangs, hard waits, loops, etc.).
- Reduces system outage by suggesting FRU's for initial customer service call.
- Is easy to use via screen prompted instructions.
- Can be used concurrently with applications.
- Is operational even when processing unit, main storage, channels or attachments are down.
- Gives telephone number of the responsible service location.

In cases of Check Stop or IML error conditions the PROF1 appears automatically on the operator console to give further advice.

### Remote Support Facility (RSF)

The 4361 may use the databank and datalink facilities of RETAIN in a remote support environment.

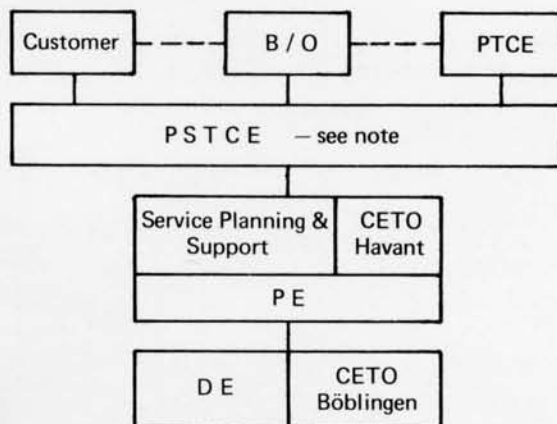
- Remote console mode allows control of the Maintenance Sub-System from a RETAIN terminal, or via 3275 display station, as well as from an IBM Personal Computer.
- In databank mode the system works like a RETAIN terminal which allows access to RETAIN databank facility.

### Customer Data Security

- Customer permission for RSF connection.
- RSF connection is established at the customer location by the IBM Customer Engineer only.
- All data to be transferred is displayed on screen and can be monitored by the customer.
- Immediate break of RSF session by the customer via control command possible.

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## Service Delivery (EMEA only)



Note: Depending on country organisation, PSTCE will be involved immediately on every customer call (hardware central service) or by PTCE.

### Maintenance Service (Maint. Agreement)

The IBM Maintenance Agreement enables IBM CE to provide optimal service and system availability and combines the above service components with limited customer involvement.

CE assumes full responsibility for keeping this machine in good working order. The IBM Maintenance Agreement is available at plannable cost with minimum administrative impact to the customer.

The IBM Maintenance Agreement is the best way to protect Customers investment. IBM CE will assist in the marketing of Maintenance Agreements.

### CE Career Path

The 4361 processor complex is assigned to the 'Account Systems' Career Path.

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