Chapter 1. Overview of the 7588 Computer

The IBM 7588 Computer is designed for an extended product life in an environment of constantly advancing technology. It is engineered for flexibility, growth, and upgradability. The chassis and covers can be used with different configurations of the industrial computer. The following are some of the highlights of the computer.

- It accommodates several different microprocessors.
- It houses a variety of standard-width drives; it has space for two hard disk drives, a diskette drive, and a full-size 5.25-inch device, such as a CD-ROM drive.
- It has features for data security and selected power-management functions.

The 7588 Computer has two basic configurations, 10/2-slot and 4/5/3-slot. Each configuration has one slot for the SBC and 11 full-length and one half-length expansion slots that support 16-bit ISA (industry standard architecture) and 32-bit PCI (peripheral component interconnect) adapters.

- The 10/2-slot configuration has:
  - Ten 16-bit ISA slots (nine full-length)
  - Two shared slots that support both ISA or PCI adapters
- The 4/5/3-slot configuration (standard) has:
  - Four ISA slots (three full-length)
  - Five full-length PCI slots
  - Three shared slots that support both ISA and PCI adapters

Attention
Installing more than eight ISA adapters in a single system can overload the ISA bus and cause the adapters or the computer to fail. Before using configurations with more than eight adapters, test the configuration thoroughly.

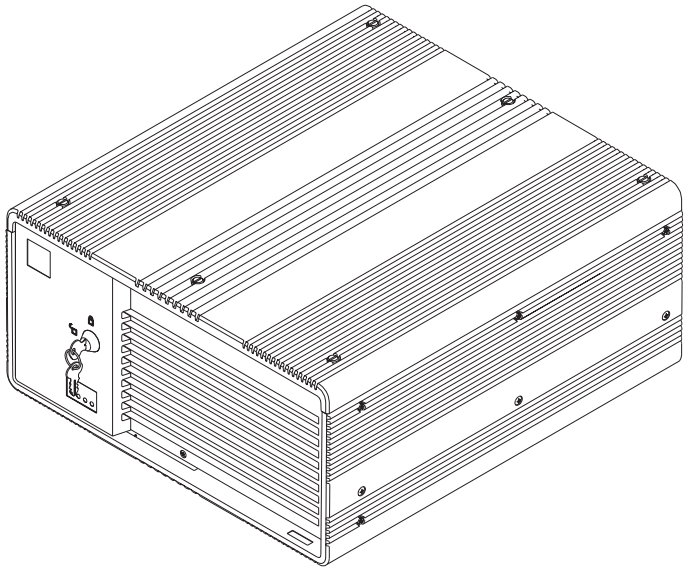

Figure 1-1. IBM 7588 Computer

General Layout of Components

Figure 1-2 and Figure 1-3 on page 1-3 show the 7588 Computer with the cover removed to show the location of the major components in the system unit. The actual options and adapters for a specific configuration can be different than the ones listed; however, the general layout is the same for all configurations,

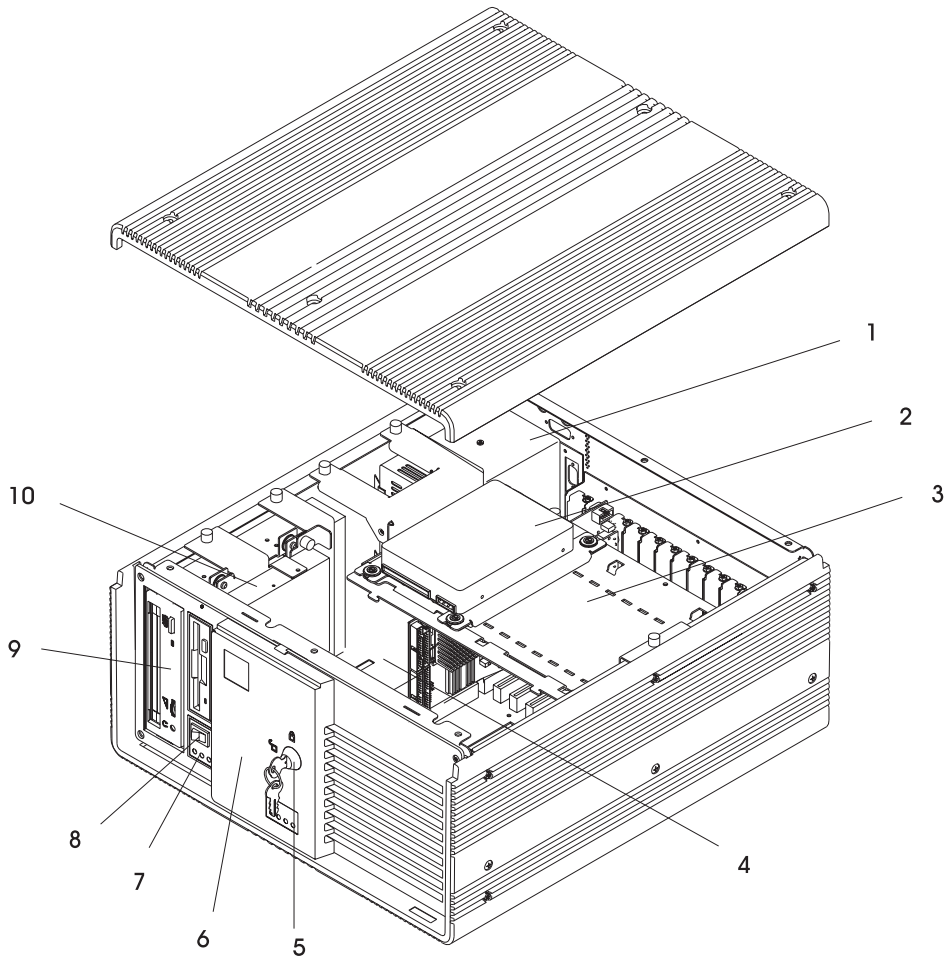

Figure 1-2. General Component Layout 1

1 Power supply
2 Hard disk drive
3 Card hold-down bracket
4 SBC
5 Key lock
6 Sliding door
7 Status light-emitting diodes (LEDs)
8 On/Off switch
9 5.25-inch front access bay (CD-ROM drive shown)
10 3.5-inch diskette drive

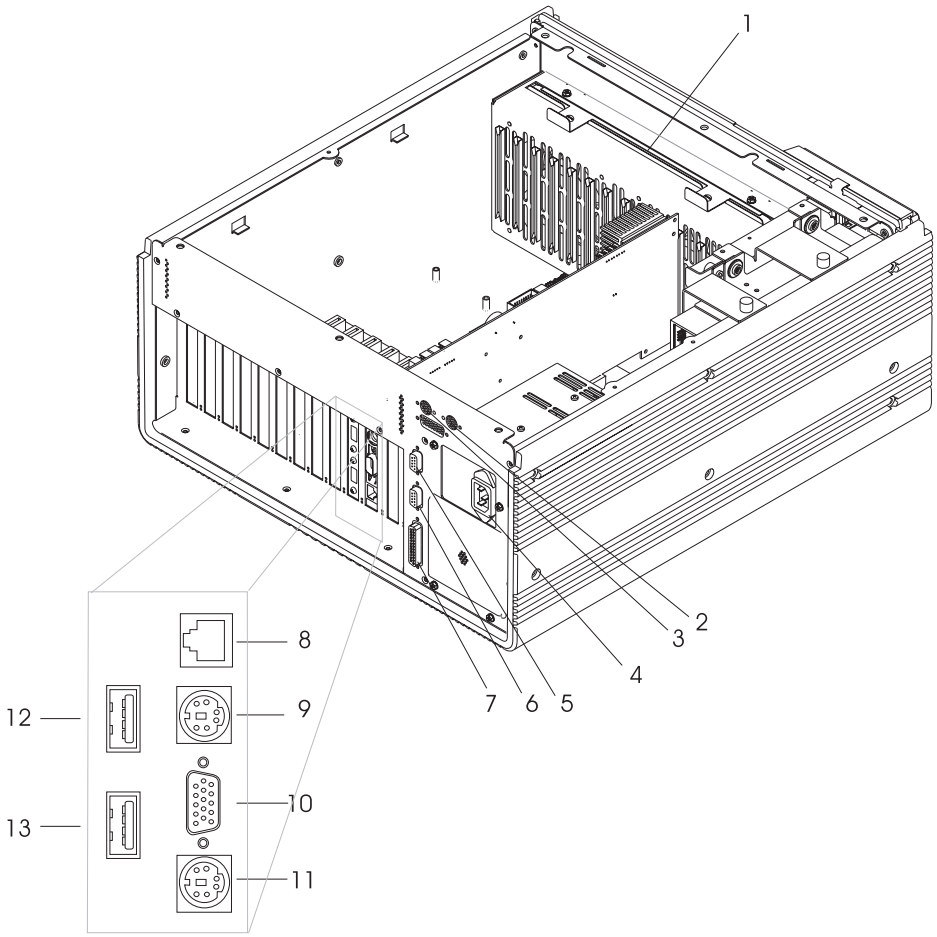

Figure 1-3. General Component Layout 2

1 Filter assembly
2 Alternative keyboard connector
3 Alternative mouse connector
4 Power input connector
5 Serial port B connector
6 Serial port A connector
7 Parallel port connector
8 10 BaseT/100 BaseTX Ethernet port
9 Keyboard connector
10 Video connector
11 Mouse connector
12 USB port 2 connector
13 USB port 1 connector

Specifications

The physical specifications are as follows. For more exact system-unit dimensions, see Appendix B, “Physical Dimensions.”

- Width: 431 millimeters (17 inches)
- Depth: 474 millimeters (18.7 inches)
- Height: 210 millimeters (8.3 inches)
- Weight: 20 kilograms (45 pounds)
  (The actual weight depends on the installed options.)

Power Supply

- 250 Watts Output—ac input only; the voltage range is selected manually. Acceptable inputs are:
  - 100 to 125 (nominal) V ac; 50/60 Hz; 7.5 Amps (maximum)
  - 200 to 245 (nominal) V ac; 50/60 Hz; 3.25 Amps (maximum)

  The following is the maximum total loading allowed for all adapters and hard disk drives installed in the system unit.

+3.3 V dc	5.0 Amps
+5 V dc	20.0 Amps
+12 V dc	4.0 Amps
–5 V dc	0.4 Amps
–12 V dc	0.4 Amps

Note: These specifications apply to the standard ac power supply only. For specifications on the dc power supply, refer to the *–48 Volt Power Supply Information* book.

Heat Output

The estimated heat output for the system unit with a 250-Watt power supply is 350 Watts (1200 BTU/hour).

Environment

- Ambient temperature
  - Operating: 0° to 50°C (32° to 122°F)
  - Non-Operating: 0° to 60°C (32° to 140°F)
  - Shipping: –40° to 60°C (–40° to 140°F)
- Relative humidity
  - Operating: 5% to 95%

Agency and Standards Compliance

- Equipment Approvals and Certifications
  - UL Listed (UL 1950, 3rd Edition, U.S Legal-OSHA)
  - CSA Certified (CSA22.2 No. 950-M95)
  - VDE or TUV (EN 60950/IEC 950) 2nd Edition
  - FCC Class A
  - VCCI Class A
  - CISPR 22 Class A (EN 55022)
  - CE Mark Class A (EN 55022)
  - AS/NZS 3548 Class A
  - Korean MIC Notice No. 1996-78
- European Standards Compliance
  - Safety (IEC 950, EN 60950)
  - Shock while operating (IEC 68-2-27)
    30 G, 1/2 sine wave for 3 milliseconds duration
  - Vibration (IEC 68-2-6)
    5 to 500 Hz random at 0.27 G RMS
  - Electromagnetic compatibility

Radiated and conducted EMI	EN 55022	
Conducted immunity	EN 50141, Level 3	
Radiated electromagnetic susceptibility	EN 50140, Level 3	10 V/m
Power line harmonics	EN 61000-3-2	
Flicker	EN 61000-3-3	
Electrostatic discharge	EN 61000-4-2	4 kV contact 8 kV air-gap
Electrical fast transients	EN 61000-4-4, Level 3	
Power frequency magnetic field immunity	EN 61000-4-8, Level 4	