
Chapter 1. Overview of the 7587 Industrial Computer

The IBM 7587 Industrial Computer (**computer**) has been designed for use over a long life in an environment of constantly advancing technology. It is engineered for flexibility, growth, and upgradability. Its chassis and covers are designed to be used for many different Industrial Computer configurations. Some of the highlights are:

- It can accommodate several different microprocessors.
- It can house a variety of standard-width input/output (I/O) devices, and a single hard disk and diskette drive.
- It has three full-size and one half-size 16-bit ISA (industry standard architecture) bus card slots. Two of the full-size slots also have a 32-bit PCI (peripheral component interconnect) connector.
- It has features that provide data security and power management.

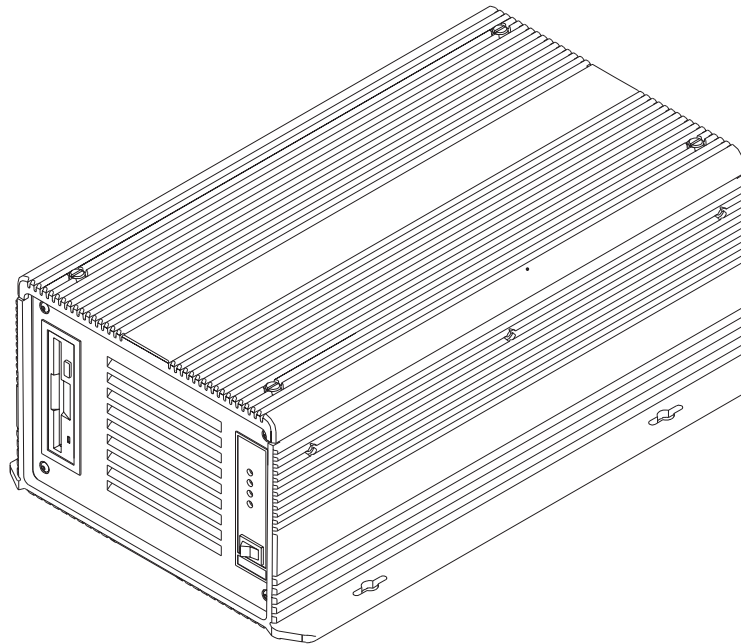


Figure 1-1. IBM 7587 Industrial Computer

General Layout of Components

Figure 1-2 and Figure 1-3 on page 1-3 show the 7587 Industrial Computer with the cover removed. These figures illustrate the general layout of the system unit. The general layout is the same for all configurations, even though components (such as input/output and storage devices) can be changed or added.

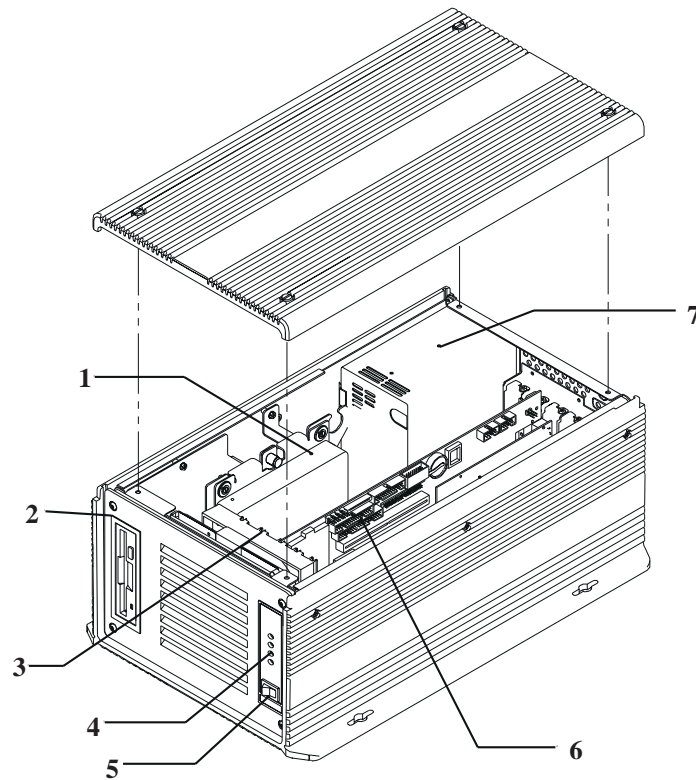


Figure 1-2. General Component Layout 1

- 1 Hard disk drive
- 2 3.5-inch diskette drive
- 3 Fan and filter
- 4 Status light-emitting diodes (LEDs)
- 5 On/Off switch
- 6 Single Board Computer (SBC)
- 7 Power supply

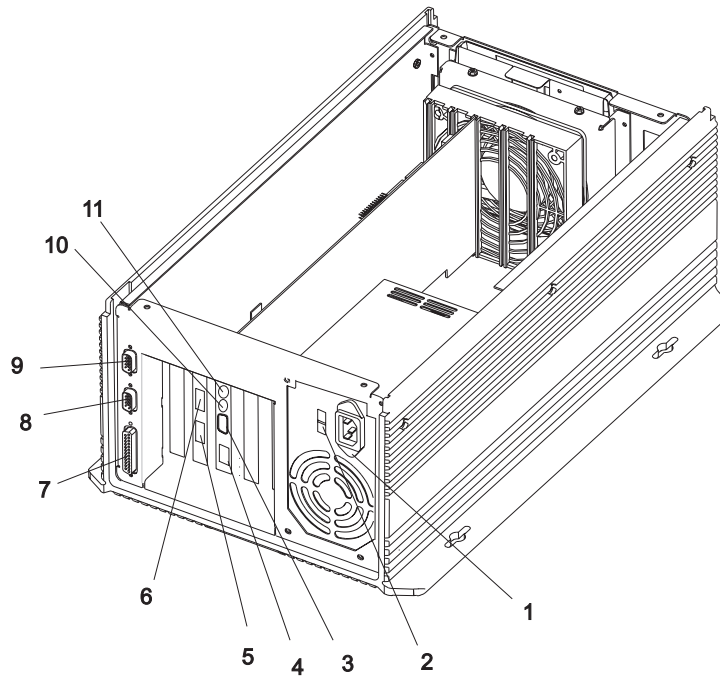


Figure 1-3. General Component Layout 2

- 1 Power input connector
- 2 110/220 voltage selector switch
- 3 Video connector
- 4 10 BaseT/100 BaseTX Ethernet port (optional) (586E and 586EU only)
- 5 USB port 1 connector (586U and 586EU only)
- 6 USB port 2 connector (586U and 586EU only)
- 7 Parallel port connector
- 8 Serial port B connector
- 9 Serial port A connector
- 10 Keyboard connector
- 11 Mouse connector

Specifications

Nominal physical specifications are as follows. For more exact system unit dimensions, see Appendix B, "Physical Dimensions."

- Width: 296 millimeters (11.6 inches)
- Depth: 461.2 millimeters (18.2 inches)
- Height: 185.3 millimeters (7.3 inches)
- Weight: 12.5 kilograms (27.5 pounds) minimum
(Actual weight depends on the options installed.)

Power Supply

- 200 Watts Output—ac input only; voltage range manually switchable. Acceptable inputs are:
 - 100 to 125 (nominal) Volts AC; 50/60 Hz; 6 Amp (maximum)
 - 200 to 245 (nominal) Volts AC; 50/60 Hz; 3 Amp (maximum)

The loading of the adapters and hard disk drives installed in the system unit must not exceed the following limits:

+3.3 V dc	5.0 Amps
+5 V dc	11.0 Amps
+12 V dc	3.5 Amps
–5 V dc	0.5 Amps
–12 V dc	0.5 Amps

Heat Output

Approximate maximum heat output in British Thermal Units (BTUs) per hour.

- 200 Watt power supply—1417 BTU/hour

Environment

- Ambient air 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 while operating: 5% to 95%

Agency and Standards Compliance

- Equipment Approvals and Certifications
 - UL Listed (UL 1950, 1st Edition)
 - CSA Certified (CSA22.2 No. 50-M1990)
 - VDE or TUV (EN 60950/IEC 950)
 - FCC Class A
 - VCCI Class A
 - CISPR 22 Class A (EN 55022)
 - CE Mark Class A (EN 55022)
 - AS/NZS 3548 Class A
 - BABT—UK General Approval NS/G/1234/J/1000003
- 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
 - 15 G, 1/2 sine wave for 10 milliseconds duration
 - Vibration (IEC 68-2-6)
 - 5 to 500 Hz random at 0.67 G RMS

– Electromagnetic compatibility

Radiated and conducted EMI	EN 55022	
Conducted immunity	ENV 50141, Level 3	
Radiated electromagnetic susceptibility	ENV 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	

