
TITAN



SITE
PREPARATION
GUIDE

Change History

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SITE PREPARATION



This guide describes how to prepare your site for installation of the TITAN Graphics Supercomputer, the TITAN Server, and the TITAN Expansion Cabinet.

The FCC requires the following notice:

TITAN generates, uses, and can radiate radio frequency, and if not installed and used in accordance with instructions manuals, may cause interference to radio communications. It has been found to comply with the limits of a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his or her own expense will be required to take whatever measures may be required to correct the interference.

Physical space must be set aside for the TITAN System Module (which houses the TITAN processors and memory), the User Interface Module (which includes the monitor, mouse, junction box, and keyboard), and any peripherals and accessories you plan to connect to the system (printer, terminal, knob box, tablet, and so on).

FCC Notice

***TITAN Graphics
Supercomputer Floor
Plan***

System Module. The System Module is 22.5 inches wide, 24 inches deep, and 50.5 inches high. To allow sufficient air flow, the System Module must be located at least 12 inches from the back wall. To provide clearance for the back door, locate the System Module about 25 inches from the back wall. See Figure 1. The System Module may be colocated with the User Interface Module, or can be located up to 200 feet away (in another room in the same building). Fully configured, the System Module weighs about 450 pounds.

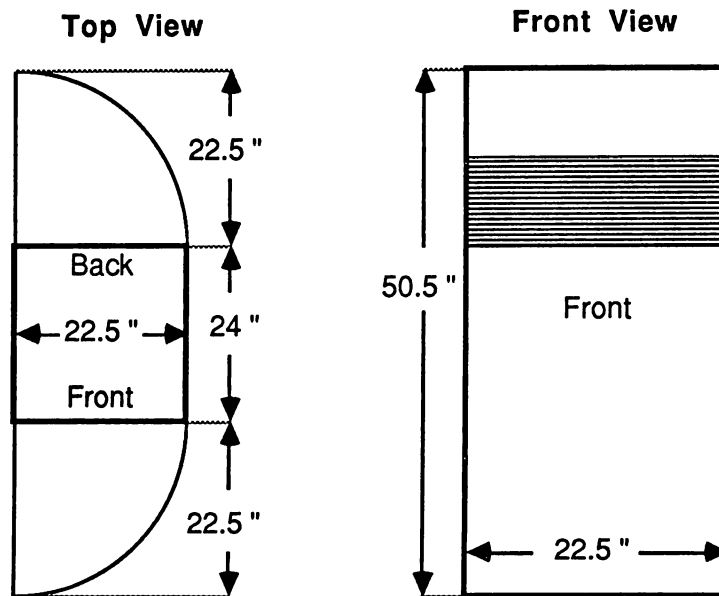


Figure 1. System Module Footprint

User Interface Module. The User Interface Module components should be placed on a table or desk in the user's work area. Room is required on the desk for the monitor, keyboard, mouse pad, and (if desired) the knob box and tablet. Table 1 gives dimensions of the User Interface Module components and accessories.

We recommend that you use a table of standard height (approximately 28 inches high) with minimum dimensions 3 ft. by 5 ft; an adjustable ergonomic chair with good lumbar support to minimize back and neck strain; reduced ambient light levels to improve screen contrast; and localized incandescent lighting to read documents.

Table 1. Size of User Interface Module Components

item	length	depth	height
monitor	19"	21"	19"
keyboard	18"	8"	
mouse pad	8"	9"	
junction box	16"	5.5"	2"
knob box	8.5"	5.5"	
tablet	15"	12"	

Have sufficient space set aside for peripherals and accessories. Keep in mind that printers and modems connect directly to the System Module, whereas accessories such as the knob box and tablet connect to the User Interface Module's junction box.

User Interface Cable. A special interface cable, called the User Interface Cable, connects the System Module and the User Interface Module. It is available in 50 or 200 ft. lengths. The two modules must be located within range of these cables.

When routing the User Interface Cable through ductwork, ceilings, or false floors, take care that sources of electro-magnetic fields, such as light ballasts and motors, are avoided.

The User Interface cable connectors are 2.2 inches wide at the System Module end and 2.9 inches wide at the User Interface end. Make sure conduits are wide enough to accommodate connectors.

TITAN Server Floor Plan

The same chassis is used for both the TITAN Graphics Supercomputer and the TITAN Server System Modules, so use the instructions given above under System Module to prepare your site for the TITAN Server.

Note that the TITAN Server includes no User Interface Module and requires no User Interface Cable. Simply set aside space for a standard, VT100-compatible display terminal to be used as the TITAN Server console. The terminal should support

- 8 bit characters, one stop bit, no parity
- CR, NL, LF, TAB, and BS characters
- 9600 and 2400 baud operation.

**TITAN Expansion
Cabinet Floor Plan**

The TITAN Expansion Cabinet has the same dimensions as the TITAN System Module, except that it is 36 inches deep (rather than 24 inches). Figure 2 shows proper placement of the TITAN Expansion Cabinet relative to the TITAN System Module. Facing the front, the Expansion Cabinet must be located to the right of the System Module, with front panels flush. A metal coupler is installed along with the Expansion Cabinet to keep the two units a fixed distance apart (6 inches). Notice that the doors open opposite from one another, for cabling and maintenance purposes. To allow sufficient air flow the Expansion Cabinet must be located at least 12 inches from the back wall. (See the *Installation Guide* for installation instructions.)

A fully configured Expansion Cabinet weighs about 950 pounds.

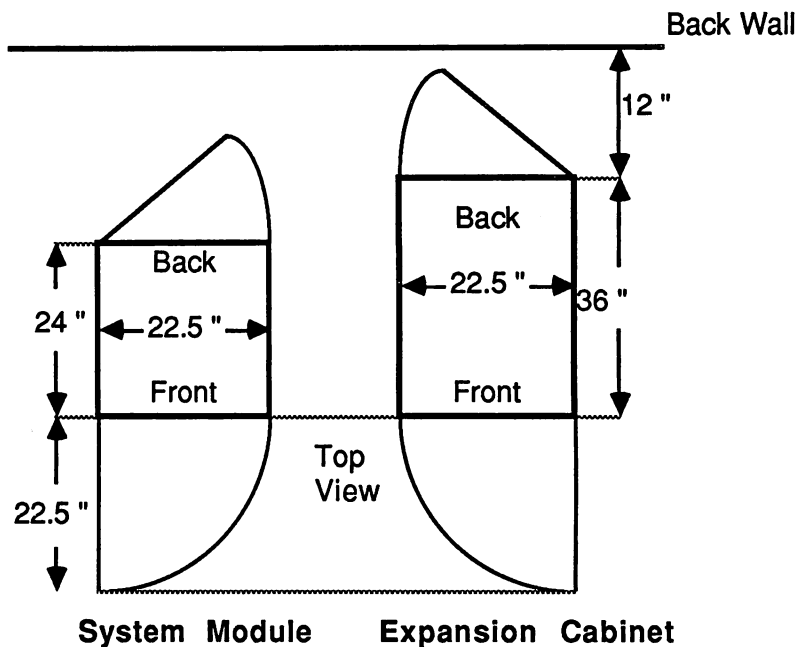


Figure 2. TITAN System Module and Expansion Cabinet Placement

**Environmental
Standards**

Table 2 gives environmental standards for the TITAN System Module.

Table 2. System Module Environmental Standards

Specification	Limit	Exceptions
CLIMATIC Temperature: operating non-operating shipping Humidity: operating non-operating shipping	10 to 40 deg.C -30 to 50 deg.C -40 to 60 deg.C 10-80% (non-condensing) 90% max (non-condensing) 95% max (non-condensing)	monitor lower lim. is 0 tape media lower lim. 20% keyboard lower lim 30%
MECHANICAL Shock: non-operating shipping Vibration: operating non-operating shipping	4g, 15ms, 3axes 12 in., 5 drops .01 in. @5-22hz, .25g@22-500hz .1 in. @5-10hz .5g@10-500hz .25 in.@5-11hz, .15g@11-200hz	
ELECTRICAL Voltage Range: 110 volts 220 volts Frequency:	90-130 VAC RMS 180-260 VAC RMS 50+/-3, 60+/-3 hz	Monitor lower lim. is 198
ACOUSTICAL	less than 63 dbA@ 23 deg.C	
PRODUCT SAFETY UL listing CSA certification GS mark	UL-478 5th edition CSA 22.2 #154 TUV/VDE 0806 IEC 380	
RFI FCC VDE	Class A 0871 Level A	
ESD SUSCEPTIBILITY No Effect Machine Recoverable Errors Reset Recoverable errors No Component Damage	2.5 to 5 KV 7.5/10/12.5 KV 17.5 KV 25 KV	

Power Requirements

Power consumption for the TITAN System Module is 5770 BTUs or 1692 watts. Power consumption for the User Interface Module is 1473 BTUs or 432 watts. Table 3 gives line cord specifications for the TITAN System Module and Figure 3 illustrates the corresponding line cord plugs.

The TITAN Expansion Cabinet uses the same line cord as the associated System Module. Choose the 120 or 240 volt option according to the peripherals you plan to install. For more information see the *Installation Guide*.

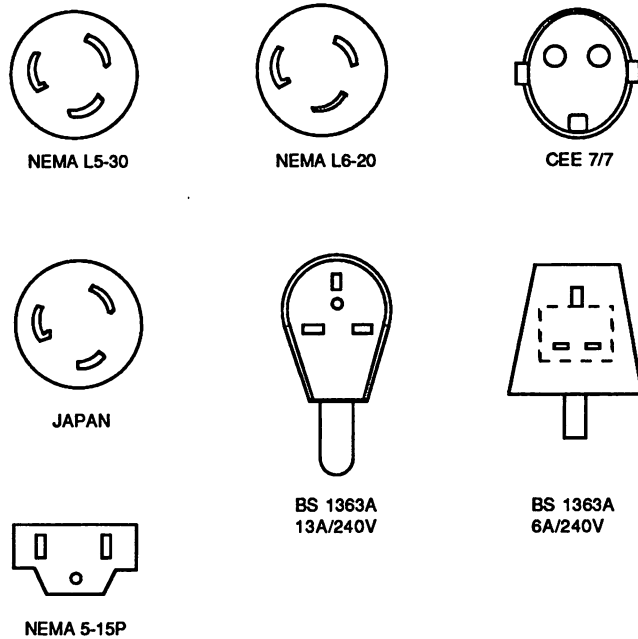


Figure 3. TITAN System Module Line Cords

Table 3. TITAN Line Cord Specifications

Part No.	Title	Plug	Nominal Volt/Curr	Length
100-0044-01	Sys Mod Line Cord USA 110V	NEMA L5-30	115V/30A	10 ft.
100-0045-01	Sys Mod Line Cord USA 220V	NEMA L6-20	230V/20A	10 ft.
100-0046-01	Sys Mod Line Cord Cont. Eur.	CEE 7/7	220V/16A	10 ft.
100-0047-01	Sys Mod Line Cord Unterm.	(NA)	240V/20A	10 ft.
100-0048-01	Sys Mod Line Cord Japan	(See Fig. 2-1)	200V/20A	10 ft.
100-0050-01	Sys Mod Line Cord Brit.	BS 1363A	240V/13A	10 ft.
100-0030-01	User Interface Line Cord USA 110V	NEMA 5-15P	115V/10A	6 ft.
100-0059-01	User Interface Line Cord Brit.	BS1363A	240V/6A	6 ft.
100-0061-01	User Interface Line Cont. Eur.	CEE 7/7	220V/6A	6 ft.