

System 3 ZB1PS Device Chassis

Operator's Manual



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A **CAUTION** informs users when failure to take or avoid a specified action could result in damage to the product or loss of data.

A **WARNING** calls attention to an operating procedure or practice that, if not correctly performed or adhered to, could result in personal injury or death. Do not proceed beyond a **WARNING** notice until the indicated conditions are fully understood and met.

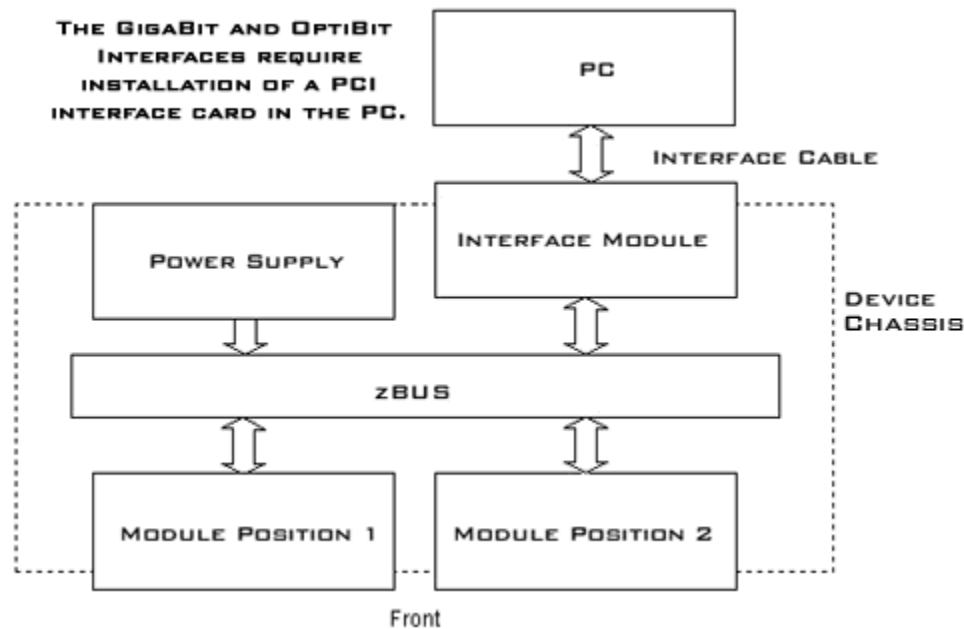
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User's Guide

ZB1PS Chassis – A Powered zBUS Device Chassis



zBUS is TDT's high-speed, low-noise bus for System 3 modules. The bus is integrated into a device chassis, which serves as a rack mountable housing for most modular devices in the System 3 line. As seen in the functional diagram below, the bus distributes communication and power throughout the system.



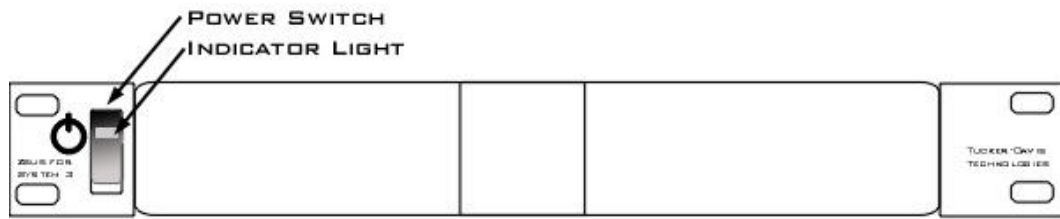
Functional Diagram

One or two modular devices can be mounted in the chassis' front bays, providing easy access to front panel connections. An interface module can be mounted in the second rear bay for chassis housing a programmable device. Multiple chassis can be interfaced for custom system configurations and individual modules can be added or removed as needed. *For additional information regarding zBUS interface modules refer to Interfaces and the zBUS in the TDT System 3 help.*

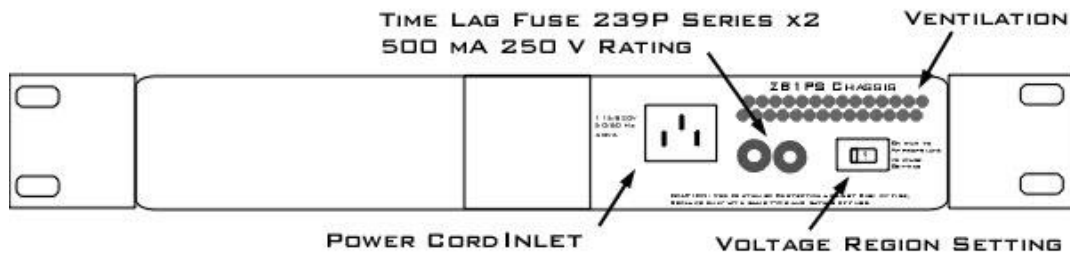
Power Supply

The ZB1PS chassis features an onboard, switchable (115V/220V) power source. The power supply is integrated into the chassis and cannot be removed. A small fan is located inside of the power supply and provides cooling while the power supply is active.

Using the ZB1PS



Front View



Back View

Applying Power to the Chassis



CAUTION! Allow at least 2 cm clearance from each side of the chassis for proper cooling. A ventilation fan is provided on the right side of the chassis. Ventilation holes are also provided on the power supply panel and another internal fan is provided inside the power supply housing. Installation of the chassis with the ventilation obstructed may cause a malfunction or fire.

Use only the supplied power cord.

To turn the ZB1PS on:

1. Position the chassis so that both the power switch and power cord may be accessed easily.
2. Ensure that the power switch is off and connect the power cord.
3. Ensure that the voltage region switch is set correctly. For standard outlets in the United States it should be switched to 115 V.
4. Turn the power switch on and check that the power switch's green LED is illuminated.

The Indicator Light

A front panel switch turns on the chassis power supply and includes an indicator light. The power switch's green LED will illuminate when the chassis is switched on. The light will flash rapidly when it receives a command from software and slowly to indicate a communications error (check all cable connections).

Disconnecting Power from the Chassis



CAUTION! When removing the power cord from either the power supply or socket outlet, grasp the plug, not the cord, in order to avoid damaging the cable.

To disconnect the ZB1PS:

1. Turn off the power switch.
2. Disconnect the power cord from the power supply.
3. Disconnect the power cord from the wall socket plug.

Adding and Removing Modules

When adding or removing modules, make sure the zBus is powered off.

To remove a module from the chassis:

1. Unscrew the two thumb screws on the corner of the module faceplate.
2. Pull straight out on the front-panel BNC connectors. A BNC 'T' connector makes a great handle for removing zBus devices.

To add a module to a chassis:

1. Insert the module into an empty bay and push straight back until it seats onto the connector.
2. Hold the module in place with the thumb screws.

Maintaining the ZB1PS

Safety Notices

This device has passed rigorous testing by Underwriters Laboratories and is UL compliant for CAT II installation in laboratories and other indoor environments. Before applying power to the chassis, verify that the correct safety precautions are taken.



WARNINGS! Read the following warnings prior to operation.

- If the device is damaged, or fails to operate according to the specifications described in this manual, disconnect the power cord and contact TDT support immediately.
- Before applying power to the device, you must correctly connect the power cord to a standard socket outlet provided with a protective earth contact.
- In the event of impaired ground protection, avoid using the device to prevent possible damage.
- When removing the power cord from either the power supply or socket outlet, grasp the plug, not the cord, in order to avoid damaging the cable.
- Do not attempt to disassemble the power supply or chassis. If you experience any issues, contact TDT support immediately.
- Only fuses with the required rated voltage, current, and specified type should be used with this device. Do not attempt to alter or disassemble the power supply fuses.
- Do not attempt to alter this device in any way that deviates from its intended operation as described in this user manual.

- Capacitors contained inside the device may retain their charge even after power has been disconnected from its supply source.
- Operation of this device in the presence of flammable gases or fumes is strictly prohibited to avoid definite safety hazards.
- Do not subject this device to excessive amounts of vibration or shocks during handling or shipping, and avoid dropping the device.
- Although there is a protective screen over the ventilation fan, do not attempt to stick any objects into the fan. This may result in injury or damage the device.
- Do not attempt to store this device where it may be exposed to prolonged periods of excessive sunlight, high temperatures, high humidity, or condensation. If exposed to such conditions, the device may no longer work properly and its specifications may no longer be satisfied.
- The device is designed for indoor use only and is not waterproof; do not get the device wet.
- Do not attempt to use this device in a manner unspecified by TDT.

Changing the Power Supply Fuses



CAUTION! Only fuses with the required rated current, voltage, and specified type should be used with this device. Use only 500 mA, 250 V rated Time Lag fuses.

1. Turn off the power switch.
2. Disconnect the power cord from the power supply.
3. Using a flathead screwdriver gently push the fuse plate inward.
4. Once the fuse plate is pressed inward gently turn the screwdriver counterclockwise until the fuse plate tab is visible.
5. Depress the fuse plate and it will pop up.
6. Grab both ends of the fuse plate and slide the fuse housing out of the power supply.
7. Replace the defective/broken fuse with a new 500 mA 250 V rating Time Lag fuse by gently pushing the end of the fuse into the fuse housing.
8. Push the fuse housing back into the power supply again by pressing the screwdriver inward.
9. Rotate the screwdriver clockwise until the fuse tab is correctly locked back into its original position.
10. Repeat for the other fuse if necessary.

Cleaning the ZB1PS device chassis

To clean the device:

1. Remove power from the ZB1PS device chassis.
2. Clean the external surfaces of the device with a soft, dry cloth.
3. Do not attempt to disassemble and clean the inside of the device.

ZB1PS Technical Specifications

Technical specifications for the ZB1PS chassis.

Chassis	
Height	1U
Width	Standard 19'' rack mount
Power Supply (Integrated)	
Maximum Working Voltage	HI to earth ground 230V max LO to earth ground 230V max
Main Voltage Rating	115/230 V, 50/60 Hz, 40 VA AC
Installation Category	CAT II
Environmental	
Operating Temperature	0 to 45°C
Storage Temperature	5 to 40°C
Humidity	80% for temperatures up to 31°C, decreasing linearly to 50% RH at 40°C
Maximum Altitude	2,000 m
Pollution Degree	2 (Indoor use only)
Power Supply Fuses	
Time Lag Fuse 239P Series	2 fuses
Operating Temperature	-55°C to 125°C
Ampere Rating	0.500 A
Voltage Rating	250 V
Interrupting Rating	10,000 amperes at 125 VAC, 0.7-0.8 power factor 35 amperes at 250 VAC, 0.7-0.8 power factor