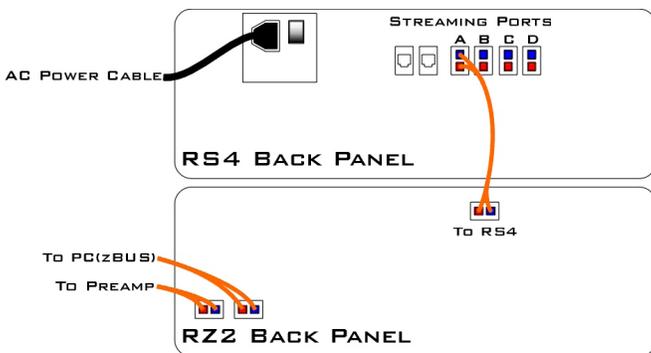


RS4 Data Streamer

This fast fact sheet provides basic reference information for the RS4 Data Streamer and related devices. See reverse for Synapse set-up. See the System 3 Manual for more detailed device information.

Overview. The RS4 stores data streamed directly from the RZ2, through a special optical DSP. Access to the RS4 storage array is provided through a network connection, direct connection to a PC, or data transfer to a USB storage device.

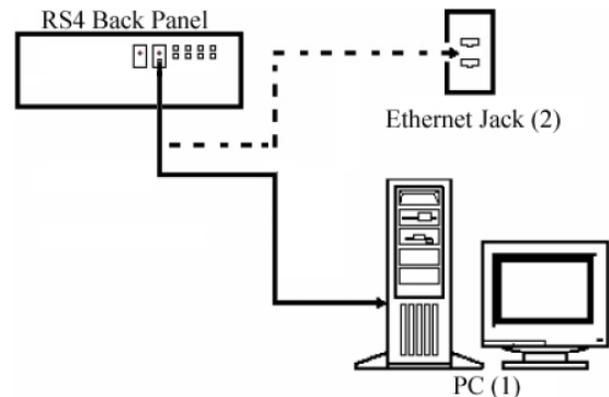
Hardware Setup. An RZ2 provides one streaming input to the RS4. Additional RZ2 devices can be connected to the same RS4 provided it has available streaming ports [B, C, or D]. The fiber optic cables are color coded to prevent wiring errors.



RS4 to RZ Connection Diagram

In the diagram above, a single RZ connects to the RS4.

Network Setup. The RS4 can be accessed directly via a PC or across a local area network [LAN]. In either case connect the corresponding Ethernet cable to the RS4 port labeled Network.

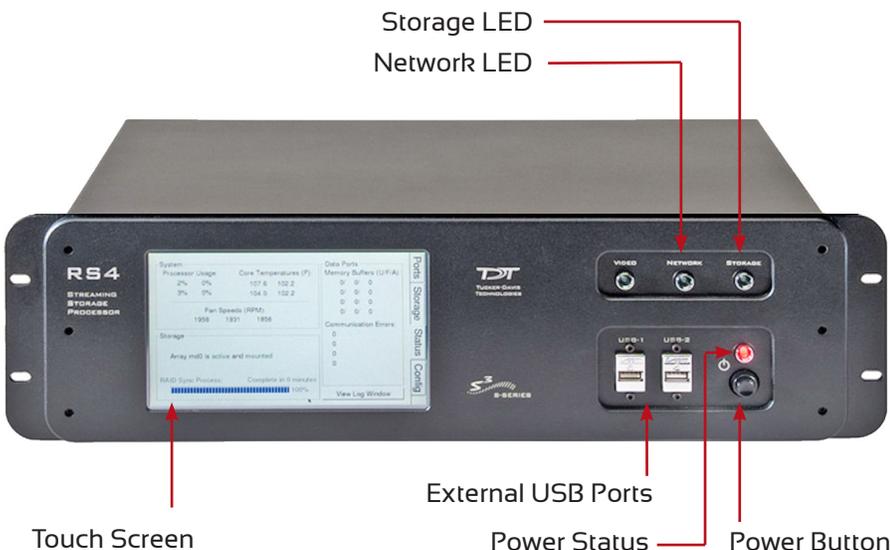


RS4 PC and Network Connection Diagram
Possible connections to a PC (1) or LAN (2).

The default IP address is 10.1.0.42.

To access the RS4 through a PC you must configure the PC TCP/IP settings and set the PC IP address to 10.1.0.x, where x is any value, 1 - 254 except 42.

To access the RS4 file system through a LAN, DHCP must be enabled on the network.



Status LEDs

Network LED lit - traffic is present and detected on the RS4.

Storage LED lit - access to the RS4 is in progress.

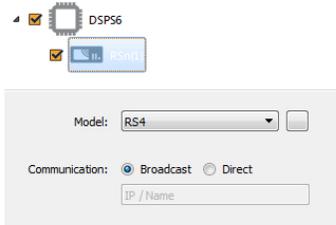
Powering On.

Always power the RS4 down during an Idle state. Idle status can be checked in the Ports tab. Failure to power down during Idle status may result in the RS4 performing a file system check during the next boot process and possible data loss.



Synapse Configuration. The RS4 must be configured in the Rig Editor.

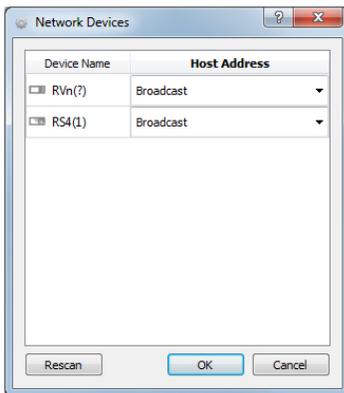
The DSPS optical DSP should be auto-detected. Click the check box next to the RS4 icon to enable the streamer.



Click the icon in the tree to display configuration options.

Select Broadcast or Direct connection, then enter the IP address.

Check Network



Alternatively, click the Check Network button and select the RS4 IP address in the Host Address drop-down menu.

The Touch Screen Interface. The four tabs on the RS4 LCD touch screen display status information and can be used to configure RS4 options.

Ports. View information for storage array streams, local storage rates, and storage size.

Storage. Select and review a list of stored data files. Items may be deleted or moved and copied to a USB device. USB Storage device status information may also be displayed.

Status. View device IP address and other system information.

Config. Reformat storage array or update firmware.

Two RAID based array types are supported, Striped and Mirrored. The default array type is **Mirrored**, which provides redundant data back-up in case of drive failure.

Device Address. The path `\\RS4-#XXXX\data` is used to access the RS4 storage array, where **#** is the total number of streaming ports on the RS4 back panel and **XXXX** is the device serial number. **data** is the folder containing the data saved to the storage array.

The device address is also shown on the top of the **Ports** tab. Alternatively, you can access the RS4 by its IP address, which is shown on the **Status** tab.

Data Transfer Rate. The maximum data rate for each RS4 streaming port is 12.5 MB/s. This equates to streaming 256 16-bit channels at a sampling rate of ~25 kHz per streaming port. With four ports available, up to 1024 channels can be streamed to the RS4 at this rate.

When using the PZ5 at 25 kHz or below, you must use the Float [32 bits] data format. If you are recording 128 channels at 50 kHz, you must AC couple the PZ5 and use the Short [16 bits] data format.

Important! When data is no longer streaming to the port or if streaming has been paused for longer than 1 second, the session is concluded [data files are closed] and a new session will begin when a new data stream is presented.

File Space Management. Data sets containing a large number of channels, or long recording periods may take longer to display and process on the RS4 and will also lengthen the amount of time for file system checks. TDT recommends removing data from the RS4 that is no longer needed.

Updating the Firmware. The RS4 firmware can be updated on the Config tab. Firmware is downloaded from the TDT server and automatically installed on the RS4. Connection to a DHCP enabled network that has internet connectivity is required to retrieve any updates.

For more information on the user interface, see the RS4 Data Streamer section of the System 3 Manual.