

New!

# Model RTR 2758

# LVDS Digital I/O Rugged Rackmount Recorder



### Features

- Designed to operate under conditions of shock and vibration
- Removable SSDs
- 32 bits of LVDS digital I/O
- LVDS clock, Data Valid and Data Suspend signals
- Supports clock rates up to 250 MHz
- Real-time aggregate recording rates up to 1 GB/sec
- Up to 19.2 terabytes storage to NTFS RAID disk array
- RAID levels of 0, 1, 5, 6, 10 and 50
- Optional N+1 redundant power supply
- SystemFlow® GUI virtual instrumentation panel for fast, intuitive operation
- C-callable API for integration of recorder into application
- File headers include time stamping and recording parameters
- Optional GPS time and position stamping
- Windows® 7 Professional workstation with high-performance Intel® Core™ i7 processor

Contact factory for options, recording rates, and disk capacity.

### General Information

The Talon® RTR 2758 is a complete turn-key system for recording and playing back digital data using the Pentek Model 78610 LVDS digital I/O board. Using highly optimized disk storage technology, the system achieves sustained recording rates of up to 1 GB/sec.

The RTR 2758 utilizes a 32-bit LVDS interface that can be clocked at speeds up to 250 MHz. It includes Data Valid and Suspend signals and provides the ability to turn these signals on and off as well as control their polarity.

Optional GPS time and position stamping accurately identifies each record in the file header.

### SystemFlow Software

The RTR 2758 includes the SystemFlow Recording Software. SystemFlow features a Windows-based GUI (Graphical User Interface) that provides a simple means to configure and control the system.

Custom configurations can be stored as profiles and later loaded when needed, allowing the user to select preconfigured settings with a single click.

Built on a Windows 7 Professional workstation, the RTR 2758 allows the user to install post-processing and analysis tools to operate on the recorded data.

The RTR 2758 records data to the native NTFS file system, providing immediate access to the recorded data.

Data can be off-loaded via two gigabit Ethernet ports or six USB ports. Additionally, data can be copied to optical disk using the 8X double layer DVD±R/RW drive.

### Rugged and Flexible Architecture

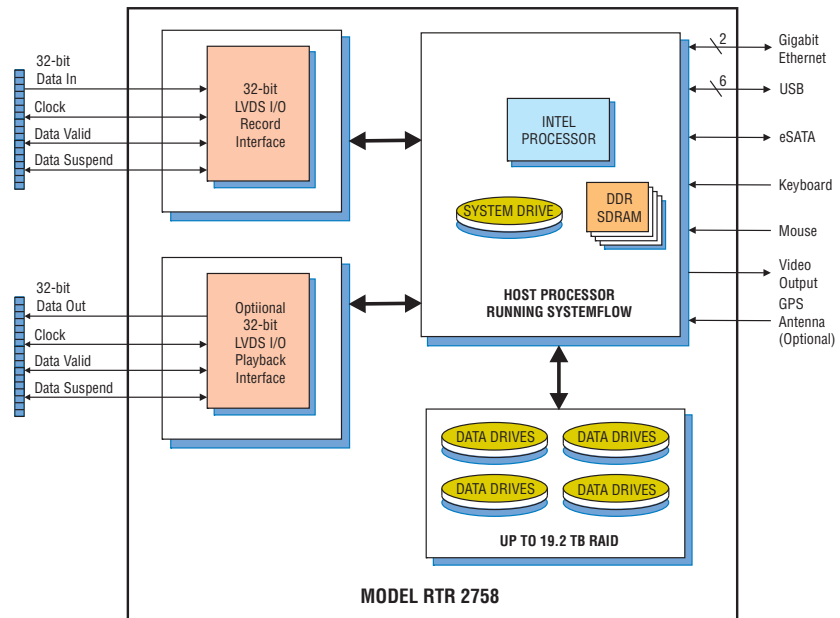
Because SSDs operate reliably under conditions of shock and vibration, the RTR 2758 performs well in ground, shipborne and airborne environments. Configurable with as many as 40 hot-swappable SSDs, the RTR 2758 can provide storage capacities of up to 19.2 TB in a rugged 4U chassis. Drives can be easily removed or exchanged during or after a mission to retrieve recorded data.

The RTR 2758 is configured in a 4U 19" rack-mountable chassis, with hot-swap data drives, front panel USB ports and I/O connectors on the rear panel.

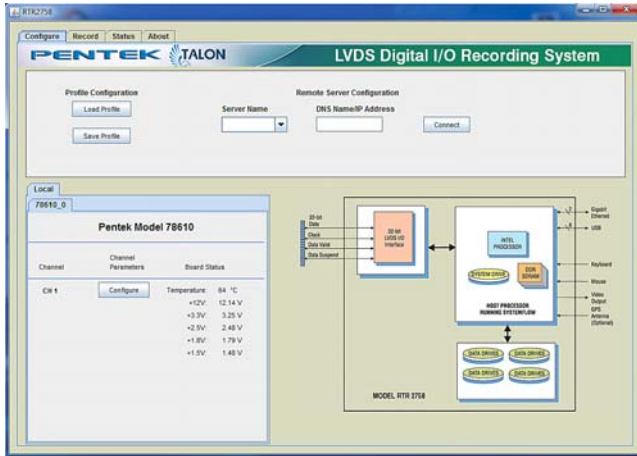
Systems are scalable to accommodate multiple chassis to increase channel counts and aggregate data rates.

All recorder chassis are connected via Ethernet and can be controlled from a single GUI either locally or from a remote PC.

Multiple RAID levels, including 0, 1, 5, 6, 10 and 50, provide a choice for the required level of redundancy. Up to 40 hot-swappable SATA drives are optionally available, allowing up to 19.2 terabytes of real-time data storage space in a single 4U chassis. ➤



► SystemFlow Graphical User Interface

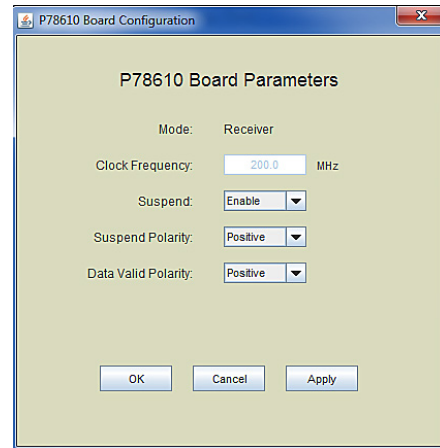


SystemFlow Main Interface

The RTR 2758 GUI provides the user with a control interface for the recording system. It includes Configuration, Record, Playback, and Status screens, each with intuitive controls and indicators.

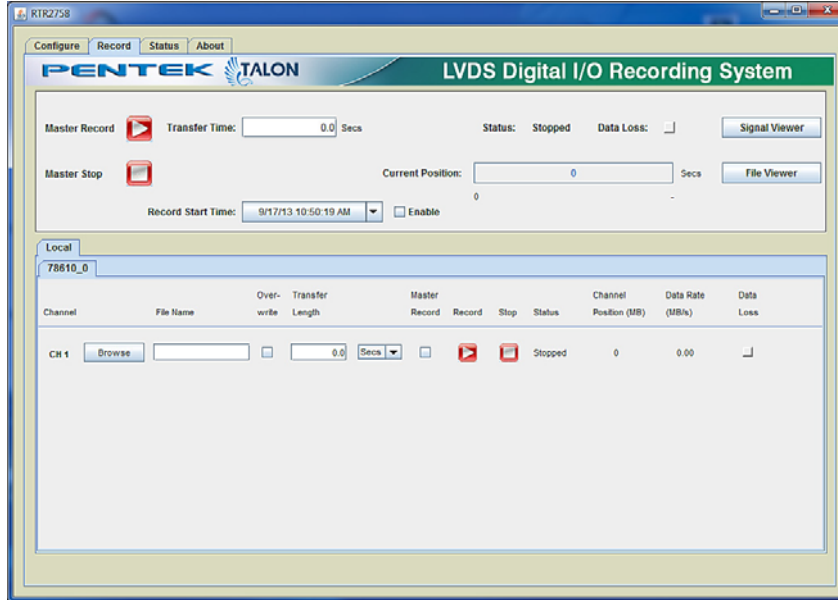
The user can easily move between screens to set configuration parameters, control and monitor a recording, and play back a recorded stream.

All parameters contain limit-checking and integrated help to provide an easier-to-use out-of-the-box experience.



SystemFlow Hardware Configuration Interface

The RTR 2758 configuration screen shows a block diagram of the system, and provides control for operational system parameters. These parameters include data valid and suspend enables, as well as polarity control for both signals.



SystemFlow Record Interface

The SystemFlow Record Screen allows you to browse a folder and enter a file name for the recording. The length of the recording for each channel can be specified in megabytes or in seconds. Intuitive buttons for Record, Pause and Stop simplify operation. Status indicators for each channel display the mode, the number of recorded bytes, and the average data rate. A Data Loss indicator alerts the user to any problem, such as a disk full condition.

By checking the Master Record boxes, any combination of channels in the lower screen can be grouped for synchronous recording via the upper Master Record screen. The recording time can be specified, and monitoring functions inform the operator of recording progress. ►

### ► SystemFlow API

SystemFlow includes a complete API (Application Programming Interface) that supports control and status queries of all operations of the RTR 2758 from a custom application.

High-level C-language function calls and the supporting device drivers allow users to incorporate the RTR 2758 as a high-performance server front end to a larger system. This is supported using a socket interface through the Ethernet port, either to a local host or through an internet link for remote, stand-alone acquisition. Recorded NTFS files can be easily retrieved through the same connection.

### Specifications

#### PC Workstation

**Operating System:** Windows 7 Professional

**Processor:** Intel Core i7 processor

**Clock Speed:** 3.0 GHz or higher

**SDRAM:** 8 GB

#### RAID

**Storage:** 3.8–19.5 TB

**Drive Type:** 2.5" SSD

**Number of Drives:** up to 40

**Supported Levels:** 0, 1, 5, 6, 10 and 50

#### LVDS Interface

**Cable:** 80-pin ribbon cable

**Connector Type:** 2x40 pin IDC

**Data Lines:** 32 LVDS pairs, 2.5 V compliant

**Clock:** One LVDS pair, 2.5 V compliant

**Data Valid:** One LVDS pair, 2.5 V compliant

**Data Suspend:** One LVDS pair, 2.5 V compliant

#### Physical and Environmental

##### Dimensions & Weights

**Dimensions:** 19" W x 21" D x 7" (4U) H

**Weight:** 50 lb, approx.

**Operating Temp:** 0° to +50° C

**Storage Temp:** -40° to +85° C

**Relative Humidity:** 5 to 95%, non-condensing

**Operating Shock:** 15 g max. (11 msec, half sine wave)

**Operating Vibration:** 10 to 20 Hz: 0.02 inch peak, 20 to 500 Hz; 1.4 g peak acceleration

## Model RTR 2758 Order Information

### Storage Options

**Option 242** Storage capacity: 3.8 TB  
4U short chassis



**Option 243** Storage capacity: 7.6 TB  
4U short chassis

**Option 244** Storage capacity: 11.5 TB  
4U short chassis

**Option 245** Storage capacity: 19.2 TB  
Special chassis



### Interface Options

**Option 221** Playback Interface

### General Options

**Option 261** GPS time & position stamping

Contact Pentek for compatible Option combinations

*Specifications are subject to change without notice*