New!

TALON
RTR RUGGED RECORDER

SystemFlow

Features

- Designed to operate under conditions of shock and vibration
- Portable system measures 16.9" W x 9.5" D x 13.4" H
- Rugged aluminum alloy chassis
- Lightweight, approximately 30 pounds
- Shock- and vibration-resistant SSDs perform well in vehicles, ships and aircraft
- 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/s
- Up to 3.8 terabytes of storage to NTFS RAID disk array
- 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 2738 is a complete turnkey 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 rugged, lightweight portable package achieves sustained recording rates of up to 1 GB/sec.

The RTR 2738 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 2738 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 2738 allows the user to install post-processing and analysis tools to operate on the recorded data.

The RTR 2738 records data to the native NTFS file system, providing immediate access to the recorded data.

Data can be off-loaded via a gigabit Ethernet port, eight USB 2.0 ports, two USB 3.0 ports or two eSATA 3 Ports. Additionally, data can be copied to optical disk, using the 8X double layer DVD±R/RW drive.

Rugged and Flexible Architecture

The RTR 2738 is configured in a portable, lightweight chassis with eight hot-swap SSDs, front panel USB ports and I/O connections on the side panel. It is built on an extremely rugged, 100% aluminum alloy unit, reinforced with shock absorbing rubber corners and an impact-resistant protective glass. Using shock- and vibration-resistant SSDs, the RTR 2738 is designed to reliably operate as a portable field instrument.

The eight hot-swappable SSDs provide storage capacities of up to 3.8 TB. Drives can be easily removed or exchanged during or after a mission to retrieve recorded data. Multiple RAID levels, including 0,1,5 and 6, provide a choice for the required level of redundancy.
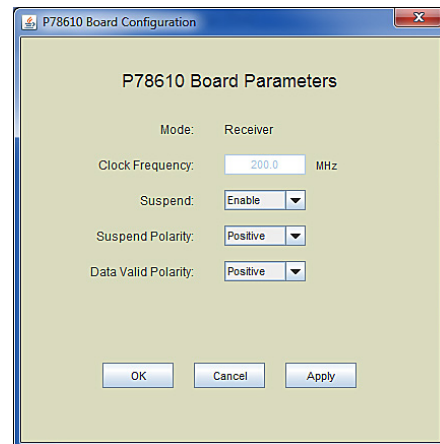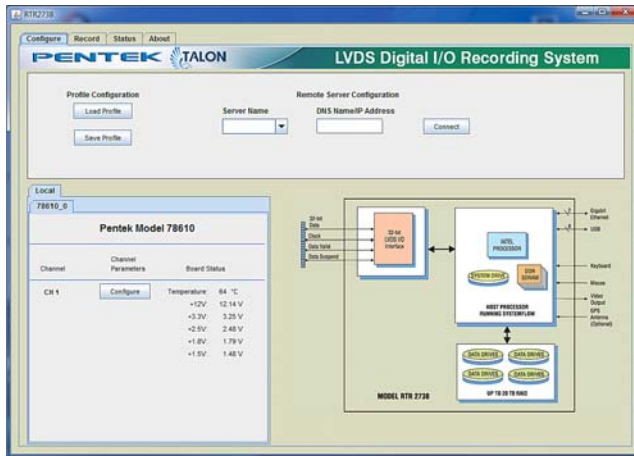
SystemFlow API

SystemFlow includes a complete API (Application Programming Interface) that supports control and status queries of all operations of the RTR 2738 from a custom application.

High-level C-language function calls and the supporting device drivers allow users to incorporate the RTR 2738 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. ➤

MODEL RTR 2738

PENTEK
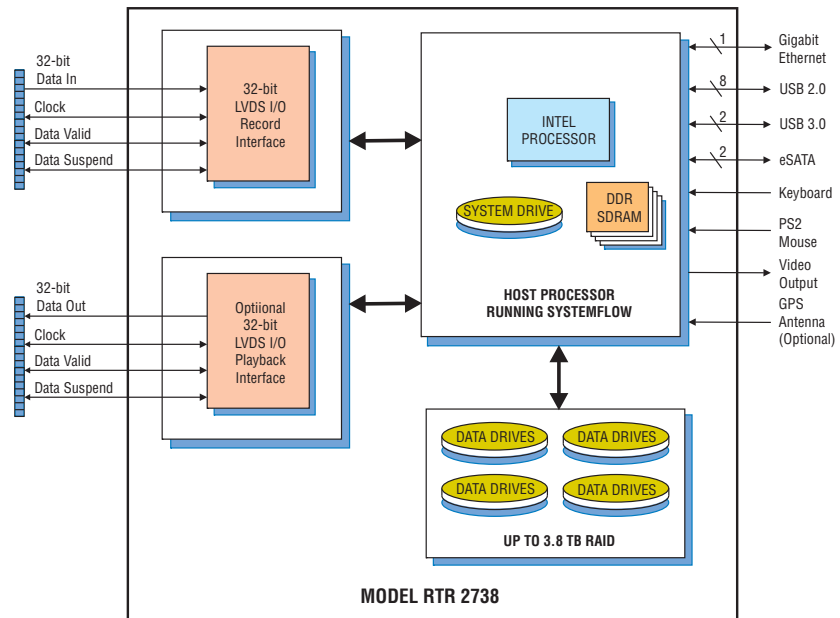
▶ **SystemFlow Graphical User Interface**
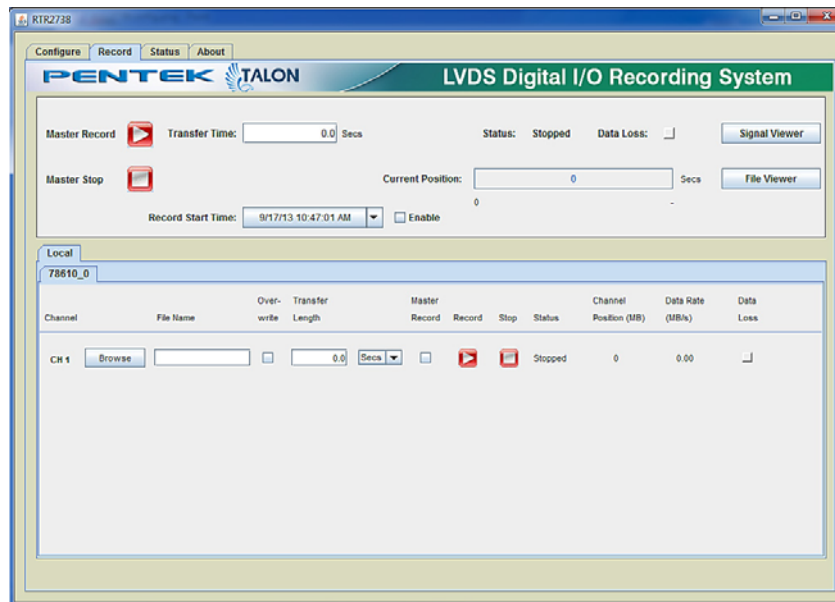

SystemFlow Main Interface

The RTR 2738 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 2738 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. ▶

Specifications

PC Workstation

Operating System: Windows 7 Professional
Processor: Intel Core i7 processor
Clock Speed: 3.0 GHz or higher
SDRAM: 8 GB
Monitor: Built-in 17" high-resolution LCD, 1440 x 900 pixels, 200 nits
RAID
    Storage: 1.9 or 3.8 TB
    Number of Drives: up to eight
    Supported RAID Levels: 0, 1, 5 and 6
    Drive Bays: 8, hot-swap, removable, rear panel
USB 2.0 Ports: 8 left side, 2 front panel
USB 3.0 Ports: 2 left side
1 Gb Ethernet Port: 1 left side
eSATA Ports: 2 left side
Aux Video Output: 15-pin VGA left side

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: 16.9" W x 9.5" D x 13.4" H
Weight: 30 lb, approximately
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
Power Requirements: 100 to 240 VAC, 50 to 60 Hz, 500 W max.

Model RTR 2738 Order Information

Storage Options

Option 242	1.9 TB SSD storage capacity
Option 244	3.8 TB SSD storage capacity

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