

New!

# Model RTR 2736A

# Serial FPDP Rugged Portable Recorder



### Features

- Designed to operate under conditions of shock and vibration
- Portable system measuring 16.0" W x 6.9" D x 13.0" H
- Lightweight, just less than 30 pounds
- Shock- and vibration-resistant SSDs perform well in vehicles, ships and aircraft
- Up to eight I/O channels
- Supports Flow Control, CRC, and Copy/Loop Mode as a receiver and transmitter
- Supports 1.0625, 2.125, 2.5, 3.125 and 4.25 GBaud link rates
- Copper, single-mode and multi-mode fiber interfaces available
- Real-time aggregate recording rates of up to 3.2 GB/sec
- Windows® 7 Professional workstation with high performance Intel® Core™ i7 processor
- Up to 30.7 terabytes of SSD storage to NTFS RAID solid state disk array
- SystemFlow® GUI with Signal Viewer analysis tool
- File headers include time stamping and recording parameters
- Optional GPS time and position stamping
- Optional 18–36 VDC power supply

Contact factory for options, number of channels, recording rates, and disk capacity.

### General Information

The Talon® RTR 2736A is a complete turn-key recording system capable of recording and playing back multiple Serial FPDP data streams in a rugged, lightweight portable package. It is ideal for capturing any type of streaming sources including live transfers from sensors or data from other computers and is fully compatible with the VITA 17.1 specification. Using highly-optimized disk storage technology, the system achieves aggregate recording rates up to 3.2 GB/sec.

The RTR 2736A can be populated with up to eight SFP connectors supporting Serial FPDP over copper, single-mode, or multi-mode fiber, to accommodate all popular Serial FPDP interfaces. It is capable of both receiving and transmitting data over these links and supports real-time data storage to disk.

Programmable modes include flow control in both receive and transmit directions, CRC support, and copy/loop modes. The system is capable of handling 1.0625, 2.125, 2.5, 3.125, and 4.25 GBaud link rates supporting data transfer rates of up to 420 MB/sec per Serial FPDP link.

Optional GPS time and position stamping allows the user to mark the beginning of a recording in the recording file's header.

### SystemFlow Software

The RTR 2736A includes the SystemFlow Recording Software. SystemFlow features a Windows-based GUI (Graphical User Interface) that provides a simple and intuitive

means to configure and control the system. It also includes a C-callable API that allows users to easily integrate the Talon recorder into a larger system.

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

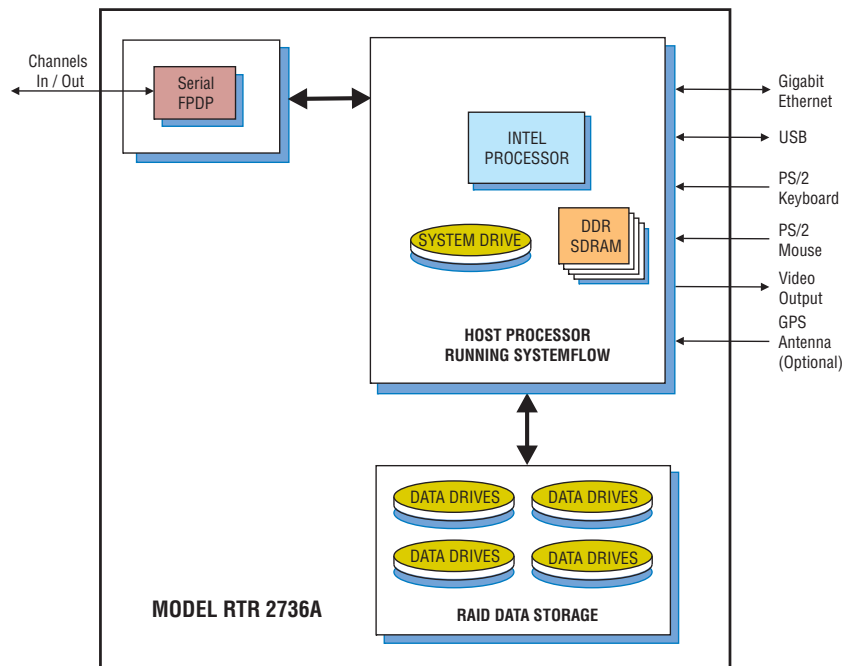
Built on a server-class Windows 7 Professional workstation, the RTR 2736A allows the user to install post-processing and analysis tools to operate on the recorded data. The RTR 2736A records data to the native NTFS file system, providing immediate access to the recorded data.

Data can be off-loaded via gigabit Ethernet, USB 2.0 and USB 3.0 ports. Additionally, data can be copied to optical disk, using the 8X double layer DVD±R/RW drive.

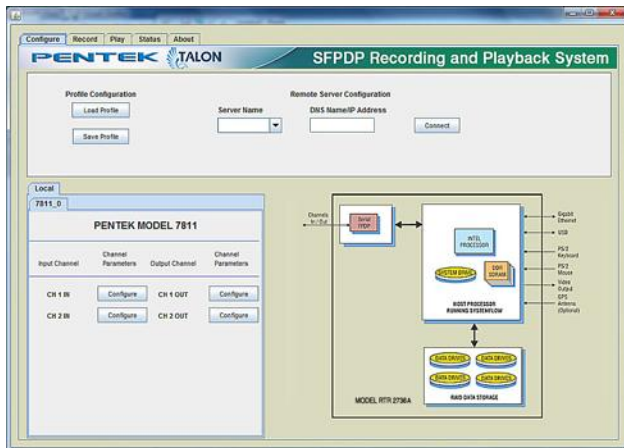
Option -625 replaces the DVD±R/RW drive with a removable operating system drive; an external DVD drive can be used.

### Rugged Chassis with SSD Storage

The RTR 2736A is configured with hot-swappable SSDs, front panel USB ports, and I/O connectors on the side panel. It is built in an extremely rugged steel and aluminum chassis and is tested for shock and vibration. The SSDs provide storage capacities of up to 30,7 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 Graphical User Interface

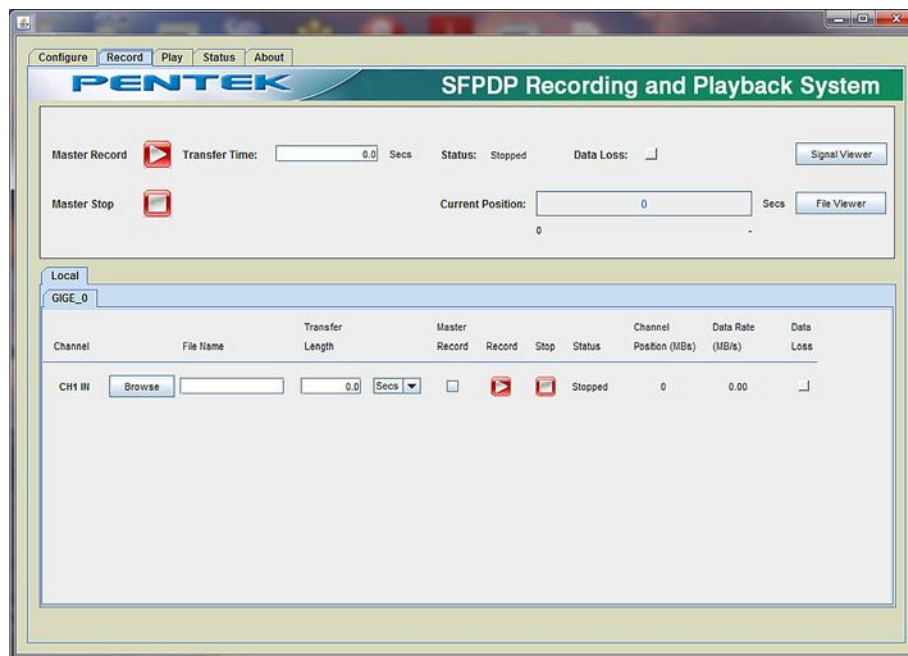


SystemFlow Main Interface

The RTR 2736A GUI shows a block diagram of the system and provides the user with a control interface for the recording system. It includes Configure, Record, Playback, and Status screens, each with intuitive controls and indicators. The user can easily move between screens to configure parameters, control and monitor a recording, and play back a recorded stream.

SystemFlow Hardware Configuration Interface

The Configure screen presents operational system parameters including temperature and voltages. Parameters are entered for each input or output channel specifying the flow control settings and the recognition of a CRC in the data stream. Each channel can also be set up to utilize Serial FPDP's copy/loop mode. All parameters contain limit-checking and integrated help to provide an easier-to-use out-of-the-box experience.



SystemFlow Record Interface

The 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) supporting control and status queries of all operations of the RTR 2736A from a custom application.

High-level C-language function calls and the supporting device drivers allow users to incorporate the RTR 2736A 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 (standard configuration)**

**Operating System:** 64-bit Windows 7 Professional

**Processor:** Intel Core i7 processor

**Clock Speed:** 3.0 GHz or higher

**Operating System Drive:** 128 GB SSD

**SDRAM:** 8 GB

**Monitor:** Built-in 17.3" high-resolution LCD,  
1920 x 1080 pixels, 16:9 aspect ratio, anti-glare surface  
Brightness: 300 cd/m<sup>2</sup>; Contrast ratio: 400:1 typical

**RAID**

**Total Storage:** 1.9, 3.8, 7.6, 15.3 or 30.7 TB

**Supported RAID Levels:** 0, 1, 5 and 6

**Drive Bays:** Hot-swap, removable, side panel

**USB 2.0 Ports:** Four on left side, two on front panel

**USB 3.0 Ports:** Two on left side

**1 Gb Ethernet Ports:** Two on left side

**Aux Video Output:** 15-pin VGA on left side

**Serial FPDP Interface**

**Copper - Option 280**

**Cable:** 100-ohm shielded twin-ax

**Connector Type:** SFP+

**Max. Cable Length:** 20 m

**Multi-mode Fiber Optical - Option 281**

**Cable:** Multi-mode fiber, 850 nm

**Connector Type:** LC

**Max. Cable Length:** Up to 300 m

**Single-mode Fiber Optical - Option 282**

**Cable:** Single-mode fiber

**Connector Type:** LC

**Max. Cable Length:** Up to 10 km

**Optional DC Power supply**

**Voltage:** 18 to 36 VDC

**Input Current:** 42 to 26 A (39 A at 24 VDC)

**Inrush Current:** 100 A at 24 VDC

**Temperature Range:** Oper.: 0° to 50° C, Store: -0° to 80° C

**Efficiency:** >80% typical at 24 V full load

**Power Good Signal:** On delay 100 to 500 msec

**OverPower Protection:** 110% to 160%

**Remote Control:** On/Off

**Safety:** Meets UL, TUV, CB specifications

**Physical and Environmental**

**Size:** 16.0" W x 6.9" D x 13.0" H

**Weight:** 30 lb max.

**Operating Temp:** 0° to +50° C

**Storage Temp:** -40° to +85° C

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

**Operating Shock:** 30 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

**Non-operating Vibration:** 5 to 500 Hz: 2.06 g RMS

**Power Requirements:** 100 to 240 VAC, 50 to 60 Hz, 500 W max.

**Model RTR 2736A Ordering Information and Options**

**Channel Configurations**

**Option -204** 4-channel recording

**Option -208** 8-channel recording

**Storage Options**

**Option -405** 1.9 TB SSD storage capacity

**Option -410** 3.8 TB SSD storage capacity

**Option -415** 7.6 TB SSD storage capacity

**Option -420** 15.3 TB SSD storage capacity

**Option -430** 30.7 TB SSD storage capacity

**Serial FPDP Interface (append to all options)**

**Option -280** Copper, SFP+ connectors

**Option -281** Multi-mode optical, LC connectors

**Option -282** Single-mode optical, LC connectors

**General Options (append to all options)**

**Option -261** GPS time & position stamping

**Option -264** IRIG-B time stamping

**Option -625** Removable operating system drive

**Option -681** 18 to 36 VDC Power Supply

**Contact Pentek for compatible Option combinations**

**Storage and Channel-count Options may change, contact Pentek for the latest information**

*Specifications are subject to change without notice*