

A horizontal bar consisting of seven rectangular blocks of varying shades of blue, from dark to light, arranged from left to right.

Passive Call Recording Technologies  
(For TDM & IP networks)



# About us

Synway specializes in providing superior Media Processing & Signaling Technologies, Telephony Hardware and Integrated Multimedia Switch in use for convergence (voice/data/video) communications. Since 1995, over 1000 software developers and system integrators have integrated Synway's offerings to deliver a broad range of TDM and VoIP-based applications, including unified communications, call center, mobile VAS, media gateway, fax, conferencing, call recording, Asterisk-based open source applications for operators and enterprises worldwide.

Having continued to optimize and expand its product portfolios to cater to various needs, Synway has consolidated its position as a leading vendor in international market for its widest range of portfolios: IP&TDM board & new-generation integrated multimedia switch platform for SP developers, Asterisk-based hardware & appliances, and the most diverse hardware options for passive call recording (logging) applications in IP and TDM network.

With 200 teammates, Synway makes all efforts to deliver quality support and service and help clients offer a variety of customizable, high-performance and cost effective solutions.



## Introduction about Recording Series

For two decades Synway has consolidated its position as a leading International call recording hardware solution vendor. Because Synway's products and services react rapidly to unpredictable business and industry environments, they provide continual advantages to small, medium and large scaled developers and clients. In other words, in today's changeable and hyper competitive business environment, Synway enables clients to grow organically and be well rewarded for their risk and helps them expand by offering unparalleled and continuous innovation.

By continually developing and adapting its products, Synway help optimize clients' product features and help them innovate. Having worked with our products over time, our clients have helped Synway achieve: the

most diverse product ranges, greatest scalability, greatest compliance with multi-protocols and multi-networks, and the most installations in Asia and Europe. Tested and optimized for many networks, Synway's product portfolios support Analog, Digital, PBX, Radar and IP network connections worldwide.

Based upon its well established products and services for call recording application providers, Synway now is progressing into a new era of growth. To cement its brand as a world-class vendor of call recording hardware, Synway will help clients overcome new challenges in unexpected economic situations and cooperate with more partners, especially public relations partners in the next stage of growth.

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# SynIPR

## VoIP Reocrding

SynIPR is a VoIP recording software component, including two engines: SynIPAnalyzer and SynIPRecorder. SynIPAnalyzer is for monitoring and analysis of sessions over IP lines, besides transferring the RTP packets to SynIPRecorder. And SynIPRecorder is to record retrieved RTP packets.

SynIPR inherits Synway's decades of voice processing technologies, and features high interoperability and reliability. It could help software developers and integrators to migrate their systems to next generation networks, effortlessly and efficiently.

Benefit at a glance:

- Simultaneous monitoring of diverse protocols over single IP line
- D-channel events parsing(decoding)
- Phonest administration and management
- Session administration RTP administration
- Protocol configuration
- Multiple IP recording modes

## Function List

- Diverse recording formats
- Multiple RTP streaming formats
- Multiple recording methods, including independent or combined incoming/ outgoing call recording
- Volume adjustment
- DTMF parsing

## Key Features & Benefits

### ● Flexibly Monitor Protocols and Ports

SynIPAnalyzer supports monitoring for diverse protocols. Users can select configuration tools and API functions to control settings related to protocol and port monitoring.

### ● Multiple Monitoring Modes

SynIPAnalyzer supports two monitoring modes: Complete and Station-based. Users could select mode categories via API.

### ● Various Event Types

SynIPAnalyzer offers various event types, including call control event, board state event, media event, terminal event, D-channel event and so on. Users could obtain much detail from these events to program application.

### ● Unified D-channel Event IDs

Like Synway DST series, SynIPAnalyzer for application programming, possesses equivalent D-channel event IDs. So application migration is effortless for existing or emerging users.

### ● Flexible Authorization

Software authorization by USB KEY helps users add or reduce authorized channel number. Serial number of USB KEY generates independent upgrade file, which enables users to upgrade anytime and anywhere.

### ● Various Encoding Formats

A-Law,  $\mu$ -Law, ADPCM, PCM16, MP3, GSM or more

- File recording and RAM recording
- Stop recording via diverse modes
- Diverse formats of logging data saving
- Monitor recording status
- Recording pause and recover
- Distributed recording

### ● Authorization Code Identification

On-board authorization code identification is provided for software safety. Users can obtain their own authorization code from Synway.

### ● Unified SynCTI Driver Development Platform

Synway owns intellectual property rights of its own unified SynCTI driver development platform. All Synway products share the same development environment, via the unified API.

### ● Distributed Architecture

The driver with distributed architecture has two points: Master and Slaver. A Master could connect with several Slavers. Each Slaver can customize a number of recording resources, which guarantee capacity.

### ● Supports Standard WAV File

Be able to be edited and playout by audio tools such as Cooledit.

### ● Various RTP Decoding Formats Supported


RTP decoding formats, such as A-Law,  $\mu$ -Law, G.729ab, etc.

### ● Memory Recording

Encoded voice data can be sent back to Master while needed to enable application program to utilize data more efficiently.

## System Requirements

Software/Hardware	Requirement
Operating Systems	Windows2000 Professional/Server, Windows XP Professional (SP3), Windows7(32-bit/64-bit), Windows2003 server (32-bit/64-bit), Window2008 server(32-bit/64-bit)
Hardware	CPU: 2.40GHz or higher Memory: 512M or more



# DTP Series

## E1/T1/J1 Tapping for Call Center

With multiple signaling capabilities and high compatibility with international standards, the DTP series has been widely used as a reliable and cost effective tool by call recording application developers to passively tap E1/T1/J1 networks in a variety of complex telephony environments. Used by the leading call recording solution providers since the 1990s, the DTP series has been optimized to fit the toughest demands and most competitive environments because of its unrivalled cost advantages and world-class robustness.

As a proud milestone in call recording hardware design, the DTP series is E1/T1/J1 interface software configurable, supports 4, 2 or 1 dual span taps per slot, and can flexibly fulfill various requirements. Specifically, by providing on-board advanced DSP algorithm and DMA processing capability, the DTP series helps minimize host CPU resources and outperforms all competitor products in the toughest application scenarios. This includes better performance and higher scalability up to 1200(40E1)-channels simultaneous call logging. For these reasons many leading developers worldwide depend on the DTP series to create robust high capacity systems in complex central office as well as high-demand Telco environments.

The DTP series also leverages dedicated DSP chipsets to process a range of high-ratio compressions, such as license-free G.729 and GSM. This robust architecture further releases host processor resource from overloading and assures efficient data storage and high robustness for data transmission in the most difficult situations. The DTP series provides call logging application developers with a complete range of options, portfolios containing half/full length, E1/T1/J1 configurable, CAS/ISDN/SS7 protocols and more versatility. Conveniently DTP series can be installed into most server categories and computer types. All of its new-generation portfolios are PCI-express or PCI(X) form factor, half-length card.

## Key Features & Benefits

- **Single, Dual and Quadruple Hi-Impedance E1/T1/J1 Digital Tap**  
Tap digital lines with no additional hardware for passive logging applications.
- **Multiple Call State Monitoring (CAS/ISDN/SS7)**  
Support the CAS, SS7(TUP, ISUP) and ISDN signaling protocols and report the call states and calls parameters via comprehensible API events.
- **True Dual Span Capabilities**  
Customizable RJ-45/BNC/RJ-11 interfaces can record inbound/outbound sides of a conversation, and support inbound and outbound call recording.
- **Support Direct Windows WAV Format**  
Data is stored in WINDOWS WAV format directly, and can be played out by sound card with no format conversion.
- **High Density Passive Tap Capabilities**  
Operating between a central office and PBXs, the DTP's high impedance receivers record both sides of a call without interrupting service. Each board can process up to 120 ports, with a maximum of 960 ports per host.
- **Voice-Processing Capability**  
A large selection of voice CODECs for developers, including G729, GSM, G711 A-law,  $\mu$ -law, Linear PCM, IMA-ADPCM, MP3, and support VOX format.
- **Tap Environment**  
With single or dual E1/T1/J1 trunk boards, DTP adapts to high density applications. The Synway's in-house unified API supports a total of 960 ports per system. In any digital environment, DTP can work well as tapping point between office and PBX, office and phones, PBX and phones and any other digital audio signals.
- **Worldwide Interface Digital Support**  
DTP supports passive call recording on E1/T1/J1 networks features such as programmable voltage thresholds, voltage detection, and ring detection are managed through Synway's in-house unified API, so the products can easily adapt or be quickly customized to variations in most digital systems worldwide.
- **Security for User Software**  
The built-in authorized code identification circuit is included to provide an exclusive authorization code for protecting users' software security.

## Technical Specifications

### PRODUCT MODELS

SHD-30B-CT/PCI/FJ	1E1/T1/J1, PCI, GSM/G729A
SHD-60B-CT/PCI/FJ	2E1/T1/J1, PCI, GSM/G729A
DTP-30C/PCIe(+)	1E1/T1/J1, PCIe, (GSM/G729A/MP3)
DTP-60C/PCIe(+)	2E1/T1/J1, PCIe, (GSM/G729A/MP3)
DTP-120C/PCIe(+)	4E1/T1/J1, PCIe, (GSM/G729A/MP3)
DTP-30C/PCI(+)	1E1/T1/J1, PCI, (GSM/G729A/MP3)
DTP-60C/PCI(+)	2E1/T1/J1, PCI, (GSM/G729A/MP3)
DTP-120C/PCI(+)	4E1/T1/J1, PCI, (GSM/G729A/MP3)

### INPUT/OUTPUT INTERFACE

#### E1 Physical Ports:

Compliant with G703, including 75 $\Omega$  unbalanced interface and 120 $\Omega$  balanced interface.

#### T1 Physical Ports:

DSX-1 and CSU line build-outs available for different extents of signal losses, including 100 $\Omega$  and 110 $\Omega$  balanced interfaces.

### AUDIO SPECIFICATIONS

16Bit PCM	128kbps	8Bit PCM	64kbps
A-Law	64kbps	$\mu$ -Law	64kbps
VOX	32bps	ADPCM	32kbps
GSM	13.6kbps	Mp3	8/16kbps
G.729A	8kbps		

Frequency Response: 300-3400Hz ( $\pm$ 3dB)

Automatic Gain Control (AGC): -20dB-0dB

### SIGNALING

SS1(CAS): compliant with international GF002-9002 (DL and MFC)

SS7: compliant with Q771-Q795

DSS1: compliant with Q.933

### MAXIMUM SYSTEM CAPACITY

Up to 8 boards concurrently per system; each board can monitor up to 1, 2 or 4E1/T1/J1 trunks.

### POWER REQUIREMENTS

+3.3V DC: 1.5A

Maximum Power Consumption:  $\leq$ 5W

### INPUT INTERFACE AND IMPEDANCE

Interface: RJ48C

AC Impedance: 1K $\Omega$

### ENVIRONMENTAL CONDITIONS

Operating temperature: 0 $^{\circ}$ C—55 $^{\circ}$ C

Storage temperature: -20 $^{\circ}$ C—85 $^{\circ}$ C

Humidity: 8%—90% non-condensing

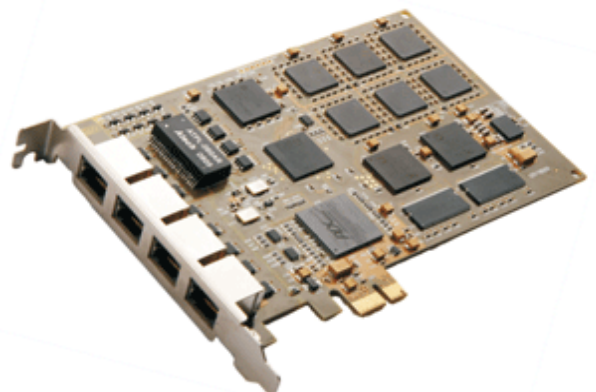
Storage humidity: 8%—90% non-condensing

### SAMPLING RATE: 8KHZ

### SAFETY AND CERTIFICATIONS

Lightning Resistance: Level 4

Certifications: FCC & CE & AS/NZS CISPR







# DST Series

## Passively tapping proprietary PBXs extensions

The DST range of single-slot solutions for logging and monitoring behind PBXs, fits into a variety of PBXs extension tapping environments, including connection between the PBX and the proprietary handsets providing passive monitoring of the voice conversation and D-channel (call control). A variety of telephony events such as call taken and key pressed are automatically decoded and sent to recording applications for a powerful set of functions and high integration with PBXs. As a modular structure, the DST series can be customized to provide 24, 16, 12, 8, 4 ports (per slot) ideal small offices up to large call centers. For that reason many developers worldwide depend on DTP series to create robust and high capacity systems in central office and Telco environments.

Solidly built on Synway's robust FPGA technology, the DST series help logging application providers deliver the most competitive recording solutions with its high performance specifications and the lowest price points when compared with other competitor products. DST series also provide a powerful range of voice processing capabilities via rich dedicated DSP resources to process high-ratio audio compression formats, including license-free G.729 and GSM. This robust architecture further releases host processors from overloading and assures efficient data storage and high reliability for data transmission in the most difficult situations.

The DST series can protect system performance and robustness with its capability to remotely log media stream. Doing this helps solution providers simplify remote debugging or other diagnostic activities and assure high availability of a running system. In addition, Synway's engineers can remotely monitor applications for users to help optimize systems architecture. An intelligent tool, the DST series is able to adjust to a variety of complex environments by automatically and manually configuring variable parameters, and is widely in service in large-scale call centers.



## Key Features & Benefits

- **Multiple PBX Support**

A single board interfaces with a majority of PBXs on single hardware platform. With much field expertise, Synway can configure for your PBXs. Structured with motherboard and functional module architectures, a single DST board can be configured freely from 4 to 24 ports based upon special application needs.

- **Flexible Configuration**

Structured with motherboard and functional module architectures, a single DST board can be configured freely from 4 to 24 ports based upon special application needs.

- **Firmware Upgraded**

No need for hardware change and special upgrading tools, a simple firmware upgrade allows DST to fit into different PBX environments.

- **On-Board Audio Jack**

Monitors up to 24 ports in real-time or playback audio files with on-board audio jack resources.

- **Wide Spectrum of Trigger Events**

DST initiates and terminates recordings based on voice activity, raw D-channel, DTMF, programmable tone analysers, and Call Progress Monitoring (CPM) events.

- **Voice Processing Capability**

A large selection of voice CODECS for developers, including G.729A, G.711 A-law,  $\mu$ -law, Linear PCM, IMA-ADPCM, MP3, and support VOX format.

- **Support Direct Windows WAV Format**

Data is saved in WINDOWS WAV format directly, and can be played out by sound card with no format conversion.

- **Security for User Software**

The built-in authorized code identification circuit is included to provide an exclusive authorization code for protecting users' software security.

- **Extensive PBX Support**

Compatible with international deployments, the DST taps 2-wire, 4-wire, BRI and full duplex PBX's. The list of PBXs the DST supports is constantly growing. Please feel free to contact Synway for custom configuration.

- **Tap Failure Detection**

Support detection for malfunction of hardware platforms and digital telephone as well as digital line interruption.

## Technical Specifications

- **PRODUCT MODELS**

DST-24B/PCI	8/16/24ports, PCI, full length
DST-24B/PCI+	8/16/24ports, PCI, full length, GSM/G729A/MP3
DST-24B/PCI(2.0)	8/16/24ports, PCI, half length
DST-24B/PCI+(2.0)	8/16/24ports, PCI, half length, GSM/G729A/MP3
DST-24B/PCIe (2.0)	8/16/24ports, PCIe, half length
DST-24B/PCIe+(2.0)	8/16/24ports, PCIe, half length, GSM/G729A/MP3

- **INPUT/OUTPUT INTERFACE**

Headset jack: One  $\phi$ 3.5 stereo jack

Telephone line jack:

SHR-16DA-CT/PCI: Four 8-pin RJ45 jacks

SHR-24DA-CT/PCI: One 50-pin RJ21 connector

DST-24B: One 50-pin RJ21 connector

- **AUDIO SPECIFICATIONS**

16Bit PCM	128kbps	8Bit PCM	64kbps
A-Law	64kbps	$\mu$ -Law	64kbps
VOX	32bps	ADPCM	32kbps
G.729A	8kbps (SHR-24DA-CT/PCI, DST-24B only)		
GSM	13.6kps (DST-24B only)		
Mp3 8kps,	16kps (DST-24B only)		
Output power: $\geq$ 50mW			
Distortion: $\leq$ 2%			
Frequency Response: 300-3400Hz ( $\pm$ 3dB)			
Signal-to-noise ratio: $\geq$ 80dB			

- **MAXIMUM SYSTEM CAPACITY**

Up to 10 boards concurrently per system; up to 24channels per board.

- **POWER REQUIREMENTS**

Maximum power consumption:  $\leq$ 12W

- **Impedance**

Input impedance:  $\geq$ 600  $\Omega$  AC

Insulation resistance for PC isolation from telephone line:  $\geq$ 20M  $\Omega$  /500V DC

- **ENVIRONMENTAL CONDITIONS**

Operating temperature: 0 $^{\circ}$ C—55 $^{\circ}$ C

Storage temperature: -20 $^{\circ}$ C—85 $^{\circ}$ C

Humidity: 8%—90% non-condensing

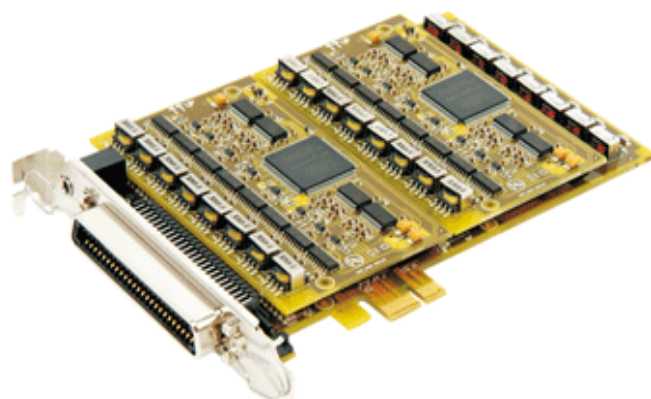
Storage humidity: 8%—90% non-condensing

- **SAMPLING RATE: 8KHz**

- **SAFETY AND CERTIFICATIONS**

Lightning Resistance: Level 4

Certifications: FCC & CE & AS/NZS CISPR





# ATP Series

## Tapping Analog Lines

The well established ATP series supports all analog interfaces, and can easily be configured to connect with diverse analog networks worldwide. With passive and trunking interface capacities, it features programmable voltage thresholds, loop polarity reversal and multiple event triggers. The ATP series provides a range of options, including half length or full length cards, PCI/PCIx/USB/PCIe selectable interfaces and huge versatility. Used by the leading call recording solution providers since 1990s, the ATP series has been optimized to fit the toughest demands and hyper competitive environments with its matchless cost advantage and outstanding robustness.

Specifically, with on-board advanced DSP algorithm and DMA processing capability, the ATP series helps minimize the consumption of host CPU resource and outperforms all comparable products in the toughest application scenarios, including better performance and higher scalability up to 256-channels simultaneous call logging. As a modular structure, the ATP series can be customized to provide 24, 16, 14, 12, 10, 8, 6, 4 and 2 ports (per slot) ideal for small offices up to large call centers. Many developers worldwide have depended on the ATP series to create robust and high capacity systems in central office and Telco environments.

The ATP series leverages multiple dedicated DSP chipsets (not host processor resource), to process a range of high-ratio compressions, including license-free G.729 and GSM. This robust architecture releases host processors from overloading and assures efficient data storage and high reliability for data transmission in the most difficult situations.

## Key Features & Benefits

- **Detect Polarity Reversal**

Adapt to environments where Tip and Ring are reversed. Minimum 10k Ohm AC Impedance/2M Ohm DC Impedance With no conversation interruption, high impedance receivers record both sides of a call.

- **Support Direct Windows WAV Format**

Data is stored in WINDOWS WAV format directly, and can be played out by the sound card with no format conversion.

- **On-Board Audio Jack and Microphone Connector**

Monitor all channels in real-time or playback audio files by on-board audio jack resources.

- **2~24Port High-Impedance Analog Line Tap**

Synway designs all kinds of analog boards (up to 256 ports) ideal for any analog environment, widely used small-scaled systems, call recording systems, call center monitoring, and microphone recording, etc.

- **In-house Unified API (SHCTI)**

A single protocol-independent API, which minimizes the processing overhead on the system CPU by executing protocols only on DSP and unifies application development across all Synway's product series, including USB series products.

- **Tap Environment**

With 2, 4, 6, 8, 10, 12, 14, 16 or 24 port board/USB box, the ATP adapts to low to high density applications. The Synway's in-house unified API supports a total of 256 ports per system. In any analog environment, ATP can work well as tapping point between office and PBX, office and phones, PBX and phones and any other analog audio signals.

- **Worldwide Analog Support**

ATP supports passive call recording on groundstart and loopstart analog networks. Features such as programmable voltage thresholds, voltage detection, ring detection and polarity reversal are managed through Synway's in-house unified API, so the products can easily adapt or be quickly customized to variations in analog systems worldwide.

- **Security for User Software**

The built-in authorized code identification circuit is included to provide an exclusive authorization code for protecting users' software security.

## Technical Specifications

- **PRODUCT MODELS**

SHT-2B(4B)/USB	2/4 ports, USB
SHT-8B/PCI	2 to 8 ports configurable, PCI
SHT-16B-CT/PCI(/MP3)	2 to 16 ports configurable, PCI
ATP-24A/PCI(+)	8/16/24 ports, PCI, (G729A)
ATP-24A/PCIE(+)	8/16/24 ports, PCIE, (G729A)

- **INPUT/OUTPUT INTERFACE**

Headset jack: One  $\phi$ 3.5 stereo jack  
SHT-2B/USB, SHT-4B/USB  
Microphone jack: One  $\phi$ 3.5 stereo jack Telephone line jack: Four 4-pin RJ11 connectors  
Handset jack: One 4-pin RJ11 connector  
USB jack: One USB1.1 standard interface  
Telephone line jack:  
SHT-8B/PCI: Four 4-pin RJ11 jacks  
SHT-16B-CT/PCI(/MP3): Four 8-pin RJ45 jacks  
ATP-24A: A 50-pin RJ21 connector

- **MAXIMUM SYSTEM CAPACITY**

Up to 10 boards concurrently per system; up to 24 channels per board  
Up to 8 USB recording boxes concurrently per system; up to 4 channels per box (SHT-2B/USB, SHT-4B/USB only)

- **AUDIO SPECIFICATIONS**

16Bit PCM	128kbps	8Bit PCM	64kbps
A-Law	64kbps	$\mu$ -Law	64kbps
VOX	32bps	ADPCM	32kbps
GSM	13.6kbps	Mp3	8/16kbps
G.729A	8kbps		
Output power:	$\geq$ 50mW		
Distortion:	$\leq$ 2%		
Frequency response:	300-3400Hz( $\pm$ 3dB)		
Signal-to-noise ratio	$\geq$ 38dB		
Echo suppression:	$\geq$ 40dB		

- **POWER REQUIREMENTS**

+5V DC: 900mA  
-12V DC: 120mA  
+12V DC: 450mA  
Maximum Power Consumption:  $\leq$ 12W

- **IMPEDANCE**

Input impedance:  $\geq$ 1M $\Omega$ /500V DC;  $\geq$ 10k $\Omega$ /1000V AC  
Insulation resistance for PC isolation from telephone line:  $\geq$ 2M $\Omega$ /500V DC

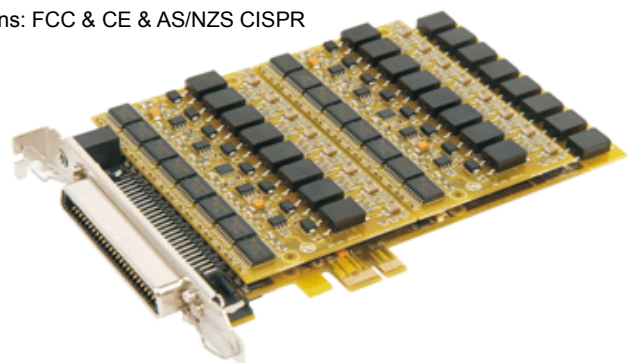
- **ENVIRONMENTAL CONDITIONS**



Operating temperature: 0 $^{\circ}$ C—55 $^{\circ}$ C  
Storage temperature: -20 $^{\circ}$ C—85 $^{\circ}$ C  
Humidity: 8%—90% non-condensing  
Storage humidity: 8%—90% non-condensing

- **SAMPLING RATE: 8KHz**

- **SAFETY AND CERTIFICATIONS**

Lightning Resistance: Level 4  
Certifications: FCC & CE & AS/NZS CISPR





# RDR Series

## Tapping Radar data lines

The Radar Data Recording Board is designed specifically for recording data from airport air-traffic control radars. This board uses PCI interface, allowing recording and playback of up to 4 ports of radar data. It is the first of radar data recording products publicly released for sales within China.

Similar to other Synway's series of recording boards, the Radar Data Recording Board uses high impedance connection. As the input impedance of over 50k ohm is way above normal connectivity impedance on serial data lines, the original radar system is unaffected either during or after installation. The main purpose of the board is to provide airport air-traffic control with an all-in-one solution for voice and radar data recording. The data recording and monitoring system which composes of Synway's voice boards and radar data recording boards enables airline dispatchers to perform synchronized recording and playback of voice and radar data. This greatly enhances analysis work.

The Radar Data Recording Board is suited for air-traffic control system's data recording that uses RS232 synchronous serial communication interfaces. Data recording rate is automatically modulated to accept input signals in the range of 300-38,400 baud rate and playback rate is configurable via a function call with applications. In addition, it is suited for third-party monitoring/play back of other serial-communications data signals.

## Key Features & Benefits

- **Adjustable Recording/playback Rate**

Data recording rate is automatically modulated to accept input signals in the range of 300-38400 baud rate and playback rate is configurable via a function call with applications.

- **DB15 Port**

Easy parallel connection to on-board DB15 port via high impedance with a low malfunction rate, signal level complying with the RS232 standard.

- **1 to 4 Port Hi-Z Monitoring**

Flexible positioning of the access point on the communication line between radar and terminal.

- **Driver's Programming Mode**

Two modes support: Polling mode and event mode (callback mode)

- **Unique Hardware Serial Number**

Each board has a unique hardware serial number written in the firmware to distinguish itself from other boards and prevent piracy. The number is available via an easy function call with applications.

- **Authorized Code Identification Circuit**

The on-board authorized code identification circuit is designed for software safety. Users can apply to our company for the authorized code.

- **Driver Requirements**

Uses an independent driver, allowing share of a software platform with other SHCTI voice boards to enable simultaneous voice processing and radar data recording in a system.

- **Powerful API**

Simple programming algorithm for rich functions.

## Technical Specifications

- **PRODUCT MODELS**

SHR-4D/PCI

- **Environment**

Operating Temperature: 0°C-55°C

Storage Temperature: -20°C-85°C

Humidity: 8% 90% non-condensing

Storage Humidity: 8% 90% non-condensing

- **Input/output Interface**

Two DB15 Ports

- **Maximum System Capacity**

Up to 10 boards concurrently per system; up to 4 channels per board

- **Power Requirements**

+5V DC: 600mA

-12 VDC: 80mA

+12 VDC: 300mA

Maximum Power Consumption:  $\leq 5W$

- **Input Impedance**  $\geq 50K \Omega$

- **Transmission Rate**

300/600/1200/2400/4800/9600/19200/38400 bps

- **SAFETY AND CERTIFICATIONS**

Lightning Resistance: Level 4

Certifications: FCC & CE & AS/NZS CISPR



# Special Enhancements

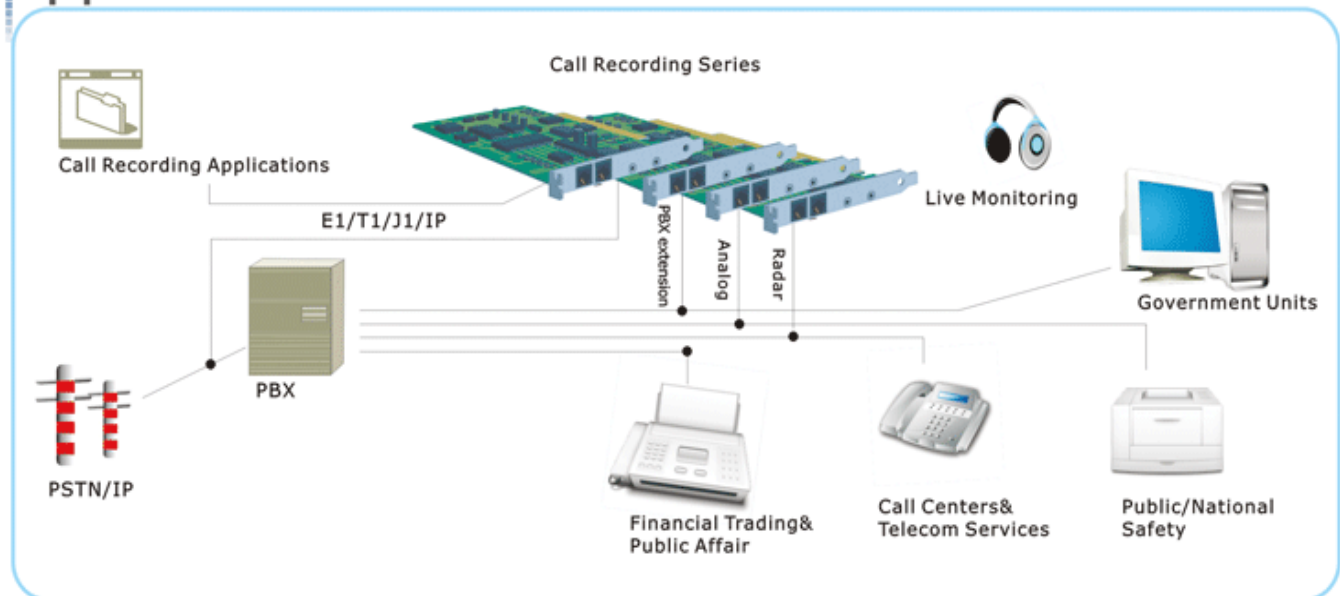
## Field-proven Reliability

Synway has won high recognition for field-proven performance of 2 million ports in 80,000 systems installation across the world. Located in China's IT centre and manufacturing hub of the world, Synway delivers products with high MTBF and low defect rate by optimizing technologies and implementing ISO 9001 and 100% quality control system.

## User-friendly API

Unifying applications for all product lines, Synway's in-house API features user-friendliness and rich functionality. With our remote or onsite Multi-Level Supports(MLS), our R&D engineer are always available to customize API, demos or sample programming to eliminate any uncertainty in your product development, and help port your application to the Synway's API in reasonable time frame.

## Application Architecture





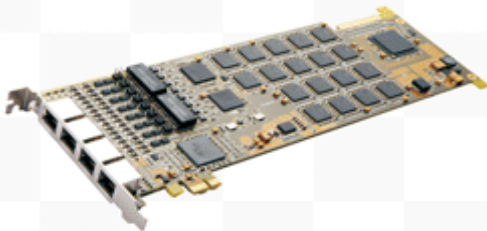
# Synway Products Family

## Multimedia Switch Platform



UMCT integrated multimedia switch platforms are open programmable platforms with integrated multimedia processing and signaling capabilities. In addition to rich media resources, the switch platforms help bridge existing wired and wireless networks with IP networks, and integrate for IP (SIP and H.323) / TDM (SS7/ISDN/CAS) / mobility protocols with IVR, fax, conferencing, compression, echo cancellation and other media processing resources. 1U,2U,6U available, the UMCT supports up to 64E1/T1/J1 or 128FXO/FXS channels per system.

## IP & TDM Series



IP & TDM boards consist of three product lines: SHN series for IP network, SHD series for E1/T1/J1 digital network, and SHT series with analog interface. Besides a complete range of media resources, such as fax, conferencing, compression, echo cancellation for voice enhancement, they also combine various built-in signaling protocol software packets, which include SIP, H.323, SS7 (MAP/SCCP/ISUP/TCAP/TUP/MTP1~3), ISDN variants, CAS and more.

## Open Source Series



Synway open source family includes four product lines: FXM series analog telephony boards, TEJ series digital telephony boards, CDC series boards for transcoding, chassis-based Asterisk appliance. The open-source family reassures high interoperability, voice quality and robustness. All these Asterisk hardware platforms adopt Synway's patent-pending echo cancellation technology SuPerForm(128ms echo tail).





**For more.....**  
**[Http://ww.synway.net](http://www.synway.net)**



**VALUE MAXIMUM BEYOND TOMORROW**

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