Contents

1. SynCTI Driver 5.3.2.7 Upgrade Instruction

New Features & Fixed Bugs (This version supports 32-bit or 64-bit Windows OS and Linux OS)

Series	Feature	Supported Board Model	New Feature & Fixed Bug
SHN	VoIP Media Processing & Signaling	SHN Series	Support the SIP channel to send the call transfer, call hold or call unhold request during an ongoing call.
			Better support the function SsmSetTxCallerId for SIP channels.
			Support the new board model SHN-120B-CT/PCIe/VAR.
			Improve the capability in the peer to peer incoming call processing for registered SIP channels.
			Allow the Domain field to be filled in with a domain name in multi-channel registration.
			Solve the problem that SDP fails to be queried due to frequent reception of the invite message.
			Solve the problem that the APP crashes due to the dynamical configuration of the log for the IP board in case no SHN series boards are installed.
			Solve the problem that the driver state goes abnormal as COT doesn't reply the ACK message.
			Improve the capability in parsing the abnormal message header.
			Improve the capability in parsing the domain name for multi-channel registration.
SHD	Digital Media Processing & Signaling	SHD Series	Support to set the SS7 subservice code in a specified link set.
			Improve the ISDN processing.
			Support the range of 64~126 for TEI value.
DST	Digital Station Tap Boards	DST-24B/PCI	Better support the Siemens AC WIN4.0 console.
			Better support the ERICSSON digital phone.
			Better support the LCD info display of AVAYA PBXes.

FAX	Fax Board	SHF Series	Support to encode the pagination of the current page in the page header.
			Better support the function SsmFaxStartReceive.
IPR	VoIP Recording Software	NTP-480A/PCIe	Better support the NTP board working under the non-administrator user mode.
			Better support the function SsmGetAccreditIdEx for the NTP board.
			Newly support the ALCATE 4059 console.
		IPR series	Newly support the RTP-only recording mode.
			Newly support the G722 RTP recording.
			Newly support LG NORTEL PBXes
			Better support CISCO PBXes
			Better support the IPR capture.
			Better support the processing of non-standard RTP addresses in IPR recording.
			Newly support the recording of specified IP calls.
			Better support CISCO H323.
			Newly support the separate recording of two extensions for an ongoing call.
			Better support the IPR recording under registration.
			Better support the recording for target monitoring.
			Support to obtain the original SIP message.
DTP	DTP	DTP Series	Newly support three interfaces - framing, coding and sync – on the configuration tool.
Install package	Install package	All	Support to modify the driver's default installation path in the setup.ini file.
			Newly support to configure the installation package to be neutral.
Newly Added Configuration Item	Add a new configuration item SubServicefield under the section [LinkSetInfo] to set the SS7 subservice code in a specified link set.		

	Add a new configuration item RTPCtrlRec under the section [BoardId=x] to set the RTP-Only mode switch for SynIPAnalyzer.
	Add a new configuration item AfterFlashNotAffectChState under the section [SystemConfig] to set whether to keep the channel state after the flash operation.
	Add six new configuration items LPTSPort, LPTSPortType, PhonePort, PhonePortType, NonStationAddressNo and NonStationAdress[y] under the section [IPRLGNortel] to set the LG Nortel monitoring.
	Add a new configuration item SipSearchChInRegisterChannel under the section [SIP] to set whether to search for an idle channel only from the registered channels while receiving a peer to peer incoming call.
	Add a new configuration item SipDomain under the section [SIP] to set whether to parse the SIP server domain name while checking the Registration state of the channel.
	Add a new configuration item LocalHookFilterTime under the section [SystemConfig] to set the minimum duration for judging the flash signal.
	Add three new configuration items RegOutBoundProxyAddr, RegAuthUserName and RegDisplayName under the section [SIP] to set Bound External Address, Authentication Username and Display Username for the multi-channel registration.
	Add a new configuration item TelephoneEventsPt under the section [BoardId=x] to set the DTMF RFC2833 payload format for local reception.
Newly Added Function	Add a new function fPcm_NotchFilter_ULAW to filter the specific frequency from a μ-Law formatted voice file which is recorded by the Synway board using the notch filtering algorithm.
	Add a new function SsmSipChHold to send the Call Hold or Call UnHold request from SIP channels to the remote end.
	Add a new function SsmSipChTransfer to send the Call Transfer request from SIP channels to the remote end during an ongoing call.
	Add a new function fBmp_SetHeaderFormatA to set the properties of the page header of a .tif formatted fax file to determine the pagination position, the prefix, etc.
	Add a new function SsmCheckMediaChRTPTimeOut to set the timeout value for a specified media channel to receive RTP data from the remote end or checks whether the RTP data reception is overtime.

Release Date: July, 2014

2. SynCTI Driver 5.3.3.0 Upgrade Instruction

New Features & Fixed Bugs (This version supports 32-bit or 64-bit Windows OS and Linux OS)

Series	Feature	Supported Board Model	New Feature & Fixed Bug
SHN	VoIP Media Processing & Signaling	SHN Series	Newly support to obtain the Reason field from 480 message.
			Improve the processing of call transfer message.

			Support the new board model SHN-480C-CT/PCIe.
			Better support IMS network.
			A-type IP board supports the auto-detection RTP address feature.
			Newly support the compatible processing of 180 and 183 message.
			Add new feature that only support the mode Signaling to receive DTMF.
			Newly support whether to enable the RTP traversal feature on the designated channels.
SHD	Digital Media Processing & Signaling	SHD Series	Newly support to record the synchronous data and signaling on T1 trunk.
			Support the configuration item DTMFFreqOffset.
			Support the functions related to Tone.
			Support the Prerecord feature on ISDN, ISUP, TUP channels.
			Provide the function to parse IAM message to obtain the callerID/calleeID.
DST	Digital Station Tap Boards	DST-24B/PCI	Better support the monitoring of BRI lines.
FAX	Fax Board	SHF Series	Support the new board model SHF-4D/PCIe.
IPR	VoIP Recording Software	NTP-480A/PCIe	Newly support the recording of TADICOM MGCP protocol.
		IPR series	Newly support the re-dial button for ALCATE PBXes.
			Newly support to parse the NOTIFY message in SIP of NEC PBXes.
			Newly support SAMSUNG PBXes.
			Newly support to monitor two network cards simultaneously.
			Better support the recording of SHORTEL MGCP PBXes.
DTP	DTP	DTP Series	Newly support the DPNSS protocol.
			Support the function SsmGetIsdnMsu.
Install package	Install package	All	Linux driver support new kernel version 3.13.5.

Configuration tool	Configuration tool	All	Configuration tool for Linux add the dynamic recording feature.
			Solve the problem that applying reports error when add the IP board manually.
Header file	Header file	All	Header file of C# support the 64 bit OS.
			Add statement of function SsmIPGetStunPublicIP in header file of Delphi.
Tone	Tone	All	Newly support the ZVEI-I tone detection
			Newly support the feature of distinguishing the ringback music from the cue tone.
Newly Added Configuration Item	Add a new configuration item HandleWithoutCic under the section [Ss7SystemConfig] to set whether to get the decoding messages by the function SsmGetDecodeSs7Msu in case there is no CIC set in SS7.		
	Add two new configuration items MonitorPort, MonitorPortType under the section [IPRSAMSUNG] to set the Samsung monitoring.		
	Add two new configuration items CallAgentPort, CallAgentPortType, GatewayPort, GatewayPortType under the section [SystemConfig] to set the Tadicom MGCP monitoring.		
	Add a new configuration item SelcallToneDetectMode under the section [SystemConfig] to set whether to enable the Selcall Tone detector.		
	Add a new configuration item SelcallToneType under the section [SystemConfig] to set the type of Selcall Tone		
	Add a new configuration item SelcallTonePara under the section [SystemConfig] to set the frequency parameter of Selcall Tone.		
	Add a new configuration item EnableAMDBeep under the section [SystemConfig] to set whether to enable the feature of distinguishing the ringback music from the cue tone when the tone detector is working.		
	Add a new configuration item OctLogEnable under the section [SystemConfig] to set whether to output the debugging and error information of Oct to the log file.		
	Add a new configuration item OctMac0 under the section [BoardId=x] to set the MAC address of Ethernet 1 on the SHN C series board.		
	Add a new configuration item DhcpServer under the section [DHCP] to set the IP address of the on-PC Ethernet port for control messages.		
	Add a new configuration item ProcessorCtrlMac under the section [DHCP] to set the MAC address of the on-PC Ethernet port for control messages		
	Add a new configuration item FilterMacRange under the section [DHCP] to set the MAC address whose IP can be allocated by the DHCP server.		
	Add a new configuration item BootFileName under the section [DHCP] to set the name of the firmware to be loaded.		

	Add a new configuration item LogLevel under the section to set the switch for DHCP and TFTP logs.
	Add a new configuration item DHCPRange under the section [DHCP] to set the range of DHCP IP address.
Newly Added Function	Add a new function SsmSipSetConnectionInforOfSDPEx to set the IP address in the Connectioninformation field in the SDP message body of the Invite or 200 message for SIP and informs the remote end to send the RTP data to this IP address.
	Add a new function SsmSipSetContactSection to designate the host and port of the 'Contact' field in the invite, 180 and 200 messages which are sent out from the SIP channels.
	Add a new function SsmIPGetMsgFieldStr to obtain a series of field values from those messages related to the call establishment of a designated channel.
	Add a new function SsmGetDecodeSs7Msu to obtain the calling/called party number, DPC, OPC and the original called party number from the MSU receive buffer of the driver.
	Add a new function SsmSipChEnableRtpStun to set whether to enable the RTP traversal feature on those SIP channels within the range from channel nChFrom to channel nChTo.
	Add a new function SsmGetSelcallToneStr to obtain the Selcall Tone characters saved in the buffer area of the Selcall Tone detector.
	Add a new function SsmGetSelcallToneLen to obtain the number of DTMF characters saved in the buffer area of the Selcall Tone detector.
	Add a new function SsmClearSelcallToneBuf to clear the Selcall Tone reception buffer area in the driver.

Release Date: Nov, 2014

3. SynCTI Driver 5.3.3.1 Upgrade Instruction

New Features & Fixed Bugs (This version supports 32-bit or 64-bit Windows OS and Linux OS)

Series	Feature	Supported Board Model	New Feature & Fixed Bug
SHN	VoIP Media Processing & Signaling	SHN Series	Enable the B-type IP board to support the RTP package which includes the checksum field.
			Support to set the name and content for the required field.
			Improve the SHN board to better support RFC2833 DTMF.
			Enable the SHN board to handle the RTP package of which the Source field is always changing.
			Improve the function of enabling 183 and stun simultaneously.
			Newly support the dynamical setting of the DTMF transmission mode for each SIP channel.

			Adjust the timestamp of the GSM formatted RTP data package.
			Improve the capability of the SHN board to connect with the IMS server.
			Upgrade the SHN linux kernel to version 334
			Improve the reply processing to the reinvite message
SHD	Digital Media Processing & Signaling	SHD Series	Newly support to obtain the original monitoring message of L2 in ISND protocol.
			Newly support adding a field to the SETUP message or sending a user-defined non-SETUP message dynamically.
			Newly support to output the internal time information of the SS7 server to the log file.
			Enable the SHD Series D-type or E-type boards to have the tone and the DTMF signal enter the recording buffer area.
SHT	Analog Trunk Voice Board	SHT Series	Newly support to search for an idle channel in the analog channels to make outgoing calls
			Fix the problem that the application closes immediately after it starts with the service mode.
IPR	VoIP Recording Software	IPR Series	Newly support win8 and win2012 operating systems.
			Improve three monitor modes (IP, MAC and Extension Number) for target monitor.
DTP	DTP	DTP Series	Improve the T1 ISDN monitoring for DTP board.
			Improve monitoring and recording capabilities.
DST	DST	DST Series	Linux system newly supports the tool under textual interface to record the raw wave data and bit stream.
			Newly support to monitor the ASCOTEL OFFICE 45 phone.
			Repair the abnormal problems which occur while monitoring the ASCOTEL PBXs.
			Improve the monitor function to ALCATEL PBX.
Tone	Tone	All	Newly support to set the parameters to judge whether the phone is picked up by a man or not for the AMD detector
Driver	Driver	Linux	Linux USB driver can support the linux kernel of 3.13.0
Newly Added Configuration Item	Add a new configuration item DtmfModel under the section [BoardId=x] to set whether to only use the energy within the range of 697HZ~1633HZ as the reference overall energy for DTMF detection.		

	Add a new configuration item bOpenSpyIsdnL2 under the section [ISDN] to set whether to have the DTP board output the event E_RCV_IsdnL2SpyMsu.
	Add a new configuration item OutputTimerStateToLog under the section [Monitor] to set whether to output the internal time information of the SS7 server to the log file.
	Add a new configuration item ShdDEToneRec under the section [BoardId=x] to set whether to have the tone and the DTMF signal sent by the SHD Series D-type or E-type boards enter the recording buffer area.
	Add a new configuration item NoiseFilteringMinGate under the section [BoardId=x] to set the threshold of back noise.
	Add a new configuration item SipAddRTPChkSum under the section [SIP] to set whether to have the RTP data package include the Checksum field.
	Add a new configuration item SipMsgHeaderName and SipMsgHeaderValue under the section [SIP] to set the name and content of the field to be added.
Newly Added Function	Add a new function fPcm_ALawToAdpcm to convert the A-law formatted file recorded by Synway boards to be IMA ADPCM formatted file.
	Add a new function SsmGetIsdnL2SpyMsu to obtain an original monitoring message of L2 in ISND protocol from the internal buffer area of the driver.
	Add a new function SsmSetIsdnParameterA to add a field to the SETUP message or sends a user-defined non-SETUP message dynamically.
	Add a new function SsmSetAMDPara to set the parameters to judge whether the phone is picked up by a man or not for the AMD detector.

Release Date: May, 2015

4. SynCTI Driver 5.3.3.2 Upgrade Instruction

New Features & Fixed Bugs (This version supports 32-bit or 64-bit Windows OS and Linux OS)

Series	Feature	Supported Board Model	New Feature & Fixed Bug
SHN	VoIP Media Processing & Signaling	SHN Series	Support A3 to ping the network port of a B-type IP board, and the detection on whether the application in shn537 runs normally.
			Better process the 183 message.
			Improve the calculation mode of RTP data for B-type IP boards.
			Add a new configuration item to send the refresh message for calls with IMS.
			Add a new function to send the option message.
			Better parse the tel field.
SHD	Digital Media Processing & Signaling	SHD Series	Better support the channel bank.
			Improve the transmission of ISDN messages.
			Better support SS1 for ASB501 SPBX

			Resolve the problem that the 30E and 60E type boards fail to initial 812.
SHT	Analog Trunk Voice Board	SHT Series	Fix the problem that the DTMF can not be received in a short time after the call is picked up.
IPR	VoIP Recording Software	IPR Series	Support normal output of the DTMF event during RTP reception.
			Improve the IPR recording logic.
DTP	DTP	DTP Series	Newly support the feature of T1 hdc decoding.
			Fix the problem that the configuration of T1-SS1 monitoring will trigger the application error.
			Newly support the SHD-30B-CT/PCI/FJ board to invoke the function SPYSTOPRECTOFILE.
FAX	FAX	FAX Series	Fix the problem that faxing fails on the SHD series boards.
Tone	Tone	All Tones	Improve the AMD algorithm.
			Fix the problem that AMD is misdetected.
			Fix the problem that MF and DTMF go missing or wrong when they coexist in the callerID.
			Improve the back-to-back busy tone detection.
Play Voice	Play Voice		Newly support to set the step of fast-forward or fast-backward dynamically for voice playing.
			Improve the voice playing feature.
Configuration Tool	Configuration Tool		Fix the problem that the total PCM amount is incorrect when the 240D/CAS board and the VoIP board exist in a same machine.
Driver	Driver	Linux	Newly support the CPCI board.
			Fix the problem that the Synway boards work abnormally because of something wrong with DMA in some HP server.
			Support to customize the installation package to be neutral.
			Fix the problem that the invoking of SsmTallkwith costs too much time.
			Fix the problem that the callerID displaying on the phone is incorrect.
Format Conversion	Format Conversion		Add a new function to initialize the resources (e.g. memory) in the driver which are required for converting voice data.
			Add a new function to convert the 16-bit PCM formatted data stored in the buffer area to be the GSM formatted data.
Newly Added Configuration Item	Add a new configuration item AdjustImmediately under the section [BoardId=x] to set whether to enable the adjustment feature for the analog trunk channel when it picks up the call.		

	Add a new configuration item AMDTOffEx under the section [SystemConfig] to set the longest duration of the greetings at the OFF state after a call is picked up by a man.
	Add a new configuration item ExToneLevel under the section [SystemConfig] to set the detection cycle of the back-to-back tone detector.
Newly Added Function	Add a new function SsmSipOutCallSendOptions to send the Option message to the SIP server from the SynSIP protocol stack.
	Add a new function fPcm_InitEx to initialize the memory and other resources in the driver which are required for converting voice data.
	Add a new function fPcm_MemPcm16ToGSMEx to convert the 16-bit PCM formatted data stored in the buffer area to be the GSM formatted data.
	Add a new function SipSessionExpiresMin to set whether to designate the minimum refresh time for the session.
	Add a new function SipSessionExpires to set whether to have the corresponding field set in this item included in the invite and 200 ok messages.

Release Date: Nov, 2015

5. SynCTI Driver 5.3.4.0 Upgrade Instruction

New Features & Fixed Bugs (This version supports 32-bit or 64-bit Windows OS and Linux OS)

Series	Feature	Supported Board Model	New Feature & Fixed Bug
SHN	VoIP Media Processing & Signaling	SHN Series	Fix the corruption problem caused by memory leak.
			Fix the problem in the start path of DHCP and TFTP servers for 480C series.
			Fix the corruption problem caused by 400 OK not containing the From field.
SHT	Analog Trunk Voice Board	SHT Series	New support the feature of DC removal.
			Improve the algorithm for FSK CID.
IPR	VoIP Recording Software	IPR Series	Improve the SIEMENS H323, LG NORTEL and NEC SIP monitoring.
			Better support the ALCATEL, ZENITEL and MITEL PBXes as well as the Siemens IP phone.
			Improve the logic in driver recording.
			Improve the logic processing in SCCP for the BASIC version and solve the problem of configuration tools taking wrong IP addresses with the option of IPV6 enabled.
			Newly support MP3 recording in Linux.
			Improve the sound-control RTP recording.

			Newly support the parsing of Siemens privately owned protocol.
			Make fine adjustments to the driver's SESSION logic processing.
			Improve the functional key parsing for monitoring the ALCATEL PBX.
			Improve the ringing feature for group calling.
			Add the default port number for IPR configuration.
			Add the item of Network Card for configuration tools.
			New support the monitoring of multiple ALCATEL PBXes.
			Enable IPR hasp to support WIN10.
			New support the monitoring of 6 network cards.
		NTP-480A/P	Improve the monitoring on TADICOM MGCP.
		Cle	Improve the monitoring on Huawei IP phones.
			Improve the logic processing of Extension NO.-IP Address relationship dynamic update.
			Enable NTP to better support AVAYA H323.
			Improve the parsing logic for SIP messages.
			Enable the Linux driver to support NTP boards.
DST	DST	DST Series	Improve the ISDN and BRI monitoring.
			Improve the monitoring on PHILIP, AASTRA, Ericsson, ALCATEL and NEC digital phones.
			Improve the driver's processing on internal keypress while using headset in the Speaker mode.
			Improve the stereo recording.
			Newly support the FUJITSU PBX.
HMP	Host Media Processing	HMP Series	Newly support HMP (Host Media Processing)
USB	USB Voice Box		Fix the bus problem for the USB voice box and improve the feature of direct connection between trunk and station during power outage for the composite module
GetInco Tool	GetInco Tool		Support the capture of PCI bus and Slot number.
Driver	Driver		Help users to fix the failure in starting the SHTA.exe.
Newly Added Configuration Item	Add two new configuration items MonitorPort 和 MonitorPortType under the section [IPRZENITEL] to set the SCCP monitoring.		
	Add a new configuration item DcOnOffValue under the section [Boardid=x] to set the threshold of DC deviation for SHT/ATP series boards.		

	Add a new configuration item NICNum under the section [HMPCodec] to set one single machine where HMP Client locates to support multiple network ports.
	Add a new configuration item LocalIP under the section [HMPCodec] to set the IP address of the host where HMP Server locates.
	Add a new configuration item RemoteIP under the section [HMPCodec] to set the IP address of the host where HMP server locates.
	Add a new configuration item LocalPort under the section [HMPCodec] to set the port of the host where HMP Server locates.
	Add a new configuration item RemotePort under the section [HMPCodec] to set the port of the host where HMP server locates.
	Add a new configuration item MaxRtpThread under the section [HMPCodec]. More threads are needed for RTP CODEC and forwarding if HMP Client processes more RTP channels. You can assign the treads appropriately according to the amount of the CPU cores and RTP channels.
	Add a new configuration item LogType under the section [HMPCodec] to set the log output mode.
	Add a new configuration item LogLocation under the section [HMPCodec] to set the path to save the HMP Client logs.
	Add a new configuration item TotalMediaForward under the section [HMPRouter] to set the amount of HMP Client.
	Add a new configuration item MaxMediaThread under the section [HMPRouter]. More threads are needed if HMP Server processes more RTP and voice channels. You can assign the treads appropriately according to the amount of the CPU cores and channels.
	Add a new configuration item LocalIP[n] under the section [HMPRouter] to set the IP address of the host where HMP Client locates.
	Add a new configuration item TotalCh[n] under the section [HMPRouter] to set the amount of HMP Client channels supporting CODEC.
	Add a new configuration item LocalPort[n] under the section [HMPRouter] to set the port of the host where HMP Client locates
	Add a new configuration item RemoteIP[n] under the section [HMPRouter] to set the IP address of the host where HMP Client locates.
	Add a new configuration item RemotePort[n] under the section [HMPRouter] to set the port of the host where HMP Client locates.

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