



June 10, 2009

## AC'97 & HDA Modem Software Ver. 2.1.95 Release Notes

### 1 Hardware

#### 1.1 Core logic chipsets supported in this release

Core logic Chipset	Vendor ID	Device ID
Intel	8086	2416
Intel	8086	2426
Intel	8086	2446
Intel	8086	7196
Intel (ICH3)	8086	2486
Intel (ICH4)	8086	24C6
Intel (ICH5)	8086	24D6
Intel (ICH6) AC'97	8086	266D
Intel (ICH6) HDA	11C1	3026, 3055, 1040
Intel (ICH7) AC'97	8086	27DD
Intel (ICH7) HDA	11C1	3026, 3055, 1040
Intel (ICH8) HDA	11C1	3026, 3055, 1040
Ali (1535)	10B9	5450
Ali (1535+), ALI(1563)	10B9	5457
VIA (686A, 686B, VT8233, VT8235, VT8237)	1106	3068
SIS (540, 630, 961, 962, 964)	1039	7013
nVidia (nForce1)	10DE	01C1
nVidia (nForce2)	10DE	0069
nVidia (MCP-2S)	10DE	0089
nVidia (KrushK8)	10DE	00D9
nVidia (CK8S)	10DE	00E9
nVidia (MCP04)	10DE	0039
nVidia (CK804)	10DE	0058
Realtek	10EC	8197
AMD	1022	746E
ATI	1002	4341
ATI	1002	434D
ATI	1002	436D
ATI (SB400)	1002	4378
ATI (SB450) HDA	11C1	3026, 3055, 1040
ATI (SB600) AC'97	1002	438E
ATI (SB600) HDA	11C1	3026, 3055, 1040
ATI (SB700) HDA	11C1	3026, 3055, 1040
ULI HDA	11C1	3026, 3055, 1040

## 1.2 Supported digital interfaces and codecs

### AC'97

- Scorpio1 in AC'97 mode (CSP1037, CSP1037A)
- Scorpio2 in AC'97 mode (SV92A2, CSP1038)
- SV92A3 in AC'97 mode (SV92A3, CSP1040)
- SV92A35 in AC'97 mode (SV92A35, CSP1040)

### HDA (High Definition Audio)

- Scorpio1 in HDA mode (CSP1037, CSP1037A)
- Scorpio2 in HDA mode (SV92A2, CSP1038)
- SV92A3 in HDA mode (SV92A3, CSP1040)
- SV92A35 in HDA mode (SV92A35, CSP1040)
- SV92A4 AMoM (Realtek ALC267, CSP1040)

## 1.3 Compliance

- AC97/MC97 Rev. 2.1
- HDA rev 1.0
- HDA Bus driver 1.0 version
- PC '99 compliant
- ACPI compliant

## 1.4 Hardware Features Supported

- Line over current detection and protection
- System resume on incoming ring.
- International DAA with country specific homologation settings programmed by software based on country ID.
- Caller ID
- HDA 1.5V and 3.3V support with SV92A35.

## 2 Modem Software

### 2.1 Operating Systems Supported

- Windows 98: Original, SE
- Windows NT 4.0
- Windows Me
- Windows 2000 Professional
- Windows XP
- Windows Vista

### 2.2 Modem Standards Supported

- Data Modes: V.92, V.90, V.34, V.32bis, V.32, V.29, V.23, V.22bis, V.22, V.21, Bell212A, Bell203J
- Fax Modes: V.17, V.29, V.22ter, V.21 Ch 2
- DCE-DCE Protocols: V.8bis, V.42, LAPM, MNP2-MNP4, V.42bis, MNP5, V.44
- DTE Protocols: V.250, V.80, MS #UD, T.31 Fax Class 1

## 3 V.92 features supported in this release

- Call Waiting/Modem On Hold. Call Waiting detection enabled by default. MOH enabled by default.
- Fast Connect. Fast Connect enabled by default

- PCM Upstream, disabled by default.

This release also supports V.44 data compression, caller ID detection on call waiting, and Agere MOH application, universal call waiting (DTMF generation), 3-way calling.

## 4 Driver Installation

The following table lists the required (R) or optional (O) modem installation files for each operating system.

File	Win98	Win NT4	WinMe	XP/Win2k/Vista
agrsm.vxd	R			
agrsmvcd.vxd	R		R	
agrsmnum.vxd			R	
agrsm.sys			R	R
agrsmnt.sys		R		
agrsmvxd.inf, .cat	R			
agrsmnt4.inf.cat		R		
agrsmmem.inf			R	
agrsmmee.inf.cat			R	
agrsmxp.inf.cat/ agrmdv32.cat/ agrsmv32.cat/ agrmuv64.cat/ agrmdv64.cat/ agrsmv64.cat/ agrmuv64.cat				R
agsetup1.dll	O	R	O	O
agsetup2.dll	O	R	O	O
agsetup.ini	O	R	O	O
setup.exe	O	R	O	O
agrsmdel.exe	O	R	O	O
agrscoin.dll				R
agrsmsvc.exe				R

- Except NT4 for all other OS versions that support Plug and Play, select Driver Update, then point to the set of required files, to install the modem. Microsoft supplies .cat catalog files after the drivers pass logo testing. Until then, run setup.exe to install the modem in WinMe and Win2k. Otherwise the driver signing policy of the OS might prevent the unsigned driver from being installed.
- For NT4 run setup.exe to install the modem
- There is an InstallMOH=Y flag in 'agsetup.ini' for installing the MOH application "ltmoh.exe". If this option is turned on the setup will install MOH application in the \Program Files\ltmoh directory and will run the application. It will also create a Run entry for the application, so that it runs automatically when the system comes up. The files ltmoh.exe, mohapi.dll and ltmoh.ini should be in the same directory as the setup, driver and inf files for the InstallMOH option to work. An additional file mfc42.dll is needed support the "ltmoh.exe" application in Win 95 and Win NT. Setup will copy "mfc42.dll" into the LTMOH application directory if required. This option is not supported in setup versions earlier than 1.43 supplied with releases prior to 2.1.0.

## 5 Customizing ATIO response string

The ATIO response consists of two parts, the product name and version number. The default product name string is "Agere SoftModem". The version number string is "Version " appended with current version number. For example, if the current version is 2.0.3 the default ATIO response is

### Agere SoftModem Version 2.0.3

The product name part of the response could be customized by adding following line in the inf files under [PortMod.AddReg]

HKLM,SOFTWARE\Agere\SoftModem,FullProductName,,"<product name string>"

For example if the product name string is Agere PCI SoftModem then the inf entry should be, HKLM,SOFTWARE\Agere\SoftModem,FullProductName,,"Agere PCI SoftModem"

This feature is not supported in release prior to 2.0.3.

## 6 History of changes

Changes made since 2.0.0 release:

1. Fixed blue screen problem observed with 3.3.13 release.
2. Agere MOH application support.

Changes made since 2.0.1 release:

1. International call-waiting support. Added S598 to set country specific SAS tone frequency. (MR2118)
2. V.92 PCM upstream disable selectively per country basis. Added S599 to block enabling PCM upstream with +PIG command. (MR2118)
3. Fixed bug in disabling V.44 with AT+DS44 command. (MR2093, MR2122)
4. Added AT%TT61 test command to generate V.92 PCM upstream signal for PTT testing. (MR2187)
5. Added feature to support custom ATI0 response string stored in registry.
6. Fixed dependency of product name and friendly name in NT4.0. Now there is no need to rebuild driver if friendly name need to be changed.

Changes made since 2.0.3 release:

1. Ali1535+ core logic chip support. (MR 2271)
2. Fixed a connectivity problem on lines where the loop current was interrupted for up to 400ms during ANSam transmission. The problem was observed on some of the lines in Japan and caused no connects or connects at V.32 or V.34 rates. The changes include the following:
3. Improved performance on certain lines. With some lines in system test lab, the modem was frequently retraining and unable to maintain connections consistently.
4. Modified functions that used system time. Using system time could potentially cause a problem in the time value returned if the user or some program changed the system time. The functions are modified to use OS ticks

Changes made since 2.0.4 release:

1. Implemented multiple stored profiles for V.92 fast connect. Up to 10 profiles stored for all operating systems except W9x. Only 3 profiles stored for W9x because of the restriction of 16K on the amount of data that could be written in registry.
2. Implemented universal call waiting – DTMF generation for call switching.
3. Implemented 3-way call (place call) feature.
4. Fixed Japan call waiting detection. Set S598=400 for Japan, modified detection algorithms.
5. Enabled type 2 caller id detection by default (no need to use AT+VCID command any more).
6. Enabled modem on hold by default for all countries, i.e., AT+PMH=0 by default.
7. Improved fast connect reliability. Fixed several bugs related to fast connect; fixed bugs that caused fast connect failure, do not attempt fast connect when there is no stored data.

8. Fixed problems in call waiting disabling with \*70 on some lines. On some lines busy signal appears when modem sends \*70 DTMF digits to disable call waiting. The modem driver was not handling the busy signal properly.
9. Fixed a bug in blacklisting logic - any call disconnected by closing port was treated as failed call.
10. Logging debug information with agrsmlog.exe disabled in released drivers. Use debug version for collecting log.
11. Fixed low connect rate problem with conexant V.92 client modem when softmodem answers the call. Disable fast connect in answer mode.
12. Fixed XP country ID problem when agrsmhom is run during setup. Earlier versions, the country setting defaulted to US instead of the setting in the system.
13. Replaced modem Setup with Version 1.43. In this version, "setup.exe" changed to support the "ltmoh.exe" application. Added a new feature to install the MOH application "ltmoh.exe". This installation option can be turned on by the following flag in the 'agsetup.ini' called InstallMOH=Y. This option will install the MOH application in the \Program Files\ltmoh directory and will run the application. It will also create a Run entry for the application, so that it runs automatically when the system comes up. The files ltmoh.exe, mohapi.dll and ltmoh.ini should be in the same directory as the setup, driver and inf files for the InstallMOH option to work. An additional file mfc42.dll is needed support the "ltmoh.exe" application in Win 95 and Win NT. Setup will copy "mfc42.dll" into the LTMoh application directory if required.
14. MOH application version 1.59S included in this version. New features include Support for Universal MOH – DTMF generation for call switching and 3-way call (place call) feature.
15. Fixed buzzer noise problem observed after port is closed with some Intel core logic systems. Speaker turned off explicitly when port is closed.

Changes made since 2.1.0 release:

1. Improved fast connect. Added code for V8Bis detection, quick V8bis, quick echo cancellation. Quick AnsAM change, changed the timers for AnsAM.
2. Speedup dialing by reducing dialtone validation and using minimum allowed value for S11. Currently this change is made only for US & Japan. For US S11 set to 55 and S536 set to 500. For Japan S11 set to 70 and S536 set to 1000.
3. Modified the PQC handler for more options for future test & debug.
4. Fixed false busy detection during pulse dial.
5. Fixed the bug where the modem was getting V.44 connection, even when the compression was disabled using AT command.
6. Modified S597 for Taiwan & PRC to use low VI template.
7. Changed S9 value from 50 to 45 to fix false V.23 detection in the presence of 400Hz busy signal.
8. Fix for MR 2316 (XP country select takes 2 min). This was caused by a combination of a bug in the Country Applet and the driver. The Applet sends an AT+GCI=xx command, the command buffer is of length 89 and is not initialized. The un-initialized data is causing local echo to get turned on and this causes the data to get echoed out. The applet is not expecting to see any data after the AT command response and does not handle this situation well. It times out after 2 seconds. The fix in the driver is to ensure that the local echo option does not get modified accidentally.

Changes made since 2.1.2 release:

1. Modified AT+PQC=3 to disable all Fast connect features.

Changes made since 2.1.3 release:

1. Disabled spectral shaping by default (S512.16=0) for all customers.
2. Set default value of S539 to 67 from 55 to detect ring frequency up to 68 Hz (FCC recommendation). Also changed default value of S538 to 15 from 0 to avoid any spurious ring detection.

3. Fixed call-progress not working after resume on certain systems using Intel core logic chipsets. Incorrect setting of audio mixer register after resume caused the problem. The change is made only for Intel core logic chipsets.
4. Fixed a HCT MixerControl test failure observed with certain customer systems.
5. Modified agrsmhomol.exe to support -W 'iniFilename' option. This option allows using ini file names other than the default filename.

Changes made since 2.1.4 release:

1. Fixed MOH bug introduced in previous release. MOH was failing when the initial call was made to a server that supported V8BIS and QC was enabled. (MR 2586)
2. For US the dial tone validation parameter, S536 set to 800 based on some field reports with earlier release.
3. Fixed DTMF level bug. The level was always 3 to 4 db lower than S93. (MR2605)
4. Fixed pulse dial inter-digit timing error. The inter-digit time was shorter than the value set in S526.
5. Disabled the debug command AT%U2 for optimized drivers.
6. Fixed ATI11 pad loss & RBS reporting bug when fast connect is enabled.
7. Set the language properties of the driver to "Language Neutral". Earlier setting was English.
8. Fixed bugs in AT-V90 command. (MR2549)
9. Fixed bugs in AT+MS command. (MR2436)
10. Fixed several bugs that caused poor throughput. Fixed significantly higher V.34 fallbacks especially with I-modem. (MR2573, MR2551, MR2505, MR2457, MR2412, MR2395, MR2371, MR2359)
11. Fixed connect reliability bugs with Cisco. (MR2509)
12. Changed S29 for South Africa to 12 (120 ms). The old value of 50 does not meet PTT requirements. (MR2564)
13. Modified digital pad loss detection. The new algorithm detects pad loss reliably and improved performance. (MR2573, MR2551, MR2505, MR2412)
14. Fixed modulation reporting bug in ATI11 command. In earlier releases ATI11 was Reporting V34 when actually V92 modulation is used with servers supporting V8bis. (MR2511, MR2561)
15. W2k & XP inf files merged. Cleaned all inf files.

Changes made since 2.1.6 release:

1. Call waiting tone detection modified to support CW tones with cadence.
2. Optimized V.44 performance.
3. Changed value of CW frequency in S598 for many countries.
4. Changed default value of S536 to 1000 based on field testing.
5. Fixed ring reporting bug when the modem is in auto answer modem.
6. Added disabling selectively individual V.92 features per country basis. Following bits in S599 are used for this feature.  
 Bit 0: PCM upstream Enable/Disable.  
 Bit 1: Fast Connect Enable/Disable  
 Bit 2: Modem On Hold Enable/Disable  
 Bit 3: V44 Enable/Disable  
 Bit 4: CID On CW Enable/Disable  
 0: Enable (Default) 1: Disable
7. Added AT+PQC=255 to clear all stored fast connect profiles.
8. Added a key in all inf files to clear all fast connect stored profiles during installation.
9. Fixed no connect on 7B6 and other lines with the Cisco servers.
10. Fixed port master3 connect reliability problem.
11. Fixed a server incompatibility problem reported in Korea.
12. Modified default value of S57 to disable automatic insertion of “,” in certain dial strings.
13. Attempting quick V.8bis with some V.90 servers caused connectivity problems. This problem is fixed by not attempting quick V.8bis when there is no stored fast connect profile.
14. Set OCP limit, S596=140 for all countries. Earlier setting of 60 for CTR21 is wrong.

Changes made since 2.1.7 release:

1. Implemented universal call waiting detection filter. The CW tone frequency set in S598 is no longer used with the new scheme.
2. Simultaneous detection of SAS and CAS tones.
3. Implemented call waiting detection during rate change.
4. Fixed DTMF level difference between S93 setting and the level at T/R.
5. Fixed blue screen bug when PCM upstream attempted with TI server.
6. Fixed 7B6 line connect reliability problems with Cisco5200. (MR2906)
7. Fixed Japan type2 CID detection.
8. Added Azerbaijan, Jordan, Ukraine, and Yugoslavia country support.
9. Implemented system audio call progress level control with ATL command.
10. Made further improvements to port maseter3 connectivity problem.
11. Implemented disabling all V.92 features per country basis when S599=255.

Changes made since 2.1.8 release:

1. Implemented call waiting detection during rate change, i.e. fall forward and fallback.
2. Fixed Japan CID on CW display problem with MOH application.
3. Fixed CID on CW detection bug for all countries other than US and Japan. This bug was introduced in 2.1.8 release when a change was made for detecting Japan CID.
4. Made changes to hang up procedure to fix a Taiwan PTT test issue. The test modem is required to hang up within 3 sec after the remote modem hangs up. This is a test issue specific to the modem used by PTT test lab. The changes are made only for Taiwan and do not affect other countries.
5. Increased S526, pulse dial inter digit delay, fro Brazil from 700 to 800.
6. Fixed DMA synchronization related problem for VIA core logic chipset. This change fixed lockup problems observed with a laptop using VIA core logic chipset.

Changes made since 2.1.9 release:

1. Modified the Taiwan PTT fix made in earlier release. Simplified the implementation.
2. Fixed bug in over current detection message popup. The interface between the driver and the application was broken in earlier releases.
3. Fixed a connect reliability problem with Cisco MICA server.
4. Fixed a bug in remote retrain detection in V.90 mode. A redundant check in V90 code prevented remote retrain detection.
5. Disabled call waiting tone detection during hang-up to prevent any possibility of false CW detection triggered by dial tone.
6. Fixed a MOH request related bug. When server does not acknowledge the request, softmodem disconnected instead of retraining.
7. New MOH application (ver. 1.6.1). New application supports multiple languages – English, Spanish (Modern, Mexican, Castillian), French, German, Italian, Korean, Japanese, Chinese (Simplified, Traditional), Czech, Danish, Dutch (Netherlands), Finnish, Greek, Norwegian, Polish, Portuguese (Portugal), Russian, Swedish, and Turkish. The new application also supports multiple language online help.
8. Fixed disabling Modem Country/Region Selection (+GCI).

Changes made since 2.1.10 release:

1. Redefined S598. Earlier this parameter was used to sert the CAS tone frequency. With the universal CW detection scheme this parameter is no longer needed. The new definition of this parameter is as follows.

Bit	Function
0	Cadence CW tone detection 0=ON, 1=OFF
1	Short SAS detection, 0=OFF, 1=ON

- 2        420 Hz SAS detection, 0=OFF, 1=ON
- 3        1400 Hz SAS detection, 0=OFF, 1=ON
- 4        Increase ACK signal level, 0=OFF, 1=ON
- 5        Short timeout, 0=OFF, 1=ON
- 6        Long timeout, 0=OFF, 1=ON
- 2. Fixed inconsistency in busy cycles bits in S23 for many CTR21 countries.
- 3. Fixed a XP/W2K verifier bug related to releasing DMA when unloading device.
- 4. New setup (ver. 1.48). This version takes care of installation of multiple language support for MOH application.
- 5. Intel ICH4 core logic chip set support. Basic modem functions are verified; power management functions are not yet verified.

Changes made since 2.1.11 release:

- 1. On some US lines a second CW tone appears 10 sec. after detection of first CW tone. Fixed problems when the second call waiting tone appears. Earlier modem was disconnecting when the second CW tone appeared.
- 2. Fixed noise problem during shutdown when system audio is used for call progress.
- 3. Call progress volume levels changed when system audio is used for call progress.
- 4. Fixed pulse dial problems observed just after system power up on a specific system.
- 5. SiS630 and SiS961 core logic chipset support.

Changes made since 2.1.12 release:

- 1. Modified ATI11 to display time taken to establish data connection. The time is measured from the time client modem got indication of remote modem answered to the time the connect message is displayed.
- 2. Fixed PM3 connectivity problems reported from field. When remote modem issues retrain, while LAPM negotiation is in progress, fallback to V.34 instead of attempting V.90 again.
- 3. Fixed false call waiting tone detection in V.34 mode.

Changes made since 2.1.13 release:

- 1. Fixed fax call answering issue with W2K Fax Service Manager when call is originated with handset in fax machine and then start fax after some delay.
- 2. Fixed pulse dial inter digit delay shorter than the value set in parameter S526. (MR3536)
- 3. Improved V.92 fast connect to achieve additional saving up to 2 sec in connect time.
- 4. Disabled MOH applet when MOH disabled in S599. (MR3362)
- 5. Fixed network coverage performance issues observed in 2.1.13 release.
- 6. Fixed fast connect not working properly for the first call after port open when a fast connect profile exists for the number being dialed. (MR3085)
- 7. Fixed #UD key 60 bug which showed improper termination cause when the modem goes through rate renegotiation. (MR3386)
- 8. Added disabling AT+GCI=? based on DisableGCIDisplay bit in AGRSMSSetup key in registry. (MR3551)
- 9. Setup ver. 1.49 with MRs 3405, 3406, 3407, 3585 fixed.
- 10. MOH ver. 1.62 with fix for CID display issues (MR3524, MR3523), installation issue with Ali1535 systems (MR3303).
- 11. Fixed Ali1535 WOR modem not working after resume with a specific system. (MR3349)
- 12. Fixed insufficient system resources error in ACPI stress test with Ali1535. (MR3372).

Changes made since 2.1.14 release:

1. Reverted back to 2.1.12 fast connect implementation. All source files related to fast connect replaced with 2.1.12 files.
2. Fixed bug in caller ID name. Earlier releases the last character in CID name in type 2 CID was missing.
3. Modified S598 default setting to enable cadence call waiting tone detection. Field tests indicate some lines in US have cadence CW tone.
4. Fixed a fax compatibility problem caused by dropping carrier too quickly. The problem was observed with PANASONIC KX-F90 and CANNON MULTI PASS L90 fax machines.
5. Fixed MOH resume problems observed in Japan. A bug in the Jpanan type 2 CID processing code caused the problem. (MR3359)
6. Disabled fast connect after initial connection is established to improve MOH resume and retrain reliability. This change fixed field MOH resume failures reported in US.
7. Modified Japan CW tone detection to support long and short CW tone detection. Two new bits in S598 are defined for this purpose.

Bit	Function
7	Long cadence CW tone detection 1=ON, 0=OFF
8	Short cadence CW tone detection 1=ON, 0=OFF

S598 modified to set these bits to 1 for Japan. (MR3760)

8. Fixed a bug in system audio call progress. This bug caused system audio cal progress failure in some systems.
9. Setup 1.50 with many customer reported bugs fixed.
10. Deleted the change made in earlier release to fix fax call answer with W2K Fax Service Manager. The change caused problems for adaptive answer.

Changes made since 2.1.15 release:

1. Fixed call waiting tone detection for countries that fail on the Rochelle tester. MR 3836.
2. Changes to log V92 connection profile data for Fast Connect. This change will allow the simulation to get the connection profile from the log file before Fast Connect simulation.
3. Modifications to have the call progress volume settings follow the setting in S Register 22.
4. Increased S detection from 20 Ms to 53 Ms to avoid false triggering on a proprietary EC training signal. MR 3894.
5. Improved algorithm for ANSpcm detection and Short DIL to get faster and more reliable Fast Connect. Should fix MR 4088, 4083,
6. Modified log command handler to enable logging homologation parameters for all countries.
7. Fixed ReadRX and Tx buffer position functions for VT8233A chipset. This fixes a pulse dial problem with this chipset.
8. Fixes for Call disconnect issues on MOH event with the Telogy server. MR 3089, 2820, 3441.
9. Fixed a bug in Japan Caller ID where the CID number was more than 10 digits. MR 4019.
10. Fixed a bug in saving ANSpcm power data in the Fast Connect Profile.
11. Save Echo Canceller taps in the Fast Connect profile data. Using these saved taps results in quicker Fast Connect times.
12. Set the Lucent Portmaster workaround flag only when the Receive data mode becomes active. Fixed PM3 connectivity problems reported from field. When remote modem issues retrain, while LAPM negotiation is in progress, fallback to V.34 instead of attempting V.90 again.

Changes made since 2.1.16 release:

1. Modified the logger program agrsmlog.exe to capture logs whenever the modem port is open. It will continue to be active and will wait for the port to open again to restart logging. The logger application will be closed when the ESC key is pressed. Previous versions of the application exit on port close.
2. Added SV92A2 support for Intel/Ali/VIA chipsets.

3. Implemented a scheme to set the speaker volume for Digital call progress through the INF. MR 3893.
4. Fixed a bug in the Digital call progress, where there were popping sounds in the audio. This was being caused by the application ltsmmmsg.exe missing audio samples. MR 3695
5. Disable interrupts and save and restore the CF8 register value during all CF8 accesses in the PCI read and write functions. This prevents the CF8 register contents from being inadvertently overwritten by another program.
6. Increased timing error tolerance before pulse dial begins to 35 msec.
7. Set the INFO1a indication bit and carrier frequency correctly to enable Fast Connect to work with CISCO 5300. MR 4110, 4127,4204.
8. Implemented code to clear Fast Connect Echo Cancellor data if the data is not good for Fast Connect, The code will now do a long train and stores the data so that subsequent calls will be Fast Connect calls. MR 4174.
9. Implemented lower DC termination than Japan using the S597 register. This code will be effective when bits 3 and 4 of this register is set to zero. MR 4008.
10. Added analog call progress support for SV92A2.
11. Fixed a bug where the AT\J1 command was overriding the ATS37 settings. MR 4136.
12. Setup Version 1.51 with customer bug fixes MR 3750
13. MOH application version 1.63 with customer bug fixes

Changes made since 2.1.17 release:

1. Fixed HCT 11.0 failure caused by AT+GCI=? not returning a valid response. (MR4407)
2. Added Estonia country ID support. Agere ID 0x51, TAPI ID 372, there is no valid T.35 ID. (MR4445)
3. Fixed a MOH detection problem with a specific Conexant server in Japan. (MR4323)
4. Fixed MOH failure with out going call field problem reported in Korea. (MR4272)
5. Fixed MOH field problem caused by a bug related to placing outgoing call option. (MR4256)
6. Fixed a UK type 2 caller ID display problem. (MR3441)
7. Fixed suspend/resume problem observed with Aii1535 when there is an active LAN connection. (MR4376)
8. Fixed failure to dial after resume from S1 state observed with Intel ICH4 systems. (MR4375)
9. Fixed a bug in over current protection, the OCP was effective for first offhook after port open but not for subsequent offhooks. (MR4371)

Changes made since 2.1.18 release:

1. Fixed disable busy detection during dialing. (MR4086, MR4184)
2. Modified the code for detecting modem device to look for modem device up to PCI bus 8. Earlier code was looking for modem device only up to PCI bus 2. (MR4513)

Changes made since 2.1.19 release:

1. Implemented fast connect disable from MOH application.
2. Disabled fast connect when PCM upstream is enabled. (MR4319)
3. Modified interrupt service routine to fix problems working with some other drivers in specific customer systems. (MR4601)
4. Fixed a MOH field problem in Singapore with lines having phone mail service and the service is activated. The modem was failing to detect CW tone. (MR4598)
5. Fixed CW tone detection problems in Singapore when the network initially sends partial CW tone. (MR4047)
6. Implemented SV92A2 over current protection. (MR4797, MR4740)
7. Implemented SV92A2 ring validation for WOR. (MR4761)
8. Implemented SV92A2 Brazil power cross test fix. (MR4739)
9. Implemented nVidia nForce corelogic chipset support. (MR4659)
10. Fixed problems in resuming from S1 state in SIS962 corelogic systems. (MR4375)
11. Implemented Realtek corelogic chipset support. (MR4349)

12. Implemented AMD8000 corelogic chipset support. (MR4036)
13. Fixed pulse dialing problems with SIS962 corelogic chipset. (MR4009)

Changes made since 2.1.20 release:

1. For Malaysia, changed S93 to 5 and S525 to 65 for better margins for DTMF level and pulse dial PTT tests. (MR5282).
2. Increased pulse dial inter digit time by 50 ms. for better margin for PTT tests. (MR5223)
3. BVRP MOH application support. (MR5165)
4. Modified AT+MS, AT+PQC, AT+PIG, AT+PMH responses based on S599=255 (v.92 disabled) or not. (MR4996)
5. Fixed field problem related to lines with multiple kinds of RBS. (MR4716)
6. Modified interrupt service routine to fix problems working with some other drivers in specific customer systems. This change was expected to be in 2.1.20 but was not included. (MR4601)
7. Fixed MOH problems related to 3COM server. Fixed modem falling in a retrain loop when 3COM server failed to detect MOH. (MR3911)
8. Fixed SiS core logic support with A2. (MR5161)
9. Fixed NT4 installation problem observed with earlier release. (MR5143)
10. Added handset exclusion feature with A2. (MR5127)
11. Modified S597 for Poland to use higher ring detection threshold. (MR5105)
12. Fixed SiS core logic S4 power state bug. (MR4968)
13. Added disabling Fast Connect by default with a bit in AGRSMSetup key in inf file. Setting the key value to 1,00,04,10,80 disables FC by default. (MR4851)
14. nVidia nForce2 core logic chipset support. (MR4736)
15. Fixed callprogres problem with unmute observed with ICH systems. The modem no longer modifies the audio register 0xc. This bug is applicable only for Intel core logic. (MR4715)
16. Fixed Transmeta large file transfer bugs. (MR3988, MR2815, MR2807, MR2252)

Changes made since 2.1.21 release:

1. For Malaysia, changed S93 to 6 and S525 to 66. (MR5282).
2. For Korea S93 changed to 6 based on field reports. (MR5566)
3. Allow disabling specific baud rates with S60. This feature likely to be useful in Australia. The allowed symbol rates for different settings of S60 are as follows. (MR2841)  
 S60 = 7 (2400)  
     = 15 (2743, 2400)  
     = 31 (2800, 2743, 2400)  
     = 63 (3000, 2800, 2743, 2400)  
     = 127 (3200, 3000, 2800, 2743, 2400)  
     = 255 (3429, 3200, 3000, 2800, 2743, 2400) DEFAULT
4. For India, modified S91 & S92 range to 2-25 from 10-25. (MR5546)
5. Fixed bug in detecting busy frequencies below 340 Hz. (MR5514)
6. Improved fast connect. Fast connect works after only one call unlike at least 2 calls in earlier drivers. (MR5413)
7. Fixed a Japan type 1 CID detection bug, some time the CID was not reported even though the CID was detected successfully. (MR5249)
8. For Japan, fixed 750ms on/ 1580 ms off ring detection bug. (MR5392)
9. Fixed system crash bug with AOL7.0 & AOL8.0 on HyperThreading systems with WinXP.
10. Fixed agrsmhom.exe utility to clean old homologation parameters.
11. Diagnostics application support.
12. Ali1563core logic chipset support. (MR4444)
13. ATI core logic chipset support. (MR4597)

Changes made since 2.1.22 release:

1. When call-waiting tone is detected, modem is not put on hold automatically if the MOH application is not running. This is done, as a precaution to make sure that modem is not in a hold state without notification to the user. (MR5940)
2. For some countries where S93 was 4 or 5 the DTMF level was higher than expected. Some field reports and PTT test indicate setting S93 to a maximum value of 6 resolves the issue. S93 is set to 6 for countries where the earlier value was 4 or 5. (MR5832)
3. Disabled current limiting for Kuwait and Lebanon. (MR5693)
4. Implemented handling of break signal sent by communication applications with ATL+B key. (MR5670)
5. Modified AGRSMMsg.exe to support the option to set the power scheme to always on when the modem is active. This option is enabled with bit0 in MiscOptions registry key. (MR5419)
6. Made changes to support display of AT commands & verbose AT command responses with the AGRSMMON.exe diagnostic application. (MR5516)
7. Fixed Japan CID detection problems with Scorpio2. (MR5391)
8. Fixed pulse dial noise issue with digital call progress. After end of a digit a short tone was heard. (MR5935)
9. Implemented an alternate power management scheme for SIS chipset. Some specific customer system needs this scheme because of problems with audio driver. The alternate scheme is enable with bit16 in AGRSMSSetup registry key. (MR5834)
10. Fixed power management issues with RealTek.

Changes made since 2.1.23 release:

1. Disabled fast connect when V.90 is disabled. (MR6056)
2. Fixed a client to client V.34 compatibility issue when fast connect is enabled. (MR6033)
3. Fixed digital call-progress noise issues related to pulse dialing. (MR5935)
4. Fixed digital call-progress issues when "Log off/Switch User" feature is used in WinXP. Fixed in Agrsmmsg.exe. (MR6010)
5. Fixed installation issue with setup in systems with Agere FW323 chips. Fixed in setup program. (MR6030)
6. Fixed a potential race condition with AGRSM msg.exe while going to D3 state. The IOCTLs from AGRSMmsg.exe are processed only when in D0 state and in all other states IOCTLs completed successfully without processing. (MR6266)
7. Intel ICH5 core logic support. (MR5616)
8. nVidia KrushK8 core logic support. (MR6172)
9. Fixed power management issues for ATI core logic. (MR4597)

Changes made since 2.1.24 release:

1. Fixed Cisco5200 connectivity issue caused by changes made for MR6033 in earlier release. (MR6296)

Changes made since 2.1.25 release:

1. Fixed DTMF level problems when S94 is set to non-zero value. In earlier release the level is lower than expected. (MR 6858)
2. Modified agrsmmsg.exe to display FullProductName defined in inf rather than fixed "Agere System Soft Modem". (MR6519)
3. Fixed MOH field issues in Ireland and other countries where a longer interval is required between two consecutive hook flashes. Fixed in MOH application version 1.71 included with this release. (MR5953)
4. Improved connect rate reliability from call to call when fast connect is enabled. (MR5347)
5. Fixed a HCT11.1A DevCtl tool related issue when the IOCTL exerciser sends invalid UserBuffer pointer.
6. Enabled over current detection all the time when modem is off-hook with ATH1 and till training starts when off-hook with ATDT or ATA commands. (MR5859)

7. Added an option in CodecFlags to enable WOR in S4. Bit 30 in CodecFlags is used for this purpose. If this bit is set WOR is enabled in S4 and disabled in S3. The default setting is WOR enabled in S3 and disabled in S4. (MR6451)
8. Increased Rx gain by 3 db for A2 to compensate Rx level difference between A2 and Scorpio. (MR5712)
9. Added ring overload protection for scorpio. Modem will not go off-hook when ring signal is present. (MR6857)
10. Modified over current detection in CTR21 mode for scorpio. (MR6860)
11. Added ATI Ids in inf files. (MR6610)

Changes made since 2.1.26 release:

1. Fixed system lockup problem observed with earlier release. (MR7090)
2. Deleted the 3Db higher Rx gain change made for A2 in earlier release. This change caused performance problems with some real lines.

Changes made since 2.1.27 release:

1. Fixed HCT11.1a Driver verifier failure observed with earlier release. (MR7103)
2. Removed ATH1 restriction for Italy. (MR6735)

Changes made since 2.1.28 release:

1. Implemented dial restriction feature, which restricts dialing to a predefined numbers. (MR8973)
2. Implemented a feature to scale the digital call progress volume. HKLM\Software\Agere\SoftModem\DCPSpeakerVolume\ SpeakerVolumeScale registry key is used for scaling. The range is 0 to 0x32. (MR8807)
3. Fixed retrain failure when retrain caused by call waiting tone. (MR7415)
4. Fixed DTMF detection problems in TAM mode. (MR7345)
5. For India, modified busy detection problems to fix false busy detection. During field-testing, earlier setting was not suitable with some lines. (MR6889)
6. For Malaysia, modified S93 based on PTT pretest results. (MR5282)
7. Fixed a modem & video driver compatibility problem with a specific customer system. (MR7106)
8. Implemented a feature to enable/disable voice mode (FCLASS=8). Bit26 in CodecFlags registry key is used for this feature. If this bit is set voice mode is disabled. The default setting of this bit is 0, i.e., voice enabled. (MR7296)
9. Fixed audio & modem compatibility problem caused by modem turning off bit clock during port close. (MR7234, MR6844)
10. Fixed loss of audio problem with SiS962 core logic systems. (MR7052)
11. Fixed Ali1563 power management issues. (MR6809)

Changes made since 2.1.29 release:

1. For Portugal S30 default set to 0 just like any other CTR21 country. The earlier value of 4 caused field problems and is no longer needed with CTR21. (MR9480)
2. Fixed file transfer related issue with hyperterminal on a hyperthreading system. (MR9098)
3. Workaround for an ADI server related bug observed in Germany. The server falsely indicates that it cannot support V.90 even though it is a V.90 server. (MR7390)
4. Fixed false fax calling tone detection problem in TAM mode. (MR7345)
5. Fix for intermittent crash observed with Device Path Exerciser. (MR7162)
6. Fixed a LAPM problem with a server that does not support selective reject. (MR6543)
7. Fixed a HCT related problem with nVidia nForce3. (MR9516)
8. Partial fix for nVidia nForce3 pulse dialing. (MR9293).
9. Added nVidia Nforce2 ID in inf files. (MR9220)

Changes made since 2.1.30 release:

1. Fixed ATB0 response bug when disabling CITT modulation is not allowed. (MR10184)
2. The change made for MR6543 in earlier release could potentially cause some performance issues. The LAPM Reject suppression is disabled by default. To enable set bit15 in AGRSMSetup registry key.
3. Fixed V.90 callback problems. (MR7390)
4. Fixed I-modem network coverage performance issues with some versions of I-modem. (MR10146)
5. Fixed a bug related to setting country ID with agrsmhom.exe utility.
6. Fixed nVidia KrushK8 core logic pulse dial issues. (MR9293)
7. Fixed random lockup problem observed with systems using Transmeta CPU. (MR10021)

Changes made since 2.1.31 release:

1. Fixed PTT answer tone timing test requirement for Australia. (MR9522)
2. Fixed Czech Republic comma pause requirement. S8 range changed to 3 –6 with default value of 3.
3. Fixed AT+MS? response for V32B modulation. (MR10588)
4. Fixed a V90 server compatibility problem when fast connect is enabled. (MR10644)
5. Fixed a WOR disable problem when the WOR is disabled from modem properties. (MR10558)
6. Modified the LAPM Reject suppression change made earlier so that any potential performance issues are minimized. This feature still effective only when bit15 in AGRSMSetup registry key is 1.
7. Fixed disabling user messages in Agrsmmsg.exe. (MR10483)
8. Fixed NoEC problem when V.34 4800 rate is selected. (MR10231, MR4111)
9. Fixed pulse dial timing problem with nVidia KrushK8 core logic. (MR9293)
10. Added nVidia MCP-2S corlogic support.
11. Deleted redundant revisions ID check for ATI corelogic. Earlier driver did not work with ATI250 chip set

Changes made since 2.1.32 release:

1. Fixed a compatibility issue with a V.34 modem. The problem was caused by slightly longer duration of line probing signal. The duration of the line probing signal reduced to be compliant with the v.34 specification. (MR10849)
2. Made several changes core ATI core logic as per ATI suggestions to fix WHQL and audio compatibility issues. (MR10892)
3. Added DMA out of synchronization check for ATI core logic as a precautionary measure. (MR10874)

Changes made since 2.1.33 release:

1. Improved network coverage performance with A lines in I-modem test. (MR11574)
2. Modified the change made in previous release for V.34 modem compatibility. (MR11362, MR10849)
3. Fixed dial inter-digit timing. (MR11148)
4. Fixed a system hang-up problem caused by race condition during port close with hyperthreading enabled systems. (MR11239)
5. Fixed an nVidia K8 corlogic specific WOR issue. (MR10974)
6. Fixed a lockup problem observed with a specific Ali corelogic based system. (MR11467)

Changes made since 2.1.34 release:

1. Added Tunisia, Belize, Aruba, Jamaica, Haiti, Cayman Islands, Bahamas, Saint Lucia, Barbados, Trinidad, Granada, Brunei, Belarus, Croatia. (MR11868)
2. Fixed a blues screen issue with ATI core logic. (MR12040)

3. Fixed pulse dial problems with ATI core logic. (MR11809, 12001)

Changes made since 2.1.35 release:

1. Fixed MSN registration connectivity problem reported from field. (MR12692)
2. Fixed analog call progress for ATI core logic. (MR12146)
3. Added support for ATI core logic with device 436D. (MR12694)
4. Added support for nVidia core logic with device 00E9. (MR12695)

Changes made since 2.1.36 release:

1. Fixed TAPI country selection not working with a specific customer image. (MR13181)
2. Fixed a blue screen problem with a specific customer system with hyperthreading enabled. (MR12271)
3. Fixed performance problems when PCM upstream is enabled. (MR3740)
4. Intel ICH6 core logic support for AC'97. (MR13462)
5. For Ali1535+ implemented recommendations in the Ali application note for interaction between audio & modem. (MR12867)
6. For VIA8235 core logic fixed modem not working after resume from S3 when audio is disabled. (MR13010)
7. For VIA8235 core logic fixed analog call-progress noise issue during initialization. (MR13063)
8. Scorpio2 performance improvements. (MR10507)

Changes made since 2.1.37 release:

1. Azalia (High Definition Audio) support.
2. Modified homologation parameters for Ukraine (MR14723)
3. Modified DMA start and stop procedure for nVidia corelogic. This change is made as per nVidia suggestion to fix system lock-up problems under certain conditions. (MR13036)
4. Fixed pulse dial problems with ATI corelogic when the CPU speed is lowered. (MR14565)
5. Fixed a COM port error caused by first time codec ID read failure with Ali1535+ corelogic. (MR13865)
6. Fixed pulse dial failures caused by DMA going out of sync with ATI core logic. (MR13864)
7. Fixed WHQL test failure caused by random codec ID read failure with a specific ATI system.

Changes made since 2.1.38 release:

1. Fixed blue screen problem observed with some Azalia systems. Modified buffer scheme. (MR16269)
2. Modified Azalia codec detection – modem codec detected dynamically. (MR16268)
3. Added an option to disable OCP. OCP disabled if bit27 in CodeFlags is set. (MR16198)

Changes made since 2.1.39 release:

1. Fixed Azalia 20 pps pulse dialing. (MR16518)
2. Fixed Azlaia WOR. (MR16521)

Changes made since 2.1.40 release:

1. Standby related changes to meet HCT12 requirements. The modem now disconnects when a standby request is received while off-hook and does not ignore the request.
2. Added protection in modem driver for a potential system crash during modem reconnects. (MR13446)
3. Azalia (HDA) support for CSP1037 dual mode devices. This is an alpha version for HDA with this device. (MR18447)
4. Fixed VI template issues for SV92A2 HDA mode. (MR17508)
5. Modified ATI5 response for HDA systems. (MR17082)

6. Disabled DMA burst mode for ATI core logic. Added an option to do all DMA sample processing in a lower priority (DPC) to fix a specific customer system related problems. This option is enabled if bit13 in AGRSMSetup key is set. (MR16956)
7. Fixed a resource conflict issue with a specific Intel core logic system. A bug in the Intel core logic specific stop DMA procedure in the modem driver caused the problem. (MR17148)
8. Fixed nVidia core logic related issues. (MR16941)

#### Changes made since 2.1.41 release

1. Ring detection and VI template fixes for Sacorpio Azalia (HDA).
2. Added an option to disable all V.92 features by default. This option is enabled if bit 20 of the AGRSMSetup key is set. This will disable Quick Connect, MOH and PCM Upstream and the features then cannot be enabled by AT commands or the MOH application.
3. Fixed a bug in agrsmmsg.exe, agrsmmon.exe, agrsmlog.exe, where the applications were not working on W2K systems. The applications now work on all 32-bit and 64-bit Windows operating systems. (MR19801,19472)
4. Detect multi-processor (hyperthreading) mode correctly on Azalia(HDA) systems. (MR 19109)
5. Standby related changes to meet HCT12 requirements. The modem now disconnects and goes to standby when a standby request is received while off-hook. ( MR 19575)
6. Modifications to fix Type 1 CID issues (USA/Japan) for Azalia(HDA) modems. ( MR 19696)
7. Fixed WOR on ATI core logic for the case where the modem is the secondary codec and there is no audio driver installed. (MR 18469)

Note: The version number was accidentally incremented to 2.1.46 after the 2.1.41 release. There are no official releases with version numbers between 2.1.41 & 2.1.46.

#### Changes made since 2.1.46 release

1. Implemented changes to meet Telstra requirements for long intermediate echo. This change affects only V.34 connections and is effective only when the country setting is Australia. (MR14053)
2. Modified fast connect echo cancellation to fix a customer reported field problem.
3. Added an option to set blind dial as default with an option in inf file. (MR21393)
4. Fixed a blue screen issue reported with specific customer systems. (MR20111)
5. Fixed a WinME drivers build related issue. Some HDA related changes made are not suitable for WinME and hence the WinME and W2K/XP drivers are no longer same. (MR20099)
6. Added nVidia CK804 & MCP04 core logic support. (MR21037)
7. Added ATI SB400 core logic support. (MR17723)
8. Fixed a COM port open/close related issue in HDA mode. (MR19949)
9. Fixed pulse dial sound issue with ATI core logic. MR(22190)
10. A2 revision E codec chip related changes.
11. Fixed Japan type 1 caller ID issues in HDA mode. (MR20058)
12. Fixed HDA mode performance issues observed in system test. (MR19285)
13. Fixed HDA mode WOR issues with Scorpio. (MR19158)

#### Changes made since 2.1.47 release

1. Added Taiwan type 1 CID support (FSK & DTMF).
2. Improved pulse dial sound issues observed with some customer systems. (MR22190)
3. Fixed pulse dial failure with ATI core logic. Increased waiting time for codec ready. (MR24713)
4. Fixed no call progress sound after pulse dial issue with ATI core logic.
5. Fixed connectivity issues in HDA mode with DION & Lucent PM3 servers. (MR26467, MR25763)
6. Fixed ATI SB400 core-logic pulse dial issues. (MR26726)
7. Fixed VIA core-logic specific AMD stress test failure. (MR20525)
8. Fixed Scorpio HDA mode WOR reliability issues. (MR27336)
9. Fixed VIA core-logic specific blue screen issues observed with a customer system. (MR26917)

10. Fixed a short cadence PBX ring detection issue in HDA mode. (MR25883)
11. Modified ATI5 & ATI7 response for HDA mode.
12. Fixed Scorpio HDA mode over current detection.

Changes made since 2.1.48 release

1. Added Bahrain, Senegal, Kenya, Monaco, and Qatar country support. (MR2793)

Changes made since 2.1.49 release

1. Added Gibraltar country support.
2. Fixed blue screen issues with specific customer systems. (MR28421, MR28742)
3. Fixed pulse dial problem with ULI core logic in HDA mode. (MR28019)

Changes made since 2.1.50 release

1. Fixed DTMF dialing bug introduced in earlier release. (MR31555)

Changes made since 2.1.51 release

1. Modified call progress to use kernel streaming audio. The AGRSMMSG.EXE application is no longer needed for digital call progress.
2. Improved Japan CID detection reliability in AC'97 mode.
3. Turned off Scorpio and the DAA barrier when port is closed.
4. Fixed a SV92A2 related connectivity issue with a specific server. (MR28114)
5. Fixed a specific customer system issue related to conflict between modem in the system and the modem in docking station. (MR32625)
6. Modified ATI5 response for Scorpio to indicate the chip versions.

Changes made since 2.1.52 release

1. Fixed ALI1535 enumeration related bug caused by changes made in earlier release.
2. Added SV92A3 support.

Changes made since 2.1.53 release

1. Modified ATI5 response to distinguish Scorpio chip versions F and F'.
2. Fixed a false ring response during port open with some HDA systems.
3. Fixed a blue screen problem observed in HDA mode.

Changes made since 2.1.54 release

1. Fixed audio mute setting change after system reboot problem. (MR34110)
2. Fixed audio volume setting change after system reboot problem. (MR34632)
3. Modified pulse dial scheme in HDA mode. This change is made to fix pulse dial timing problems observed with ATI SB450 core logic. (MR33943)
4. Fixed MOH failure in HDA mode caused by hook-flash not working reliably during MOH. (MR35232)
5. Fixed pulse dial problem noticed with ATI core logic with 64bit driver. (MR33592)

Changes made since 2.1.55 release

1. Fixed redial failure observed with a specific customer terminal adapter. (MR35011)

Changes made since 2.1.56 release

1. Fixed blue screen issue in HDA mode while resuming from standby with earlier release.

#### Changes made since 2.1.57 release

1. Fixed port open problem noticed with Scorpio rev F chip & ATI SB450 system. (MR36430)
2. Fixed a blue screen problem observed with 64 bit drivers. (MR35668)
3. SV92A3 version 2 chip support. Fixed audio & modem concurrent operation in HDA mode.

#### Changes made since 2.1.58 release

1. Fixed SV92A3 version 2 chip ring detection issue. (MR37203)
2. Fixed defer port close feature. (MR37142)

#### Changes made since 2.1.59 release

1. Fixed a blue screen problem noticed with Intel ICH7 core logic in HDA mode. (MR37252)
2. Added Intel ICH7 AC'97 mode support. (MR37366)

#### Changes made since 2.1.60 release

1. Fixed modem not responding after resume with a specific customer HDA system. The problem was caused by audio and modem streams conflict. (MR37084)
2. Fixed a bug in identifying ICH7 in AC'97 mode.
3. Disabled CTR21 current limiting for SV92A3.
4. Fixed system hang-up during pulse dial when HyperThreading turned on in HDA systems. (MR38759)
5. Fixed system hang-up/blue screen during pulse dial with HDA dual core systems. (MR38669)
6. Fixed a bug in DMA out of synchronization check that caused data connection problems on some customer systems having DMA issues under certain conditions. (MR39500, MR35302)

#### Changes made since 2.1.61 release

1. Modified changes made for dual core HDA system pulse dial issue. (MR38669)
2. Added pulse dial timing error detection and abort dialing feature for HDA mode. (MR39846)

#### Changes made since 2.1.62 release

1. Fixed connect rate reliability problems noticed with a customer system in HDA mode. (MR40117)
2. Modified pulse dial inter digit timing for SV92A3. (MR37402)
3. Fixed a blue screen problem reported with a specific customer system. (MR40036)
4. Fixed SV92A3 detection bug with nVidia core logic in AC97 mode.
5. This release includes changes made in earlier test driver (2.2.60) to improve SV92A3 connect rates.

#### Changes made since 2.1.63 release

1. Enabled type 1 caller ID for Egypt, Jordan, and Uruguay. (MR40682, MR40910)
2. Microsoft Vista operating system compliance changes.
3. Fixed SV92A3 detection in AC'97 mode with nVidia core logic. (MR21037, MR41246)
4. Fixed SV92A3 WOR reliability problems. (MR40682)
5. Fixed SV92A3 pulse dial inter-digit timing problems under stress test. (MR37402, MR41523)
6. Fixed HDA mode blue screen problems observed with a specific customer system.

#### Changes made since 2.1.64 release

1. Fixed W98 and WME support broken in earlier release.

Changes made since 2.1.65 release

1. Fixed false ring detection in HDA mode with some CO simulators. (MR40137)
2. Fixed audio and modem codec register conflict issue with SV92A3 for nVidia core logic. (MR41246)

Changes made since 2.1.66 release

1. Connect reliability improvements with CSP1040 DAA based on Japan testing.
2. Changed Belarus homologation parameters.

Changes made since 2.1.67 release

1. Fixed V32 mode bug introduced in earlier release by a change made to fix compilation warning.
2. Added an option to disable spectral shaping.

Changes made since 2.1.68 release:

1. Fixed AT%TT60 homologation test command causing memory corruption. (MR44892)

Changes made since 2.1.69 release:

1. Fixed French Type 2 CID detection. (MR43300)
2. Fixed a blue screen issue occurring with a specific customer system. (MR46127)
3. Fixed unexpected noise with ALI1535P system while system goes to standby. (MR45785)

Changes made since 2.1.70 release:

1. Implemented device version information display in ATI5 command response for AV92A3/CSP1040. (MR47047)
2. Fixed a race condition in CSP1040 device version detection during device initialization. (MR47479)
3. Added support for several new countries. (MR47128)
4. Fixed Product Version number display (in driver file properties), the driver version number was displayed twice in earlier releases.
5. Fixed TAPI country detection problem when there are more than 9 country locations created by user.
6. Fixed MOH call switching problem reported from field in France. (MR43300)
7. Fixed busy detection field problem reported in TAM mode with France country setting. (MR46254)
8. Improved CSP1040 DAA first call connect rate reliability with some lines.

Changes made since 2.1.71 release:

1. Fixed Scorpio performance problems caused by changes made for CSP1040 DAA in 2.1.70 release. (MR48267)
2. Fixed a system hang-up problem with a specific customer system. (MR43379).

Changes made since 2.1.72 release:

1. Fixed abnormal behavior during WOR with a specific customer system. (MR50298)
2. Fixed a specific customer modem test tool compatibility issue. (MR49636).
3. Fixed back to back V.34 connection issues. (MR49522)
4. Added new countries - Bosnia, Congo (DRC), Congo (Rep), East Timor, Macau, Malawi, Serbia (changed from Yugoslavia), New Caledonia, Swaziland. (MR49330)
5. Fixed AT command response error with a customer specific stress test program. (MR49264)
6. Fixed a file transfer problem with nVidia core logic. (MR48408)

Changes made since 2.1.73 release:

1. Fixed send Fax not working in 64-bit Vista RC1. This problem was observed only with 64-bit Vista and is caused by 64-bit fax application compatibility. (MR51784)

Changes made since 2.1.74 release:

1. Fixed Vista wake on ring issues. (MR51956)
2. Modified agrdiag.exe to fix a potential problem caused when agrdiag.exe was run while the port was not open and the driver state was active. (MR52285)
3. Changed default (USA) call progress detection threshold based on field report. (MR53334)
4. Modified xp/vista inf files to take care of the Vista hybrid power management.

Changes made since 2.1.76 release:

1. Fixed longer delay in resume from suspend observed with earlier releases. (MR53907)

Changes made since 2.1.77 release:

1. SV92A4 support with Realtek ALC267 AMoM chip.
2. Fixed dial-tone detection problem reported in Malaysia. (MR56746)
3. Changed Tunisia homologation parameters based on PTT test results.

Changes made since 2.1.78 release:

None. The 2.1.79 release was discarded.

Changes made since 2.1.79 release:

1. Modified ATI5 response to distinguish SV92A35 V1 and V2 chips.

Changes made since 2.1.80 release:

1. Speakerphone support. (MR61055)
2. Improved Japan CID ring cadence detection. (MR61260)
3. Modified type 1 CID response when number or name is not present. The new response is consistent with ITU V.253 spec. (MR61823)
4. Brazil power cross test changes for homologation testing.

Changes made since 2.1.81 release:

1. Fixed modem retraining issue with Vista when power mode is set to Power Saver mode. (MR62050)
2. Increased call progress volume. (MR 62645)
3. Fixed modem not functioning with a particular customer system under certain conditions with Vista64. (MR62465)
4. Fixed subsystem ID display in diagnostic application (agrdiag) with Vista. (MR52485)
5. Modified DisplayInstallStatus option in modem setup. English message is used as default for any unsupported language. (MR55252)

Note: 2.1.83 release did not have any changes that affected AC'97 or HDA modems.

Changes made since 2.1.83 release:

1. Fixed audio call progress not working after resume. (MR63388)

Changes made since 2.1.84 release:

1. Improved Type 1 CID detection. (MR63399)
2. Fixed lower speed (V21, Bell103, V23c) compatibility issues. (MR64400)

Changes made since 2.1.85 release:

Changes made in 2.1.86 release are PCI specific and do not affect AC'97 or HDA modems.

Changes made since 2.1.86 release:

1. Fixed HDA 64 bit modem driver issues with Vista SP1 and 4 G Bytes RAM. (MR65841)

Changes made since 2.1.87 release:

1. Modified softmodem service (agrsmSvc.exe/agr64Svc.exe) to set system power management to "High performance" mode while modem is off-hook only when the "MiscOptions" flag in the registry is set to 01. (MR62050, MR65992, MR66004)

Changes made since 2.1.88 release:

1. Windows 7 specific changes. The changes have no impact on other Windows OS drivers.

Changes made since 2.1.89 release:

1. Microsoft OEM ready changes. (MR67454)
2. Improved type 1 CID performance to pass TIA-777-A-2003 test. (MR67302)
3. Introduced a delay between modem going off-hook and turning on call progress sound to avoid any unpleasant sound caused by glitches on the phone line. (MR66545)
4. Fixed potential WOR reliability problems that could be caused if there is a long trace in the Vaux power supply. This problem was noticed with SV92A4 test setup. (MR68766)

Changes made since 2.1.90 release:

1. PCIe specific changes. The changes have no impact on MDC modems.

Changes made since 2.1.91 release:

1. PCIe specific changes. The changes have no impact on MDC modems.

Changes made since 2.1.92 release:

1. Changed S9 lower limit. S9=0 now disables carrier detection in Bell 103 mode.

Changes made since 2.1.93 release:

1. Changed "Agere" to "LSI" in ATI commands response strings.
2. Inf file names changed – file names start with "lsi" instead of "agr"
3. "Agere Systems" changed to "LSI" for friendly names in inf files.

Changes made since 2.1.94 release:

1. Implement K.21 for OEM ready compliant driver
2. Setup/Agrsmdel - Version 2.7.5 with support for more languages (Arabic,Russian and Turkish),
3. DPI Scalable Icon