# CM4000 – RELEASE NOTES & TECHNICAL TIPS

The release notes in this document outline feature and functionality changes that have been made since the last release of code for the octal and quad modems, PRI/CT1 card and the Compaq 4000 Manager software. The technical tips outline issues that may be encounter, check our web page www.microcom.com or call technical support at 781-255-2700

- **Note: Channelized E1 support is present in this code. Compaq has gone to great lengths to beta test the code in multiple countries and environments. Due to the significant number of the locations with different network complexities and topologies, every possible configuration can not be anticipated. Compaq is addressing this issue, by adding enhancements to the CE1 code on an on-going basis. For more information, please consult your Compaq reseller or visit our web page (www.microcom.com).**
- **Note: PRI outbound dial support is present in this code. Due to minimal testing in the field and with third party applications (i.e. LAN based fax), it is recommended this feature should be evaluated by the customer before purchase. Compaq is committed to completing the necessary testing (field and application) in the near term. For more information, please consult your Compaq reseller or visit our web page (www.microcom.com).**

## Release Notes Connection Log Analyzer (Version 17)

- New Excel spreadsheet which is used to analyze the connection log data

## Release Notes Compaq 4000 Manager (Version 4.0 Build 13)

- Connection Log reporting connect rates; duration ; and various connection diagnostics (defaulted off)
- Alarm capabilities – Alarms and notification – Email; modem; or pager – Alarm log (defaulted off)
- Real-time system status – Hardware status; Main/Boot code; TDM assignments; A/B bit status
- cE1 card display
- Updated On-line Help
- A, an Excel spreadsheet used to analyze the connection log information captured by Compaq 4000 Manager

## Release Notes PRI\CT1 (Main 2.1.2/Boot 2.1.2)

- NOTE: PRI dial out capability and channelized E1 support are present in this code, however, due to minimal Field Testing these features are for restricted use only.
- Added the latest PRI Layer 2 fix
- Upgrade notice:
  Because of the pSOS change you MUST upgrade your
  cards in the following manner.
  Set Bit 8 of dipswitch SW2 so the card comes up in boot mode.
  From boot mode upgrade the boot code and main code to 2.1.2.
  After the main is burned OK, you can put Bit 8 down and run the whole system.

## Release Notes PRI\CT1 (Main 2.1.2/Boot 2.1.2){Continued}

- Proper handling of SW Configuration files
- Support PRI cards in slots 8 and 9.
- PRI in slot 8 will default to HWY1 and modem pool 1 - 7
- PRI in slot 9 will default HWY2 and modem pool 10 – 16.
- This code also supports the old slot 15 and 16 configuration as well.
- Single/Dual cT1 (SW2 switch 6 - open); Single/Dual PRI/T1 Single/Dual PRI/E1 support.
- Single/Dual channelized T1 features dynamic channel assignment, which allows
- 4/8 port modems to be mixed within a span.
- Modem signaling can be set via “ModemSignaling1=n”, or “ModemSignaling2=n” entries in the configuration files (where n = 1-Loop, 2-E&M, 3-E&M Wink signaling).
- “ModemPool=” parameter is now in the configuration files located in the Compaq 4000 Manager folder.

## Release Notes 8 Port Modem (4.2.19)

- V.8bis capabilities list, including Flex version number and Rockwell data pump version number
- A-law/mu-law bits set to indicate to client, in V.8bis handshake, whether server modem is in A-law or mu-law environment. When used with later Rockwell based client modems that support this feature, it forces the client to A-law. Important feature since we have encountered Rockwell based modems, which support this feature in E1 countries, not defaulting to A-law and therefore relying on server to indicate A-law!
- Switch to high-power mode when A-law is detected – DISABLED by DEFAULT (AT:T114 =1 (low power - default; AT:T114 =3 high power). Also included is a workaround to revert to default when connecting to a Rockwell K56 client running DSP revision 37 or earlier. This feature should provide higher K56 connection speeds. May need to be disabled in certain environments.
- :T114 bit 1 determines high or low-power mode.
  when = 1, high power mode (Tx level at -6dB)
  when = 0, low power mode (Tx level at default)
- Digital Pad Detection
- DSP version reporting
- Fax Manufacturer changed from Microcom to Compaq
- Rockwell DSP version 42
- V.8bis connection status is now reported in the @E report. The possible responses are ACK, NACK, and NR (no response).
- Modem code supports A/B bits listed in the on-line status report for CT1

## Release Notes 8 Port Modem (4.2.19) {continued}

- DSP goes to sleep on busy-out for low-power mode
- MABP event support for A/B bits, rings no answer, and TDM events. (NEED Ver. 4.0 Manager software)
- Changes for Cheyenne fax package support: +FLID now holds 20 characters, +FMREV command is changed to +FREV and the modem response to fax class 2 string is changed.
- Change to force \n6 instead of \n4 during V.8bis connect. Affected connections with Rockwell based clients forced to MNP.
- AT:T18 DTR busy timer with *Y0. *Y0 always disables busy-out (including :T18 setting). It will be used in all other cases.
- ADCR removed from 8-port modem build
- The AT-H1 command will be saved as part of the Stored configuration and will be maintained through any reset/power-up event. AT-H0 can be issued through the DC session or group AT command on 4000 Manager.
- AT:T113 defaults to 1 for LAPM RRENs, this means the server now allows request Rate renegotiations
- AT#T is now set only by the PRI card. The PRI card dynamically configures each modem card on power-up and when the modem cards or PRI card have been rebooted. It sends each modem the #T information based on the switch or software configuration of the PRI card. The user is no longer allowed to override this setting with the #T command. The modem now returns OK when this command is issued (not ERROR) but no configuration changes are made.
- The AT\R Ring Indicator command setting is now stored in static memory rather than configuration memory. The modem is returned to the \R1 default only through a modem power-up or reset. ATZ or AT&F does not change the user setting of the \R command
- Clearing RING message to IDLE on 4000 Manager when modem doesn't answer the call fix
- New Default: AT-K2
- Re-sort of AT\S Status Report
- Country settings default to UNITED STATES (/85)
- PRI/T1, CT1, and PRI/E1 support
- Channelized T1 support for highway 2. The AT\S report will show span 3 and span 4 when highway 2 is selected.
- Support for Dynamic Channelized T1 over the Call Control Channel.
- The modem will not set the disconnect bit in the quick poll reply for the new Channelized T1 over PRI support.
- Support for dynamic CT1 over the Call Control Channel
- K56 support (56000 to 32000). The \S report now reports K56 when %M3 is set.
- Support for V.34 ITU-T Annex 12 33600 and 31200 bps
- Compatibility with the ITU-T V.34 protocol (2400 through 28800 bps)
- ITU-T protocols: V.21,V.22, V.22bis, V.23, V.32, and V.32bis
- DTE defaults to 115200bps; 230400bps DTE speed is supported

## Release Notes 8 Port Modem (4.2.19) {continued}

- AT@E reports the proper DSP Controller & Data Pump revisions.
- On detection of a DIGITAL adapter, the following defaults will be set:
  ATS0 = 1
  AT#Tn - PRI card will be dynamically set
  AT:T26=9 (disable billing delay, enable digital ring)
  AT:T51=13 (digital transmit level)

## Release Notes 4 Port Modem (3.2.9)

- NOTE: PRI dial out capability and channelized E1 support are present in this code, however, due to minimal Field Testing these features are for restricted use only.
- MABP event support for A/B bits, rings no answer, and TDM events. (NEED Ver. 4.0 Manager software)
- New Default: AT-K2
- The AT-H1 command will be saved as part of the Stored configuration and will be maintained through any reset/power-up event. AT-H0 can be issued through the DC session or group AT command on 4000 manager.
- Modem code supports A/B bits listed in the on-line status report for CT1
- AT#T is now set only by the PRI card. The PRI card dynamically configures each modem card on power-up and when the modem cards or PRI card have been rebooted. It sends each modem the #T information based on the switch or software configuration of the PRI card. The user is no longer allowed to override this setting with the #T command. The modem now returns OK when this command is issued (not ERROR) but no configuration changes are made.
- The AT\R Ring Indicator command setting is now stored in static memory rather than configuration memory. The modem is returned to the \R1 default only through a modem power-up or reset. ATZ or AT&F does not change the user setting of the \R command
- Remote Access and ADCR removed.
- AT:T51 and AT:T26 were not being set correctly when switching from an analog to digital adapter. To fix this, AT:T51, AT:T52, AT:T26 will be restore to their default analog or digital settings on powerup regardless of any user stored configuration settings. Defaults are as follows:
  ANALOG - AT:T51, AT:T52 defaults are country specific; AT:T26=0
  DIGITAL - AT:T51, AT:T52 default to 13; AT:T26=9
- AT+FMI response in Fax Class 2.0 changed from Microcom to Compaq
- Fax Header fix reported by GTE and FINCOM.
- Resort of AT\S Status Report
- Country settings default to UNITED STATES (/85)
- Support for Dynamic Channelized T1 over the Call Control Channel.
- PRI/T1, cT1, and PRI/E1 support
- Support for V.34 ITU-T Annex 12 33,600 and 31200 bps on ONLY the Rockwell -26 DSP
- Compatibility with the ITU-T V.34 protocol(2400 through 28800 bps)
- ITU-T protocols: V.21,V.22, V.22bis, V.23, V.32, and V.32bis

**Release Notes 4 Port Modem (3.2.9)**

- On detection of an ANALOG adapter, the following defaults will be set:
  ATS0 = country minimum ring count
  AT#T0
  AT:T26=0
  AT:T51 = country default switched transmit level
- On detection of a DIGITAL adapter, the following defaults will be set:
  ATS0 = 1
  AT#Tn - PRI card will dynamically set
  AT:T26=9 (disable billing delay, enable digital ring)
  AT:T51=13 (digital transmit level)
- Rockwell V.FC support (28800 to 14400 bps)
- The AT\S report has been enhanced to show the Span and Channel that the modem has been programmed on. The MODEM HW line will show (PRI T1, PRI E1 for PRI and Analog,T1-Loop,T1-E&M, T1-Wink, T1-MF, T1-MF/W for cT1 depending on the AT#T setting).
- The hostport speed and parity settings will remain locked with the &D2 functionality (previously the speed would be unlocked for autobaud when DTR was dropped).

## Technical Tips:

- With the Cisco 2511 Communication Servers modems must configured for AT%U1, which locks the serial speed and parity. This configuration is recommended on any communication server who's serial speed is locked.
- On any modem pool however finely tuned you can expect a certain percentage of No Connections to occur. The percentage will vary with line quality, client modem type and revision.
- The Digital Pad Detected field displayed when AT@E is issued is inaccurate.
- When dial out through Bell Atlantic T1 lines you may experience a NO DIALTONE response from the modem. To work around this issue set the modems for ATX0 so they will ignore the lack of dialtone.
- USR Sportster K56 X2 internal(V4.3.110) modems have a LAPM compatibility problem in which data is not passed to it's serial port when connected to the CM4000 modems. This problem only occurs during a LAPM connection when serial ports are configured for 115200. A possible workaround to the problem is to set the USR for a serial speed of 57,600, or lock it to MNP mode. This problem has not been seen with any other USRobotics modem tested.
- When using NT 4.0 RAS some customers have experienced problems in which the modems would not answer intermittently. Because of timing issues the ATA sent by NT RAS is sometimes missed. Two possible workarounds are available that should resolve the problems. The first is to replace the existing *.inf file with one which locks the serial speed. The new INF file is available at ftp.microcom.com/pub/4000_series/scripts/ the file name is cm4knt40.exe. The second involves turning off unimodem support by editing the registry and using the modem.inf file available at ftp.microcom.com/pub/4000_series/scripts file name cm4knt40.exe.
- In the Compaq 4000 View=>TDM , the TDM assignment for quad modem cards is incorrect or not displayed.

## Technical Tips {Continued}:

- The response time of the 4000 Manager over TCP/IP (seen w/ Cisco 2511) is extremely slow when there are 10 PPP connections connected to the 4000 performing continuous bi-directional FTP file transfer while the 2511 is being used as both the modems and the 4000 Manager.

- When connected to a AT&T 5ESS switch the PRI /CT1 card can sometimes take 3 minutes for the D channel to synchronize, after the T1 portion is in synchronization with the line.

## LEGAL NOTICES