

CDD-564/L and CDD-562L Bulk 1.7.0 Release

Approval Signatures			
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Applicability
Bulk Release IP Module Rev. 1.7.0 (FW-0000364-) for CDM-562/564/ L-band and 70/140 modems. Includes all related firmware and SNMP MIBs.

Revision History			
Rev #	Description	Date	Prepared by
-	Release Version 1.7.0	2/4/2010	Wallace Davis

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Introduction

Version 1.7.0 is the 17th version of CDD-564/L software released. Comtech EF Data will continue to enhance the CDD-564/L software based on customer feedback and experience gained from its use. The changes in this release are the result of real world traffic and customer applications. In addition, Rev. 1.7.0 is the 10th release of the CDD-562L which functions exactly like a CDD-564L except there are only 2 demodulators rather than 4.

NOTE: Firmware FW-0000364- does not contain 3xDES. Please contact CEFD customer support for details on how to get the v1.7.0 version with 3xDES.

NOTE: Firmware FW-0000364- is not compatible with any previous versions of CDM-IP 570 and CDD-564 firmware.

New Features

Streamline Encapsulation Support

Numerous encapsulation techniques exist for transporting packetized data including HDLC and GSM. Many of them perform well on large packet sizes, but produce excessive overhead on smaller packet sizes such as those found in VoIP or when Header and / or Payload compression techniques are utilized. Some, such as HDLC, are data dependent making it impossible to specify the amount of user bandwidth available and giving a lower bound of 3% in purely random data regardless of how large the packets are.

The Comtech Streamline Encapsulation method was developed to provide a low overhead method of transporting any size packetized data. It provides superior performance on small packets and performs well on large packets, with overhead performance approaching 1%. The table below provides comparison of the three basic encapsulation methodologies. As can be seen in the table, the large performance gain of over GSM and HDLC encapsulation on smaller packets far outweighs the 1% disadvantage on large packets. With respect to HDLC, Comtech Streamline Encapsulation outperforms the longtime industry standard on all packet sizes.

Packet Size	Streamlined Encapsulation	
	HDLC	Comtech Streamline
32	18.8%	7.4%
64	10.9%	4.3%
128	7.0%	2.7%
256	5.1%	2.0%
512	4.1%	1.6%
1024	3.6%	1.4%
2048	3.4%	1.3%

Additional advantages of Streamline Encapsulation include:

- HDLC addresses are removed to reduce overhead and deployment configuration complexity.
- HDLC addressing modes have been removed.
- Receive Header Compression is now automatically determine from the Streamline encapsulation information. This removes the need to configure the Rx Header Decompression feature (these options have been removed)
- The Vipersat STDMA ACK packet (one per burst) is much smaller (42 to 14 bytes)

Combined Working mode

In order greatly simply the configuration complexity, the working modes operation of modem have been centralized in the single Working Mode configuration parameter which has the following values:

- Managed Switch – functions a managed switch with support for VLAN as well as advanced features such as Qos, Header Compression and Payload Compression. Primarily intended for operation in a point-to-point topology.
- Router – functions as a router
- Vipersat Router – Hub – Hub router in a Vipersat Network
- Vipersat Router – Hub Expansion – Hub Expansion router in a Vipersat Network.
- Vipersat Router – Remote Expansion – Remote Expansion Router in a Vipersat Network.

Note: The Vipersat “Unit Role” and “Expansion Role” parameters are now read-only.

Defect Fixes

Backward Compatibility

A CDD-564L modem containing this BULK firmware is NOT compatible with previous versions of CDM-570 or CDD-564 firmware.

The v1.7.0 firmware is compatible with the CDM-570/L v1.7.0 firmware.

Compatible SNMP MIBs

MIB Name	Filename	Date
CEFD Root	FW/11669-2-.mib	8/20/2004
CDD-564 MIB	FW-0000359-.mib	12/14/2010
CDD-564Traps	FW/11669-4-.mib	11/19/2004

Note: The SNMP MIB files are not needed for upgrading the IP Module; they are only needed if using an SNMP NMS / browser for SNMP monitor and control of a CDM-562/564/L IP modem. They would be compiled on the NMS / SNMP browser, refer to compile instructions of the NMS / browser.

Known Issue(s) In This Release

Functional

564L/(IF) Platform Specific Known Issues

Issue: DB9 connector on CDD-564/L is a test connector, not to be interpreted as a standard serial remote port interface. It has been found that if a DB9 straight-through cable is connected to CDD-564/L and PC, this could harm PC serial interface card.

Workaround: None at this time.

Issue: 564L with LNB attached, LNB power on, and no receive signal, demodulators 2, 3, and 4 will intermittently display false lock. This is only when no signal power is being received from LNB, such as LNB is not connected to feed. If LNB is connected to feed -- receiving power (or just noise) -- issue has not been seen.

Workaround: None at this time.

Issue: 564L, when HTTP logged in as read-only user, attempts to clear CDD-564/L events on demodulator 4 will display 'page not found' error.

Workaround: None at this time.

Issue: 564L requires reboot when FAST options code is installed.

Workaround: None at this time, just reboot the CDD-564/L to ensure FAST options are accepted.

Generic Functional Known Issues

Issue: ICMP Redirect messages are ignored by CDD-564/L.

Workaround: None at this time.

Issue: IGMP as client responses do not always respond within set max response time.

Workaround: None at this time.

Issue: Entering an out of range value for Eb/No alarm via HTTP, will set value to random value, if previous value was within range.

Workaround: Ensure to follow Eb/No alarm limits when entering value via HTTP.

Issue: Unable to set Ethernet speed from HTTP interface.

Workaround: None at this time. Set from alternate interface.

Issue: HTTP interface does not send RF parameters in correct dependent order. If parameters are not sent in dependent order, all settings will not set properly.

Workaround: None at this time. Ensure RF parameters set correctly when using HTTP interface.

Issue: HTTP ARP table refresh button does not work properly when ARP table is full.

Workaround: None at this time.

Issue: SNMP setting of DES keys requires reboot for keys to take effect.

Workaround: None at this time.

Issue: Statistics Total Filtered and summation of individual filter counters do not equal.

Workaround: None at this time.

Issue: CLI stops responding when using Operations & Maintenance feature for dumping packets to CLI.

Workaround: Do not leave this feature on for long periods. This is very processor intensive and should be used with much caution.