

Comtech EF Data is pleased to announce the general availability of the IP Module for the CDM-570L. By adding the IP Module to the CDM-570L Satellite Modem, seamless network convergence of data, voice and video traffic is facilitated, satellite bandwidth can be further optimized and network design and configuration can be simplified. Below is an overview of the powerful features offered in the IP Module.

Overview of CDM-570L IP Module

The optional IP Module is now available for the CDM-570L Satellite Modem, and can be included at initial purchase or added as an upgrade to units already in the field. The IP Module entails both hardware and software components, and provides the same robust IP-centric features previously only available on the CDM-IP 550 and CDM-IP 300L including:

- easyConnect™ for set up with minimal configuration
- Static IP routing for unicast and multicast
- Powerful network management via SNMP, Web or Telnet
- IGMP v1 and v2 for management of multicast groups
- Symmetric as well as asymmetric operation for maximum bandwidth efficiency
- Point-to-Point or Point-to-Multi-Point configuration

Also available as options to the IP Module are a number of advanced features that focus on providing additional bandwidth efficiencies. These features can be enabled at initial purchase or after installation, and include Header Compression, Payload Compression, Quality of Service and 3XDES Encryption.

Header Compression

Header Compression is an optional feature of the IP Module that can be activated via the purchase of the FAST feature. Identical to the CDM-IP, it supports Header Compression for the following Ethernet and Layer 3 & 4 Headers:

Supported Ethernet Headers

- Ethernet 2.0
- Ethernet 2.0 + VLAN-tag
- Ethernet 2.0 + MPLS
- 802.3-raw
- 802.3-raw + VLAN-tag
- 802.3 + 802.2
- 802.3 + 802.2 + VLAN-tag
- 802.3 + 802.2 + SNAP
- 802.3 + 802.2 + SNAP + VLAN-tag
- 802.3 + 802.2 + SNAP + MPLS

Supported Layer 3 & 4 Headers

- IP
- TCP
- UDP
- RTP (Codec Independent)

Deploying this feature is simple and operation is independent of Quality of Service, with configuration on a per route basis, as well as enabled/disabled for the overall system. By utilizing this functionality, the bandwidth required for Voice over IP (VoIP) applications can be reduced by up to 60%. The user interface also provides statistics to display the total bytes of the pre-compressed and post-compressed traffic and effective compression ratio.

Payload Compression

Compressing the payload (data) condenses the size of data frames, reducing the satellite bandwidth required to transmit across the link. The IP Module supports Payload Compression, which can provide bandwidth savings in excess of 40%.

Payload Compression can be activated via the purchase of the FAST feature. Depending on the network, Payload Compression can be configured on a per route basis, as well as enabled/disabled for the overall system. And, there are statistics that report the level of compression that has been achieved.

The CDM-570L with IP Module applies Header Compression first, followed by Payload Compression. So, for maximum bandwidth optimization, we recommend that customers enable both of these FAST software features, Header Compression and Payload Compression.

Quality of Service

The IP Module supports multi-level Quality of Service that minimizes jitter and latency for real time traffic, such as VoIP or video, provides priority treatment to mission critical applications and still allows non-critical traffic to use the remaining bandwidth for maximum utilization. Three modes of QoS are available in the IP Module. When setting QoS, only one of the three modes can be used at a time.

Max/Priority

QoS could be enabled to assign a maximum bandwidth that any traffic flow could utilize combined with the prioritization from level one through eight for each flow.

Min/Max

The QoS parameters are expanded to address minimum bandwidth requirements. From a configuration standpoint, setting the minimum specification for user-defined classes of traffic ensures that a certain level of bandwidth is always applied to given flows. Conversely, in this mode, the user can also configure the maximum bandwidth allowed for specific classes of traffic.

DiffServ

Differentiated Services (DiffServ) is an industry-standard method of adding QoS to IP networks. It offers the capability to prioritize certain types of traffic and various methods of traffic handling based on the class of a particular stream. This approach is based on the premise that it is acceptable to provide one application with higher QoS over another application. The IP Module supports DiffServ. So, for example, the DiffServ can be configured to provide interactive traffic, such as voice and video, with higher priority than non-real-time traffic, such as e-mail. And, as a standards-based approach to QoS, the CDM-570L with IP Module is able to seamlessly co-exist in networks that already have DiffServ deployed.

Data Encryption

The IP Module provides optional 3xDES data encryption to prevent unauthorized access to data over the satellite link, and is configurable on a per route basis. Each unit supports eight encryption keys and eight decryption keys, all user-configurable. Each route can be configured for encryption by any of the eight available keys, random key method, or transmitted in clear.

Upgrades & Interoperability

Below is a summary of upgrade and interoperability considerations.

Existing CDM-570L Customers

For installed base customers wishing to add the advanced functionality of the IP Module, the upgrade involves two components. First, the base modem should be upgraded to v1.1.3, which is available under "downloads" on our web site. Second, the IP Module upgrade kit should be purchased. And, depending on the functionality requirements, the applicable FAST software features will also need to be purchased. Please contact Comtech EF Data sales for more detail.

Interoperability with CDM-IPs

The IP Module on the CDM-570L fully interoperates with CDM-IP 300L and CDM-IP 550 running v1.3.0 and later.

CDM-IPs with prior versions of software will also interoperate with the CDM-570L IP Module, with one exception. In order for Payload Compression to function, it must be configured on both sides of the link. Payload

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Compression was released for the CDM-IPs in version 1.3.0. Installed base CDM-IPs customers requiring the v1.3.0 and Payload Compression can upgrade via the kit including the new hardware card, Payload Compression and software. Please contact Comtech EF Data for detail on upgrade logistics.

Benefits of CDM-570L with IP Module

Designed for enterprise applications, the CDM-570L optimizes satellite communications and provides many of the advanced features previously only available in higher-end modems. Flexibility and cost-effective performance are integral to the CDM-570L, with interfaces and options to meet virtually any network environment. The benefits of this offering are countless, including reducing costs associated with satellite communications, optimizing communications, allowing seamless integration into existing networks of Comtech EF Data modems, enabling priority treatment of real-time applications and reducing configuration complexity. For more detail, please refer to the product datasheet and user manual.

If you have any questions about this announcement, please contact your Comtech EF Data sales associate.

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