



## Product Description

# TCP/IP BASED LTS COMMUNICATIONS NETWORK PROCESSOR FOR MECHANIZED LOOP TEST



721 Route 202-206  
Bridgewater, NJ 08807  
fax: 908.218.1736  
phone: 908.218.0500  
email: [sales@datatekcorp.com](mailto:sales@datatekcorp.com)  
<http://www.datatekcorp.com>

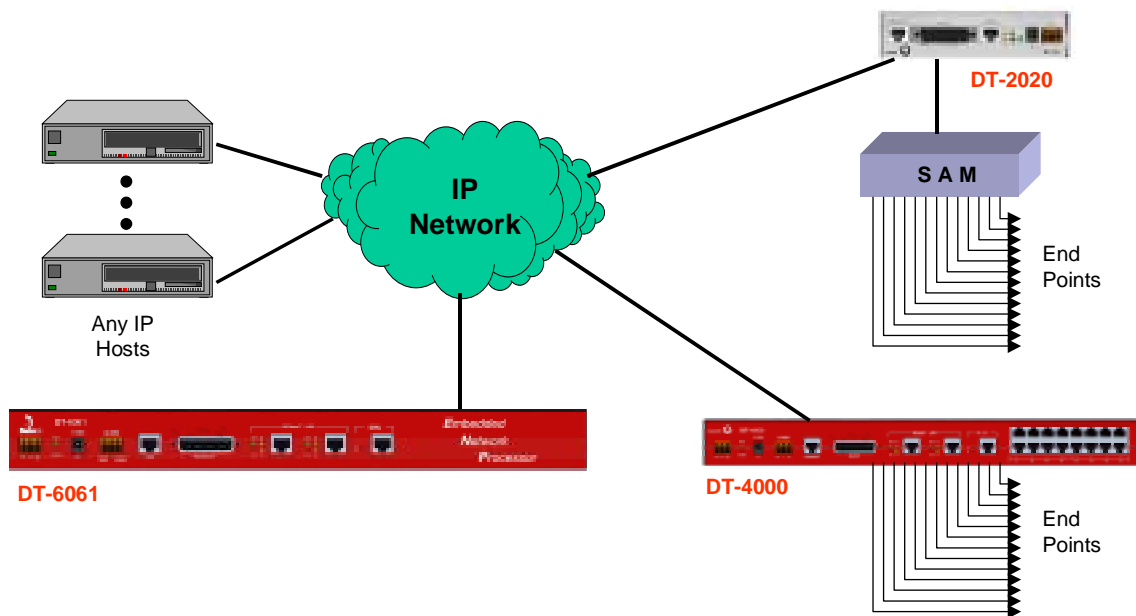


## INTRODUCTION

The DT-6061 is an Embedded Network Processor (ENP) that applies customer specific protocol operations (*protocol translation and termination*) of network connections that require such a function in a distributed network.

Consider the following diagram:

### DT-6061 Typical Application



In the diagram above, asynchronous transport, and point-to-point traffic would not require an ENP. These would proceed from endpoint to endpoint, or from host to endpoint as necessary.

However, termination of **custom protocols** is easily accomplished by a single ENP for multiple DT-2020 or DT-4000 sites and multiple IP hosts. Off the shelf applications are available for standard protocol sets, such as the IBM TN3270 or (B)X.25, which fall under the definition of a custom protocol.



## DT-6061 HARDWARE

The DT-6061 hardware is **Level 3 NEBS certified**. It consists of a High Performance Power-PC processor, with volatile and non-volatile storage. A 10BaseT interface provides network connectivity, and a console port is available for local access. The DT-6061 also has a high-speed serial (2Mbps) RS-530 interface that is software selectable as V.35 or RS-232. The DT-6061 also has an Internal T1/E1 software selectable DSU, and a second 10BaseT RJ-45 interface. These later interfaces are not used for the described application, but are included for future needs. These include embedding into Frame Relay, ATM, and other wide area networks. The flexibility of the DT-6061 interfaces will provide obsolescence insurance should the network infrastructure ever change.

## DT-6061 SOFTWARE

The DT-6061 software is composed of two components. These are a base component, which exists to support all applications, and one or more different application specific components.

The base component provides Operating System functions, selected interfaces, Protocol Stacks, SNMP functions, and system OA&M.

Each application uses the services of the resident OS, and provides certain functionality. Each application has its own specific configuration OA&M for that purpose.

## MULTIPLE APPLICATION SUPPORT

The DT-6061 supports a multitude of applications. The DT-6061 has the ability to support simultaneous operation of different applications. There is no interaction between applications except that they share the same hardware and operating environment.

## FIELD UPDATES

As new applications as well as application updates become available the DT-6061 can be updated using an industry standard FTP application.



## DT-6061 IP-LTCN APPLICATION

The IP-LTCN application provides an interface between the MLT hosts and the different LTS's throughout the IP network.

The LTS's are connected to the IP infrastructure via a DT-4000 port. Alternatively, the LTS may be attached to a SAM port that is interfaced to the IP infrastructure via a DT-2020. Integrated networking with BNS/Datakit® II VCS based devices is available via the Universal Mediation Interface (UMI) module. This latter case may be useful during migration scenarios.

The MLT hosts are directly resident on the IP infrastructure. The MLT host will originate a TCP session with the IP-LTCN application for any endpoint connected to that particular IP-LTCN. Each IP-LTCN application instance will read the application header of any message received and send the message to the appropriate endpoint.

The IP-LTCN application terminates the BX.25 Level 2 from the LTS and 5ESS endpoints.

The interface between the IP-LTCN application and an MLT host is substantially identical to that used between the MLT hosts and the BNS DKAP LTS Addresser application. The notable change in this interface is that the "BNS dial strings" for the endpoints are replaced with IP Addresses and TCP port numbers for those same endpoints.

The Loop around feature of the IP-LTCN application will allow MLT hosts to request a loop around diagnostic as well as two additional diagnostics. These diagnostics use the unique features of the DT-4000, and the SAM devices.

Security concerns are addressed by using the closed user group features found on the DT-4000, DT-2020, and UMI devices. These would prevent any access from the IP infrastructure to the LTS endpoints except the IP-LTCN application of the DT-6061.

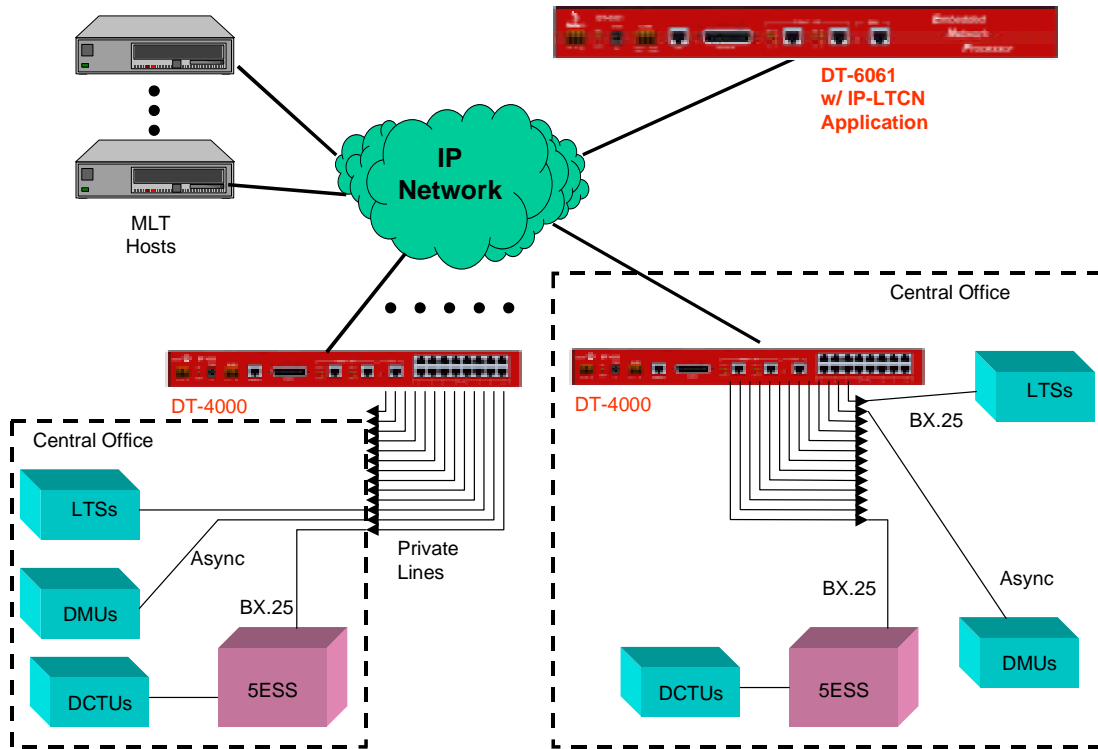
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The following diagram shows a typical deployment of the IP-LTCN application:

### DT-6061 IP-LTCN Typical Deployment



In the diagram above, the DT-4000s are connected to the MLT endpoints both via private lines, and as a remote installation without private lines. The case for having the MLT endpoints connected to central DT-4000 ports would exist in a pure DCN replacement situation. The case for a remote DT-4000 exists where sharing of the DT-4000 ports is desired in a central office for other applications; or when private line elimination is desired.



## IP-LTCN APPLICATION SPECIFICATIONS

|  |  |
|--|--|
| Number of IP-LTCN instances per DT-6061.     | 1  |
| Number of Controlling MLT Hosts per IP-LTCN: | 1  |
| Number of LTS endpoints per IP-LTCN:         | 1-200  |
| Number of MLT hosts per IP-LTCN:             | 1-20   |
| Loop-around Diagnostics                      | Yes (per specification)<br>Code 97 (SANE)<br>Code 98 (SANF)<br>Code 104                                |
| Number of OA&M Channels per IP-LTCN:         | 1  |
| Measurements Available:                      | Per endpoint:<br>- Frames<br>- Bytes<br>Selected LAPB Counts<br>- Per MLT Host:<br>- Frames<br>- Bytes |
| Alarms                                       | Yes  |
| SNMP (DT-6061 Agent)                         | Yes  |

