



## Support for wide range of modem modes, as well as ISDN

The Series56 II Digital Modems offer users dialing in on analog, digital and cellular lines support for all of the standard modem modes. With this technology, users can achieve a maximum of 56 Kbps as defined by the V.90 modem standard. Support for error correction and data compression maximizes data transfer integrity and boosts data throughput.

- Support for data modem modes: V.90, K56flex, V.34, V.FC, V.32bis, V.32, V.22bis, V.22 and below
- Support for ISDN: B Channel HDLC
- Support for error correction and data compression: V.42 LAPM and MNP2-4 error correction, V.42bis and MNP 5 data compression
- MNP 10EC for enhanced cellular performance
- MP (Multilink PPP, used for bonding multiple modem or HDLC DS-0s)

## High port-density and flexibility eases space constraints

The Series56 II modules provide modem and ISDN support on a single card, with significantly higher port density than previously available. Using this module, the industry leading APX 8000 can support up to 1344 calls per chassis and the MAX TNT can support up to 672 calls per chassis.

- Support for modem modes and ISDN on a single card
- High port-density reduces space and equipment requirements

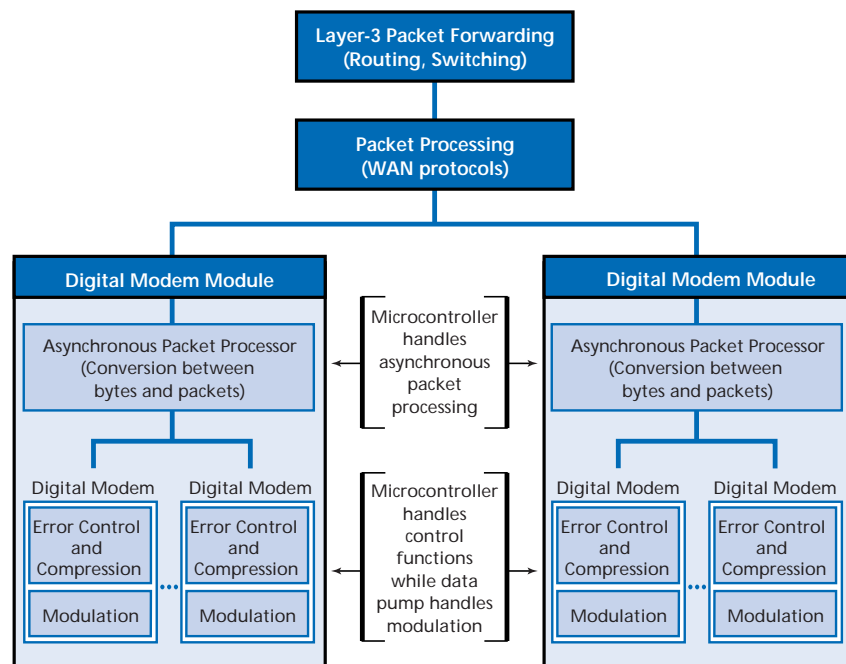
## Series56 II Digital Modem Module

### DSP-based architecture delivers high-speed digital connections

Each Series56 II Digital Modem module features an enhanced architecture that dedicates a DSP-based data pump on each modem channel for efficient bit handling. Each data pump works with a microcontroller that handles the task of packetizing and aggregating incoming byte streams as well as converting packets to bytes for outgoing traffic. This significantly offloads the central processor of the Series56 II module itself, allowing it to focus on other tasks like packet forwarding and routing.

- Dedicated data pump for bit handling
- Microcontroller provides HDLC framing, CRC calculations, and byte stuffing functions
- Data is processed as purely digital through the carrier's central office
- Modem software can be upgraded locally or remotely

#### Series 56 II Digital Modem Architecture



## Series56 II Digital Modem Module

### Features

#### Data Modem Modes

PSTN: ITU-T V.90, K56flex, V.34bis, V.34, V.FC, V.32bis, V.32, V.22bis, V.22A/B, V.23, and V.21; Bell 212A and 103

ISDN: 64/56 Kbps ISDN BRI B Channel

#### Error Correction

V.42 LAPM and MNP 2-4

#### Data Compression

V.42bis and MNP 5

#### Cellular

MNP10EC enhanced cellular performance

#### Fax Modem

14.4 Kbps transfer rate  
V.33, V.17, V.29, V.27ter and V.21 channel 2

Group 3, T.30 protocol and Class 1 and 2

#### Line Speeds

Up to 56 Kbps

#### Software Upgrade

Via uploadable modem code

#### Multiprotocol Functionality

IP/IPX, PPP, MP, Multilink Protocol Plus (MP+), Multichassis, MPP

#### Authentication

RADIUS, TACACS

#### Security

PAP, CHAP, Callback, CLID, token card

### Specifications

#### Transfer Rate

PSTN: 56 Kbps downstream/31.2 Kbps upstream

ISDN: 64 Kbps

#### Card Dimensions

15 in x 0.8 in x 11 in  
[22 cm x 2.3 cm x 28 cm]

#### Card Weight

1.5 lbs [.7 kg]

#### Hot-Swap Capability

Available on APX8000 and MAX TNT

#### Operating Requirements

Temperature: 32 - 104°F [0 - 40°C]

Relative Humidity: 10 - 90%  
(non-condensing)

*Specifications subject to change without notice.*

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