

3512 DSU/CSU



Adaptable to Your Changing Needs

The Raymar-Telenetics 3512 Data Service Unit (DSU), with integral Channel Service Unit (CSU), is an intelligent, multi-rate digital product, with multi-channel and restoral options ideally suited for today's digital environment. The 3512 is available in both managed (3512 NMS) and non-managed (3512) versions

KEY FEATURES

Based on the Motorola 68000 microprocessor, the 3512 supports a broad range of digital applications, including:

- 2 and 4 port point-to-point/multipoint Time Division Multiplexing (TDM) options to reduce line and equipment costs
- Supports all major digital leased line services; DDS/DDS II Secondary Channel to 56Kbps and 64Kbps Clear Channel
- Non-disruptive network management via Motorola 9000 series Open Management System (OMS) ensures rapid fault isolation (3512 NMS)
- IBM NetView™ network management (3512 NMS)
- Unattended remote configuration, testing and monitoring through remote front panel
- Integral V.32bis or 4-wire Switched 56 restoral options for continuous transmission
- Integral A/B switch for restoral via 2-wire DatPath™ SW56/64, ISDN BRI or V.34 class modems (3512 with 2/4 port options)
- Point-to-point and multipoint rate adaption
- Standalone or rack-mountable configurations

The **Raymar-Telenetics** 3512 is available in either front panel controlled or network managed versions. With the 3512 NMS version, command and control is provided using the Motorola 9000 OMS series over the main channel, carrier provided secondary channel, or derived secondary channel.

With standard Dual VIEW™, the 3512 NMS provides a direct interface to IBM's NetView™, as well as the Motorola 9000 OMS series. The Netware Loadable Module (NLM), WANVisible™, in NetWare servers, provides monitoring of the 3512 NMS and digital circuits.

FLEXIBILITY

Packaging of the 3512 also offers flexibility with 1, 2, or 4-port standalone or nest card versions. For space savings at the central site, the 3512 is rack mountable.

EFFICIENCY

A variety of operating modes allow the 3512 DSU/CSU to respond to user network requirements for optimum operating efficiency. As digital networks evolve, the 3512's support for multiple digital services and speeds will allow it to adapt to changing needs without requiring costly upgrades.

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3512 DSU/CSU

PRODUCT SPECIFICATIONS

SERVICE TYPES

Digital transmission services conforming to AT&T Technical Reference 62310 and related Bellcore publications

OPERATING MODE

Full-duplex, point-to-point and multipoint (56Kbps DS-II SC and 64Kbps Clear Channel are supported point-to-point only)

DIGITAL AGGREGATE INTERFACE

Point-to-point and multipoint

DDS-I type facilities: 2.4*, 4.8*, 9.6, 19.2, and 56 Kbps

DDS-II SC type facilities: 3.2, 6.4, 12.8, 25.6, and 72 Kbps providing primary channel rates of 2.4, 4.8, 9.6, 19.2, and 56 Kbps respectively plus secondary channel

64Kbps Clear Channel facilities: 72 Kbps providing 64 Kbps primary channel rate

Private Wire facilities: 2.4, 4.8, 9.6, 19.2, 56 and 64 Kbps plus DDS-II SC aggregate rates; point-to-point only

DATA FORMAT

Synchronous: Serial, Binary

Asynchronous: Serial, Binary 6 - 9 bit including parity bit

DATA ENCODING

Bipolar, return to zero, alternate mark inversion

PORT TIMING

Network, internal, external or station

DSU TIMING

Network, internal or external (external for DDS-I only, the line rate must be an integer multiple of the port rate.)

DIGITAL PORT INTERFACE

- User selectable EIA 232-D or V.35 on ports 1 through 4; front panel selection
- 25 Pin DB25 connector (port 1); DB25/V.35 physical conversion via available 3512 attached adaptor or adaptor cable
- EIA 232-D alternate DB26 subminiature connectors (ports 2 through 4)

DTE PORT RATES

Synchronous: 1.2, 2.4, 4.8, 7.2, 7.6, 12.0, 14.4, 16.8, 19.2, 21.6, 24.0, 28.8, 32.0, 38.4, 48.0, 56.0, and 64 Kbps

Asynchronous: 1.2, 2.4, 4.8, 7.2, 9.6, 14.4, and 19.2 Kbps

MAXIMUM DTE PORT RATES

DERIVED SECONDARY CHANNEL MODE

Port/Line Rates: 2290/2400*, 4688/4800*, 9487/9600, 19019/19200, 55200/56000, and 624000/640000bps with standard DTE port rates selectable at user option

NETWORK MANAGEMENT

- Motorola 9000 OMS Series
- IBM NetView™ via DualView at line rates to 56Kbps
 - NetView Version 1.3 or later
 - ACF/NCP Version 4.2 or later
 - Lines configured for either SDLC or BSC
- Novell NetWare™ with WANVisible NLM
 - NetWare versions 3.11 and 4.0

NETWORK CONTROL CHANNEL

Data format: Asynchronous, serial, binary, compatible with industry-standard network management systems

Data rate: Selectable 75, 150, and 9600 bps

MANAGEMENT PROTOCOLS SUPPORTED

- Motorola Proprietary Protocol
- Link Problem Determination Aid (LPDA) Revision 2

POWER REQUIREMENTS

3512 Standalone: 110 VAC nominal 47 to 63 Hz

3512 Nest Card: 110 or 230 VAC 47 to 63 Hz

ENVIRONMENT

Operating temperature: 32° to 122° F (0° to 50° C)

Non-operating temperature: -40° to 158° F (-40° to 70° C)

Operating relative humidity: 10% to 95% (non-condensing)

PHYSICAL DIMENSIONS

3512 DSU/CSU Standalone: 2.3" H x 6.6" W x 9.6" D
(5.8 cm x 16.8 cm x 24.4 cm)

Weight: 2.5 lbs (1.1 kg)

3500 Mini-Nest Enclosure: 7.0" H x 19.0" W x 10.0" L
(17.8 cm x 48.3 cm x 25.4 cm)

Weight: 22 lbs (10.0 kg)

CERTIFICATIONS

- UL Listed and CSA Certified
- FCC Part 15 Class A Compliant
- FCC Part 68 Registered
- DOC Registered (SLR)
- Bell Canada Approved

Specification notes:

Multipoint multiplexer is not supported with DDS I at line rates less than 9.6Kbps or with DDS-II secondary channel service. 64Kbps Clear Channel, Remote Front Panel and the Switched 56 Restoral option requires 3512 Release 3.0 and later versions

WARRANTY

Raymar-Telenetics manufactured products are warranted against defects in hardware material and workmanship under normal use for one (1) year from date of original retail purchase. Defective product will be repaired or replaced, determination to be made by Raymar-Telenetics, at no charge. Repaired or replaced products are warranted for 90 days or for original warranty period, whichever is longer. Warranty extends to original end-user only.



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