COMPLIANCE COMPONENT

DEFINITION	
Name	**CSU/DSU** - Channel Service Unit/Data Service Unit
Description	A CSU/DSU (Channel Service Unit/Data Service Unit) is a hardware device about the size of an external modem that converts digital data frames from the communications technology used on a local area network (LAN) into frames appropriate to a wide-area network (WAN) and vice versa. This is the device connected to the incoming data communications line, usually a T1 or Fractional T1 line. This is actually two devices in one. The channel service unit recovers channelized (multiplexed) data, while the data service unit strips off the encoding used to package the data.
Rationale	The csu/dsu provides the required connection between your equipment and the telephone companies circuit. The csu/dsu also provides timing regeneration, loopback testing and framing functions. The csu/dsu can also extend the distance or act like a short haul modem. Many csu/dsu products have multiple dataports and speeds to match your requirements.
Benefits	CSU/DSU's allow computers from different remote locations to communicate with each other via data communications lines.
ASSOCIATED ARCHITECTURE LEVELS	
Specify the Domain Name	Infrastructure
Specify the Discipline Name	Network
Specify the Technology Area Name	Network Hardware
Specify the Product Component Name	
COMPLIANCE COMPONENT TYPE	
Document the Compliance Component Type	Guideline
Component Sub-type	

COMPLIANCE DETAIL	
State the Guideline, Standard or Legislation	The requirements of a CSU/DSU will depend mostly on the requirements of the network gear and the type of service ordered from the telephone company. Requirements should be gathered from the Telephone Company and from the network gear support personnel before purchasing a CSU/DSU. Most CSU/DSU 's are available in either the 56kbps/64kbps model or fractional T1 model(128kbps – T1). The CSU/DSU is available as a standalone unit or can be an integrated interface on most routers. The integrated CSU/DSU can sometimes provide a lower cost, save rack space, and eliminate the potential point of failure in the cable that connects to the router. The standalone CSU/DSU will usually offer more diagnostic and error reporting capabilities. The CSU/DSU should meet/exceed the following specifications : **Network Interface:** Line Rate: 1.544 Mb/s (± 50 ppm) Line Framing: D4 or ESF Line Code: AMI or B8ZS Input Signal: 0 to -27 dB ALBO Connection: RJ48C jack, 100 Ohm (±5%) Output Signal: 3.0 V (± 10%) base - peak into 100 Ohm with protection Line Build Out: 0, -7.5, -15, -22.5 dB attenuation Transient Voltage: 1000 V protection, fused input/output Jitter Control: per TR62411 and T1.403 Timing Source: Internal, recovered line clock, external DTE Ones Density: B8ZS, N x 56 bit stuffing, alternate fill, complies with TR62411 **Equipment Interface:** *DTE Ports (depending on needs)* Compatibility: EIA 530 (RS422), female DB25, CCITT V.35, female 34-pin Data Rate: Synchronous, Nx56 kb/s or Nx64 kb/s (N = 1 to 24), independent selection on each port Clocking: Internal or External Data Invert: Independent selection on each port *SNMP/TELNET ETHERNET (optional)* Connection: 8-pin modular jack Network Protocol: TCP/IP based networks Compatibility: 10BASE-T **Diagnostics:** Performance: Monitoring per TR54016 and T1.403 Network Loops: Line loopback or payload loopback Fractional Loop: Responds to inband V.54 loop code DTE Port Loops: Bi-directional loop toward DTE or network BERT Multiple test patterns toward network or DTE ports **Alarm:** Activation: Programmable thresholds Reporting: Front panel LEDs, COA, SNMP Trap **Power:** 110 VAC: 0.2A, 24 W max, 82 BTU max **Environmental:** Operating Temp: 0° to 50°C (32° to 122°F) Storage Temp: -20° to 85°C (-4° to 185°F) Humidity: 95% maximum (non-condensing) **Compatibility:** TR62411: December 1990 TR54016: September 1989 T1.403: 1989 TR54019A: April 1988 Internet Standards: RFC1157 (SNMP), RFC1213 (MIB-II), RFC1232 (DS1 MIB), RFC1055 (SLIP) Ethernet Standards: ISO/IEC 8802-3 **Product Approvals:** FCC Compliance: December 1990, FCC Part 68 Reg:, NRTL: Certified , CSA Certified:, DOC/CS03

Document Source Reference #	Racal Publication 15D13B6-1/C		
Compliance Sources			
Name	NextiraOne	*Website*	http://www.milgo.com/rdg/products/TimePlex/trans_3101_tech.html
Contact Information	NextiraOne 2800 Post Oak Blvd. Suite 200 Houston, TX 77056 713-307-4000		
Name		*Website*	
Contact Information			
KEYWORDS			
List Keywords	CSU/DSU, CHANNEL SERVICE UNIT, DATA SERVICE UNIT, WAN, WIDE AREA NETWORK, T1, FRACTIONAL T1		
COMPONENT CLASSIFICATION			
Provide the Classification	☐ *Emerging* ☒ *Current* ☐ *Twilight* ☐ *Sunset*		
Sunset Date			

COMPONENT SUB-CLASSIFICATION		
Sub-Classification	Date	Additional Sub-Classification Information
☐ *Technology Watch*		
☐ *Variance*		
☐ *Conditional Use*		

Rationale for Component Classification	
Document the Rationale for Component Classification	
Migration Strategy	
Document the Migration Strategy	
Impact Position Statement	
Document the Position Statement on Impact	

CURRENT STATUS			
Provide the Current Status	☐ *In Development* ☐ *Under Review* ☒ *Approved* ☐ *Rejected*		
AUDIT TRAIL			
Creation Date	1/6/05	*Date Approved / Rejected*	2/8/05
Reason for Rejection			
Last Date Reviewed		*Last Date Updated*	
Reason for Update			