T-SERV® II T1 Channel Service Unit

Reliable T1/PRI Circuit Termination

The T-SERV II® CSU is a proven, cost-effective Channel Service Unit (CSU) for terminating T1 and PRI circuits. Offering high reliability and flexible configuration options, the T-SERV II is available as a stand-alone device or as a plug-in card for multiple T1/PRI connections.

All basic CSU functions are contained in the T-SERV II CSU, including bipolar violation (BPV) correction, line build-out, loop-code generator for fault isolation, front-panel LED status indicators, test jacks, power options and automatic keep-alive signal generation. Its transparent operation passes the T1 bitstream unaltered.

The T-SERV II meets all FCC and carrier requirements for a standard interface between the customer premises and the network. It is NRTL listed to ANSI/UL 60950-1-2002.

Features

- **Easy to install and use**
- **Works with ISDN PRI lines**
- **Local and remote loopback codes to sectionalize your circuit for efficient fault isolation**
- **Stand-alone or shelf plug-in units available**
- **Local or line power options**
- **Lightning protection and line isolation**
- **Front panel LEDs**
- **Front panel break, test and monitor jacks**
- **Alarm relay contacts**
- **NRTL listed to ANSI/UL 60950-1-2002**
- **AT&T 62411 certified**

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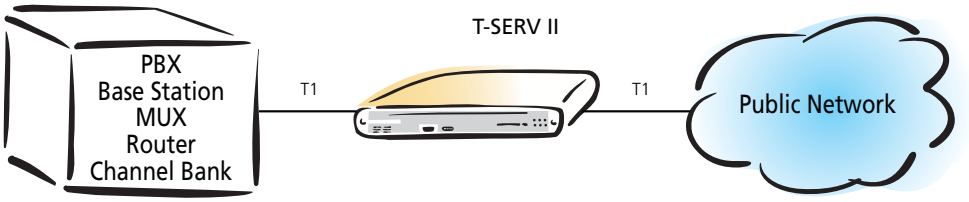


Figure 1: The T-SERV II provides all the basic CSU functions.

Easy to install

The T-SERV II CSU can be online in as little as fifteen minutes. Just attach the power terminals and connect your T1 line.

Diagnostic tools

Ten front panel LEDs offer a set of descriptive indicators of network status. Break, test and monitor jacks provide external access for T1 test equipment.

The T-SERV II automatically detects in-band loop codes, allowing your carrier to check the network through the CSU. With a toggle of the TEST switch, a far-end loop is initiated for end-to-end network testing: by toggling the LOC switch, a near end terminal loop is activated for tests of the equipment side T1.

Stand-alone and plug-ins available

The T-SERV II CSU is available as a stand-alone unit or a plug-in version for medium- and high-density rack mounting options. The stand-alone unit is suitable for desktop usage, or can be mounted on a wall with the included wall mounting brackets. The plug-in version can be installed in our high-density 12-slot CSU standard shelf.

The stand-alone version CSU mini-shelf uses rugged, industry-standard DA15 Network and Terminal interface connectors. An optional adapter to convert these DA15 interfaces to RJ48C jacks is also available.

The 12-slot CSU standard shelf uses either interface conversion panels or cables terminating in a stub configuration suitable for punch-down or wire wrap. Conversion panels are equipped with your choice of DA15 connectors or RJ48C jacks. The conversion panels are connected to the main shelf via two cables, one for the Network Interface and one for the Terminal Interface. This flexible architecture allows the actual CSU interfaces to be located up to 50 feet from the CSU shelf, mounted directly above and below the shelf for front access, or mounted immediately behind the shelf for rear access.

When installed in our 12-slot standard shelf, the plug-in CSUs can be hot-swapped. T-SERV II plug-in CSU cards can also co-exist in the same shelf as the intelligent T-SMART plug-in CSU.

ORDERING INFORMATION

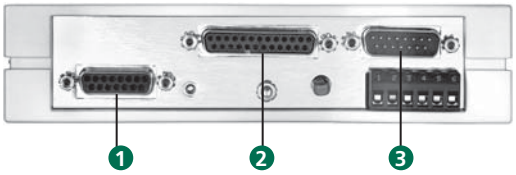
DESCRIPTION	CATALOG #
T-SERV II Plug-in card	77115
T-SERV II Stand-alone unit	77965
T-SERV II Stand-alone unit, with front access	77966

CABLES AND ACCESSORIES	CATALOG #
1 To Terminal Equipment	
25-pair RJ48H Plug/Socket	930xx061*
25-pair RJ48H Plug/Stub	930xx071*
25-pair RJ48H Plug/Plug (use with 77830 for terminal equipment)	930xx171*
DA15P to Stub	930xx101
DA15P to RJ48C Plug	930xx121
DA15P to RJ48C Jack Adapter	77892
RJ48H Plug to 12x DA15S conversion panel	77840*
RJ48H Socket to 12x RJ48C conversation panel (use with 930xx171 cable)	77830*
2 To Control Equipment (not used)	
3 To Network	
25-pair RJ48H Plug/Socket	930xx061*
25-pair RJ48H Socket/Stub	930xx081*
DA15S to Stub	930xx111
DA15S to RJ48C Plug	930xx151
RJ48H Socket to 12x RJ48C Adapter	77830*
DA15S to RJ48C Jack Adapter	77891

** For use with 12-slot shelf only*

Note: xx denotes length of cable; contact factory for available lengths.

P = Plug; S = Socket



CABLES AND ACCESSORIES *(continued)*	CATALOG #
Power Supplies and Mounting Accessories	
120 VAC to 24 VDC wall mount, 6W, up to 4 units (stand-alone only)	77995
120 VAC to 48 VDC, 100W, up to 5 shelves (60 units)	72073-ACPS
120 VAC to 48 VDC, 100W x 2 (10 shelves) or 100W redundant (5 shelves)	72075-ACPS
CSU standard shelf, 12 slots	77020
Blank Plug-in Panel	77070
19" mounting tray for up to 2 units	78480

Protect your network investment with support plans and technical training

To keep your network healthy and productive, Kentrox offers maintenance options. Additionally, Kentrox technical training courses are available online, at your site, or at the Kentrox campus to help you get the most out of your Kentrox products. For details, visit our website at www.kentrox.com/support.

KENTROX MAINTENANCE OPTIONS	CATALOG #
Basic 5x8 electronic support	ServicePack1-Enterprise
Standard 24x7 NBD	ServicePack2-Enterprise
(next business day - covers out of warranty advance replacements)	

SPECIFICATIONS

NETWORK INTERFACE

Line Rate:	T1 ISDN PRI (1.544 Mbps)
Framing:	Transparent (passes unframed/D4/SF/ESF)
Line Code:	Transparent (passes AMI/B8ZS/ZBTSI)
Input Signal:	DSX-1 to -27 dB
Output Signal:	DSX-1 with LBO 0, -7.5, -15, or 22.5 dB (selectable)
Signal Monitor:	Low Pulse Density and Keep Alive

TERMINAL INTERFACE

Line Rate:	T1 (1.544 Mbps)
Framing:	Transparent (passes unframed/D4/SF/ESF)
Line Code:	Transparent (passes AMI/B8ZS/ZBTSI)
Input Signal:	DSX-1 to -27 dB
Output Signal:	DSX-1 to 655 ft. equalized

DIAGNOSTICS

Loopbacks:	Line loopback (network interface) Test loopback (network payload) Local loopback (terminal loop)
Loop Codes:	Generate and detect standard codes Set (10000) Reset (100)

ALARM RELAY

Contacts:	Normally Open
Activation:	LOS, AIS, Keep Alive, Power Fail
ACO (Alarm Cut Off):	Front panel or control port

REGULATORY

FCC compliance:	Part 68 Reg. #F81-USA-17152-DE-N Part 15 Class A
NRTL listed:	ANSI/UL 60950-1-2002
DOC:	CS-03 Reg. 1630 4311 A
CSA:	CAN/CSA C22.2 No. 60950-1-03
PUB 62411:	T1 interface specifications

POWER

Power Option:	LINE/LOCAL selection
Line Power:	57 to 150 ma 32 V drop @60 ma
Local Power:	24 to 48 VDC, 2 watts maximum

DENSITY MONITOR

Minimum Density:	Per AT&T 62411
Maximum Zeros:	Selectable 15, 47 or disable
Keep Alive Timing:	80 consecutive Zeros
Keep Alive Signal:	Selectable SF framed/unframed, all-ones

PHYSICAL

Mounting:	Desk, wall or equipment rack
Stand-alone Unit:	6.75" W x 1.625" H x 10.5" D
12-slot Shelf:	19" W x 6.75" H x 10.5" D
Connector 12-slot Shelf:	RJ48H 25-pair adapters available for NI, TI

JACK ACCESS

Toward Network:	Bantam jacks In, Out and Monitor
Toward Equipment:	Bantam jacks In, Out and Monitor

ENVIRONMENTAL

Operating Temperature:	0° to 60° C (32° to 140° F)
Relative Humidity:	0% to 95%, non-condensing

For more information, visit www.kentrox.com, email info@kentrox.com or call 800-733-5511 or +1 614 798 2000.

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