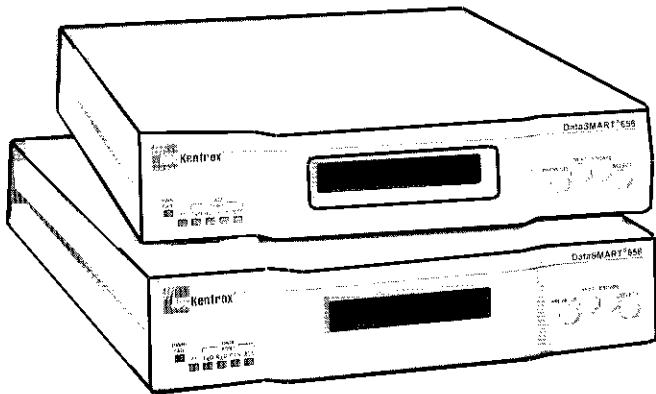


DataSMART® Family



DSUs

- Price/performance leaders for managed networks
- Future-proof with easy field upgrade to FrameVision managed Frame Relay
- Standards-based, in-band management with embedded SNMP
- Remote and managed diagnostics
- Easy local management with 10Base-T access and front-panel LCD
- Performance monitoring, and diagnostics for local loop and dedicated lines
- Free SMARTools Installer for Windows and SMARTools Alarms Utility
- Compatible with all leading voice, video and data equipment
- Supports leased-line, Frame Relay and frame-based SMDS/ATM DXI network services
- 5-year warranty

High-performance Design

The DataSMART™ family of managed DSU/CSUs are the industry's leading family of high-performance network access products. All DataSMART DSU T1/FT1s, are compatible with Frame Relay or frame-based SMDS/ATM DXI services.

Our line of DataSMART DSU/CSUs have been enhanced to include a variety of tools to maximize network uptime, including comprehensive, in-band management options, embedded SNMP agents and a convenient Ethernet connection - making the DataSMART DSU/CSUs the price/performance leaders in the industry.

Tailored to Your Application

The DataSMART DSU/CSUs support voice and data applications such as Internet access, video teleconferencing, LAN-to-LAN communications, CAD/CAM and SNA applications.

Designed for remote sites, the DataSMART 656 T1 Single-Port DSU/CSU provides Internet access or LAN/WAN connectivity.

For business networks that require both voice and data services, the DataSMART 658 T1 Single-Port Add/Drop can integrate voice traffic from a T1 PBX and data or Internet traffic onto a single T1/FT1 line, saving monthly access charges.

Managing Your Network

Convenient new management features are available in all DataSMART DSUs. Features include complete in-band access for remote management, an integrated Ethernet port for local management access, and front-panel LCD for easy setup and control.

Comprehensive diagnostics tools help resolve performance issues on the end-to-end leased line, or isolate problems in the Frame Relay local loop.

DataSMARTs can be remotely configured, software upgrades can be downloaded, and important network events can be received via traps - all via in-band communications.

Configurations and Compatibility

The DataSMART family is compatible with major router vendors such as Cisco, Bay Networks, 3Com and IBM.

All DataSMARTs support connectivity for compressed voice devices, and Add/Drop models provide direct connectivity to T1 PBXs.

DataSMART DSU/CSUs are available in stand-alone and plug-in models for the ADC Kentrox Universal Shelf.

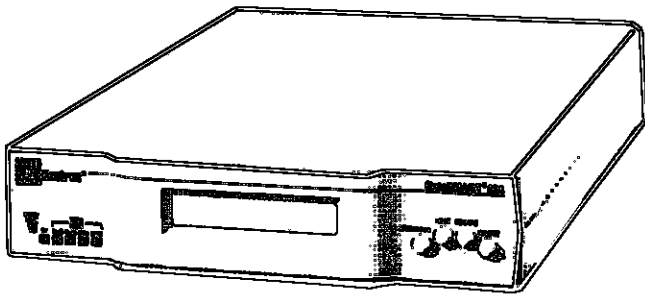
DataSMART DSUs are also fully compatible with AT&T TRs 54016, 62411, ANSI T1.403 ESF standards and FCC Parts 68 and 15.

FrameVision Upgrade

The enhanced DataSMART Single-Port DSUs can be upgraded to provide frame monitoring capabilities available from the DataSMART FrameVision models. The FrameVision Update Kit installed in the DataSMART DSUs provides end-to-end Frame Relay circuit management, in addition to T1 local loop performance monitoring.



DataSMART® 656 T1 Single-Port DataSMART® 658 T1 Single-Port Add/Drop

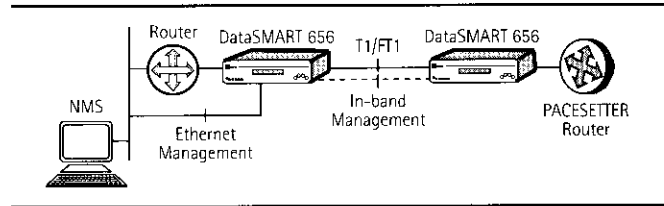


- Internet access or LAN/WAN connectivity
- Economical integration of data and voice traffic (DataSMART 658)
- Remote management with in-band access
- Ethernet connection and front-panel LCD for simplified local management
- Supports T1/FT1, Frame Relay, SMDS DXI and ATM FUNI services
- Free SMARTools Installer for Windows and SMARTools Alarms Utility
- Upgrades to Frame monitoring
- 5-year warranty

Take active control of your network - from anywhere in your network. The DataSMART 656 T1 Single-Port DSU/CSU and DataSMART 658 T1 Single-Port Add/Drop DSU/CSU include new management features, such as in-band access for simplified remote management, an integrated Ethernet port and front-panel LCD for easy local management, and standards-based SNMP management.

The DataSMART 656 is designed for remote sites that require high-speed data or video network access. Easily and economically connect your router network or other CPE to T1/FT1 networks.

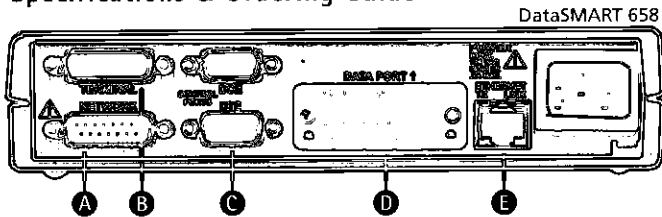
With the DataSMART 658, businesses can integrate voice traffic from a T1 PBX and data or Internet traffic onto a single T1/FT1 line, reducing monthly WAN access charges.



The DataSMART's SNMP agent, with an enterprise MIB available in standard ANS.1 format, provides complete management of every feature of the DataSMART DSU/CSU. The DSU provides a helpful menu interface, TELNET and of course, our popular and powerful SMARTools Installer for setup and diagnostics.

DSUs

Specifications & Ordering Guide



BACK PANEL & CABLE GUIDE

- A To Network**
- 930xx091 DA15S to DA15P
 - 930xx111 DA15S to Stub
 - 93010151 DA15S to RJ48C Modular Plug, 10 feet
 - 77891 DA15S to RJ48C Jack Adapter
 - 77993004 DA15S to Barrier Strip Adapter
- B To Terminal Equipment (DataSMART 658)**
- 930xx101 DA15P to Stub
 - 930xx091 DA15P to DA15S
 - 930xx121 DA15P to RJ48C Plug
 - 930xx131 DA15P to DA15P
 - 93005132 DA15P to DA15P, Crossover
 - 77892 DA15P to RJ48C Jack Adapter
 - 77993003 DA15P to Barrier Strip Adapter
- C To Control Terminal**
- 95006022 DE9S to DE9P, 6 feet
 - 95005023 DE9S to DB25P, 5 feet
 - 93001211 DE9P to RJ48, Cisco 2500 SLIP, Control Port
 - 78899 DE9S to RJ45 Adapter
 - 78891 DataSMART Installation Kit

BACK PANEL (Cont.)

- D To Data Equipment**
- 95010052 MRAC34P to MRAC34P
 - 950x057 MRAC34P to MRAC34P (DCE to DCE)
- E To 10Base-T LAN**
- 95007077 RJ45 Plug to RJ45 Plug, Cat. 3 UTP, 7 feet
 - 95007078 RJ45 Plug to RJ45 Plug, Crossover, Cat. 3 UTP, 7 feet

NOTE: xx denotes length of cable, contact factory for available lengths. DA, DB, DC, DE designate the size of the shell which encapsulates the cable connector.
P = Plug (male); S = Socket (female).

ORDERING INFORMATION

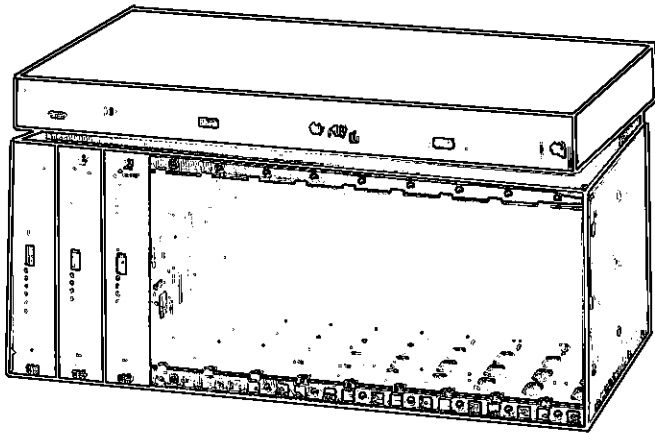
DESCRIPTION	MODEL NO.
DataSMART 656 T1 DSU/CSU w/ Ethernet	72656
DataSMART 658 T1 Add/Drop DSU/CSU w/ Ethernet	72658
Mounting Tray, 1 Unit	78031
FrameVision Upgrade Kit for DataSMART 656 and DataSMART 658	72080

SPECIFICATIONS

Network Interface	
Line Rate	T1 (1.544 Mbps)
Framing	SF, ESF, Ericsson
Line Code	AMI, B8ZS
Input Signal	DS-1 from 0 dB to -27 dB, typical
Output Signal	DS-1 with LBO 0, -7.5, -15 dB (selectable)
Mechanical	DA15 plug
Terminal Interface (DataSMART 658)	
Line Rate	T1 (1.544 Mbps)
Framing	SF, ESF, Ericsson
Line Code	AMI, B8ZS
Input Signal	DSX-1 to -10 dB
Output Signal	DSX-1 with equalization
Mechanical	DA15 socket
Power	
AC	110 VAC, 60 Hz, 8W
Physical	
Usage	Desktop or tray mount
Dimensions	7.75" W x 1.65" H x 11.5" D



DataSMART® 554 and 558 T1 Single-Port Plug-ins



DSUs

Manage and grow your enterprise network with the DataSMART® 554 and the DataSMART 558 T1 Single-Port Plug-in DSU/CSUs. These DSUs are designed for high-density T1/FT1 network installations. They support rapid expansion capabilities and comprehensive management options appropriate for central offices, and corporate and government networks.

The DataSMART Plug-ins offer auto-configuration for fast provisioning of additional circuits in rapidly growing environments. Combined

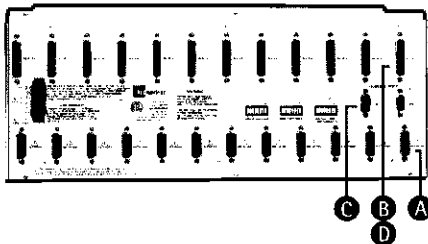
- Optimized for high-density sites
- Comprehensive T1/FT1 performance monitoring, control and diagnostic tools
- Standards-based management with embedded SNMP
- Manage multiple shelves with a single Ethernet port (DataSMART 558)
- Free SMARTools Installer for Windows and SMARTools Alarms Utility
- Supports leased-line, Frame Relay, SMDS/ATM DXI network access
- Upgrades to frame monitoring capabilities
- 5-year warranty

with the SMARTools Installer, this eliminates the need for highly skilled installation technicians.

The DataSMART 558 includes an add/drop port for voice and data traffic integration. Or it can be used as an SNMP-managed CSU. DataSMART Plug-ins and remote DataSMARTs can be managed over an Ethernet connection to the DataSMART 558 unit.

This single-port Ethernet enables local and remote management of all shelf and remote sites in your entire T1/FT1 network. SNMP and TELNET access are available to all local and remote DataSMART DSU/CSUs.

Specifications & Ordering Guide



BACK PANEL & CABLE GUIDE

- A To Network, 12-slot Shelf**
- | | |
|----------|--------------------------------------|
| 930xx091 | DA15S to DA15P |
| 930xx111 | DA15S to Stub |
| 93010151 | DA15S to RJ48C Modular Plug, 10 feet |
| 77891 | DA15S to RJ48C Jack Adapter |
| 77993004 | DA15S to Barrier Strip Adapter |
- B To Terminal Equipment, 12-slot Shelf (Requires split cables to data and terminal equipment)**
- | | |
|----------|--|
| 950xx088 | DB25P to DB25S and DA15P |
| 950xx089 | DB25P to DB25S and DA15S |
| 950xx090 | DB25P to MRAC34S and DA15P |
| 950xx091 | DB25P to MRAC34S and DA15S |
| 950xx094 | DB25P to RJ48C Plug (to terminal equipment only) |
- C To Control Terminal**
- | | |
|----------|---|
| 95006022 | DE9S to DE9P, 6 feet |
| 95005023 | DE9S to DB25P, 5 feet |
| 93001211 | DE9P to RJ48, Cisco 2500 SLIP, Control Port |
| 78899 | DE9S to RJ45 Adapter |
| 78891 | DataSMART Installation Kit |
- D To Data Equipment, 12-slot Shelf (12-slot Shelf requires split cables to access both data and terminal equipment. See Terminal Equipment cable section for model numbers.)**

For complete specification, cable and ordering information, call Application Support at 1-800-733-5511.

BACK PANEL (Cont.)

V.35	
95010054	DB25P to MRAC34P, 10 feet
95010073	DB25P to MRAC34P, tail circuit timing
95001074	DB25P to MRAC34S, 1 foot
78904	DB25P to MRAC34S Adapter
78905001	V.35 Adapter to existing DataSMART Single-Port cable
78906001	DB25P to MRAC34S (Wellfleet) Adapter
EIA-530	
950xx042	DB25P to DC37S
95010061	DB25P to DB25P, 10 feet
95010058	DB25P to DB25P, tail circuit timing
95010066	DB25P to DC37P (EIA-530 to RS449)

To 10Base-T LAN

95007077	RJ45 Plug to RJ45 Plug, Cat. 3 UTP, 7 feet
95007078	RJ45 Plug to RJ45 Plug, Crossover, Cat. 3 UTP, 7 feet

NOTE: xx denotes length of cable, contact factory for available lengths. DA, DB, DC, DE designate the size of the shell which encapsulates the cable connector.
P = Plug (male); S = Socket (female).

ORDERING INFORMATION

DESCRIPTION	MODEL NO.
DataSMART 554 T1 DSU/CSU Plug-in	72554
DataSMART 558 T1 Add/Drop DSU/CSU Plug-in w/ Ethernet	72558
FrameVision Upgrade Kit for DataSMART 554 and DataSMART 558	72081
Shelves & Mounting Accessories	
Universal Shelf, 12 slots, DC	78270

ORDERING INFORMATION (Cont.)

Shelves & Mounting Accessories	
Universal Shelf, 12 slots, DC, for use in Canada (CSA)	78272
Universal Shelf, 2 slots, AC	78075
Universal Shelf, 2 slots, DC	78070
Heat Baffle, Universal Shelf*	72273
Power Supplies 120 VAC to:	
24/48 VDC, 1.25 amps up to 4 units	77092
48 VDC, 2 amps up to 1 shelf	77099
48 VDC Redundant, 5 amps up to 2 shelves	77090
48 VDC, 100 watts up to 1 shelf*	72073
48 VDC, 200 watts/100 watts redundant*	72075
48 VDC, 200 watts redundant up to 2 shelves*	72079

* Call for availability

SPECIFICATIONS

Network Interface

Line Rate	T1 (1.544 Mbps)
Framing	SF, ESF, Ericsson
Line Code	AMI, B8ZS
Input Signal	DS-1 from 0 dB to -27 dB, typical
Output Signal	DS-1 with LBO 0, -7.5, -15 dB (selectable)
Mechanical	DA15 plug

Terminal Interface (DataSMART 558)

Line Rate	T1 (1.544 Mbps)
Framing	SF, ESF, Ericsson
Line Code	AMI, B8ZS
Input Signal	DSX-1 to -10 dB
Output Signal	DSX-1 with equalization
Mechanical	Special DB25 cable (12-slot shelf)

Power

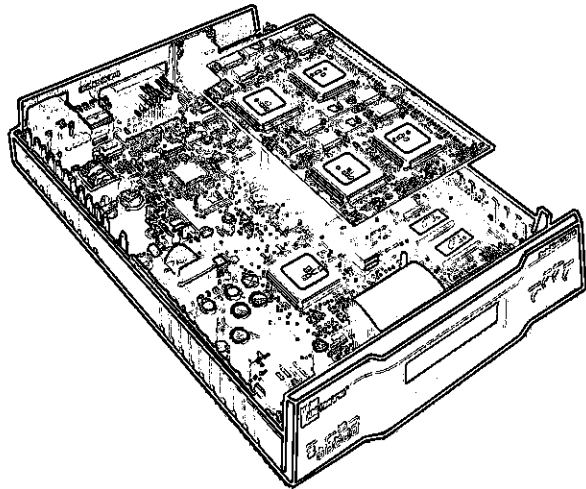
DC	24 to 48 VDC, 7.5W
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Physical

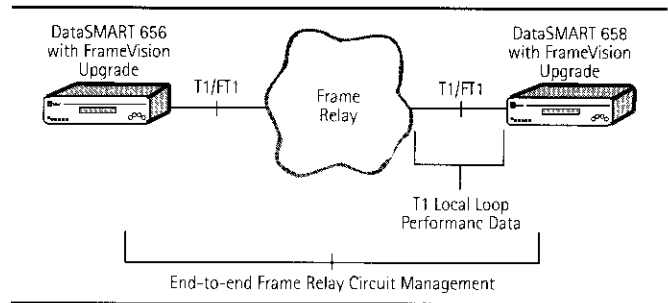
12-slot Shelf	17" W x 7" H x 12" D
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T1/FT1 Managed Data Service Unit Upgrade

FrameVision™ Upgrade Kit



- Economical upgrade kit provides investment protection for your network
- Upgrades DataSMART to include robust frame monitoring capabilities
- Fast provisioning on site with simple hardware add-on board



DSUs

When you want to migrate to managed Frame Relay Services, you can migrate your DataSMART 656 and 658 DSU/CSUs, as well as the DataSMART 554 and 558 Plug-in DSU/CSUs.

On a unit-by-unit basis, you can selectively upgrade installed DataSMART DSUs with the FrameVision Upgrade Kit. Simply open the unit, plug in the hardware add-on board, close the unit and power up. The upgrade kit enables your existing DataSMART DSUs to provide end-to-end Frame Relay circuit management, in addition to T1 local loop performance monitoring.

To upgrade the DataSMART 554 and 558 with frame monitoring capabilities, you simply pull the cards out of the Universal Shelf, attach the daughter board and reinsert the cards into the shelf. You can continue to manage the unit through the Ethernet port – without making any additional configuration changes – or you can make minor changes to the unit's configuration to take advantage of the new in-band communications capability over a virtual circuit.

Specifications & Ordering Guide

ORDERING INFORMATION

DESCRIPTION	MODEL NO.
FrameVision Upgrade Kits	
FrameVision Upgrade Kit for DataSMART 656 and DataSMART 658 Stand-alone DSU/CSUs	72080
FrameVision Upgrade Kit for DataSMART 554 and DataSMART 558 Plug-in DSU/CSUs	72081

Putting it all Together

The Reputation behind the Name

With ADC Kentrox, you can be sure you're getting the best in performance, reliability and product safety. We've earned a reputation for superior quality, reliability, service and support.

AROUND THE CLOCK

1 - 800 - 733 - 5511

CUSTOMER SERVICE

ADC Kentrox—Your Strategic Partner

At ADC Kentrox, customer support begins before we design the product. Since 1967 we have been known for giving you the quality and personal service you need, whenever you need it.

First, we listen to you to understand your requirements. Then we design products to meet those needs. We conduct evaluation and reliability studies on each product before it's released to manufacturing.

Our focus on manufacturing quality is evidenced in our ISO 9001 certification — the most stringent and comprehensive rating under the ISO standards. And all future products and new releases of current products will be verified to the Year 2000 Conformance Criteria. Before we ship products, all are approved and certified by carriers for conformance to industry standards and interoperability with the public network.

At ADC Kentrox, we emphasize reliable, prompt and flexible service and support. Our goal is to provide the best customer service and technical support in the industry — the ultimate support!

Customer Service

It is our goal to provide the 'best of class' customer service and technical support in the industry.

As a customer you will have a specific service representative who will assist you. If that person is unavailable, a designated back-up representative is prepared to help with your questions. For information on products, pricing, or delivery dates, just call your customer service representative.

Applications Support

If you have specific application or network configuration questions, don't hesitate to call our Applications Support group. They can help you with your network planning and implementation and decide which ADC Kentrox network access solution best fits your individual needs.

Technical Support

Our technical support staff is fully trained to answer a broad range of questions relating to not only our newest products, but any ADC Kentrox product you're likely to have installed. They are available for emergencies 24 hours a day, 7 days a week.

These technical specialists will help you troubleshoot your problem and they'll work with other vendors and your carrier, when appropriate, to help solve your technical problems.

Warranty Service and Systems Level Agreements

ADC Kentrox products are warranted to be free of defects in material and workmanship, when given proper installation and maintenance. All our 56k, T1 and E1 DSUs and CSUs carry a 5-year warranty. A 2-year warranty covers all other ADC Kentrox network access products.

In addition to our world-class telephone support, we have expanded your options to include system-level Support Agreements designed for our AAC-3 ATM Access Concentrator or the MagnumPlus Broadband Access Multiplexer. Our extended support offerings include:

Shared Service Agreement. With the Shared Service Agreement, you will be able to utilize your own resources, while relying on the expertise of ADC Kentrox Technical Support Engineers. You'll get cost-effective support that includes call escalation, complex problem diagnosis and repair services. (limited availability, call the factory for details)

On-site Support Agreement. This agreement is our most comprehensive support program available, with extended-hour access and same day or next-day on-site service. (limited availability, call the factory for details)

To obtain additional information on our on-line support, our systems-level installation program, return and repair policies, and selecting the best warranty agreement for your needs, call our Customer Service team.

For More Information

Product Training

ADC Kentrox offers a variety of training courses on our broadband access products. Available at our Portland, Oregon headquarters or at the customer site, these courses combine informative lectures and demonstrations with hands-on applications. Participants will learn how to install, configure, and troubleshoot products using live equipment. Combined with our in-house technical support, these courses are a smart way to avoid costly problems down the line. Visit our Web site, www.kentrox.com, for class schedules and registration information.

For detailed information and specifications on any of the products listed in this catalog, please complete the form on page 71 and fax or mail it today. Or simply call **1-800-232-5879**.

	PHONE	WEB/E-MAIL
Customer Service	1-800-733-5511 (503) 643-1681	info@kentrox.com
Literature Hotline	1-800-232-5879	www.kentrox.com
Pre-sales Support	1-800-733-5511 (503) 643-1681	info@kentrox.com
Technical Support	1-800-733-5511	support@kentrox.com
Training	1-800-733-5511 (x6322)	training@kentrox.com
Contracts Administration	1-800-733-5511 (503) 643-1681	

End-to-End Network Solutions from ADC

As people seek more effective ways to convey and use information, they are demanding better, faster and more diversified services from both public and private communication networks. To better serve these end users, ADC Telecommunications and its subsidiaries are working in collaboration with customers to change the way information is managed and transmitted. With expertise in fiber optics, video, local area network (LAN), broadband DSL and cellular technologies, ADC provides comprehensive end-to-end networking solutions for telecommunications, cable television, cellular and enterprise networks.

From the central office, through the outside plant and to the customer premises, ADC Telecommunications and its subsidiaries are continuously developing innovative new products that will enable all types of services — from POTS to video, data and even simultaneous data/voice/video transmission — to be delivered over a single integrated network.



NASDAQ: ADCT

BUSINESS BROADBAND GROUP

ADC Kentrox
Network Access

ADC Telecommunications Network Services
HiCap, SONET & ATM Transmission

RESIDENTIAL BROADBAND GROUP

ADC Broadband Communications
Analog, Digital Video Fiber Transport Residential Broadband Transport

ADC ITS Corporation
Wireless Broadband Transport

BROADBAND CONNECTIVITY GROUP

ADC Telecommunications Copper
Copper Connectivity Products

ADC Solitra
Wireless Base Station Subsystems

ADC Telecommunications Fiber
Fiber Connectivity Products

ADC AOFR
Fiber Optic Couplers and Splitters

SYSTEMS INTEGRATION GROUP

ADC Systems Integration
Global End-to-End System Integrator

ADC DaTel
Systems Integration Services

ADC Apex
Systems Integration Software

WIRELESS SYSTEMS GROUP

ADC Metrica
Network Management Database

ADC Mobile Systems
Mobile Base Stations & RF Distribution Systems

ADC Wireless Microsystems
Linear Power Amplifiers & RF Subsystems

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Regulatory Mark Legend



Underwriters Laboratory and a Nationally Recognized Testing Laboratory *U.S. product safety*



Industry Canada



Canadian Standard Association



Bundesamt für Zulassung in der Telekommunikation *Telecom Approvals Agency, German Notified Body*



Product Safety Approvals Agency, German and European Standards *EN*



British Approval Board for the Telecommunication *UK Notified Body*



Community European *Conformance with European direction*



European Standard



A Nationally Recognized Testing Laboratory *U.S. product safety*



Federal Communications Commission



Pruf und Zertifierungsinstitut *Germany*



Bellcore Recommended Tests for Carrier Central Office



Austel Australian Telecommunications Authority