

## 275x Mainstreet

DATA TERMINATION UNITS (VTC2898)

Alcatel's high performance 275x MainStreet Data Termination Units (DTUs) are used in many applications that require secure, highly reliable, low speed data such as automatic banking machines, lottery terminals, low speed router traffic and alarm monitoring applications (see Figure 1). The 275x MainStreet DTUs are excellent for extracting maximum performance from existing installed copper facilities.

275x MainStreet DTUs offer an attractive alternative for providing services of up to 128 kb/s to remote sites. They are ideal for providing services from a central site to remote locations over existing twisted pair copper lines. These products also provide secure, high reliability service over private or leased lines. Just like their predecessors, the 260x MainStreet DTUs and the 270x MainStreet DTUs, the 275x MainStreet DTUs are the choice of many carriers and enterprise customers worldwide.

These products are fully network managed by the Alcatel 5620 Network Manager (NM) which allows for easy end-to-end path provisioning with only a couple of mouse clicks.



High performance DTUs  
providing secure and  
highly reliable services



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### Three types of DTUs

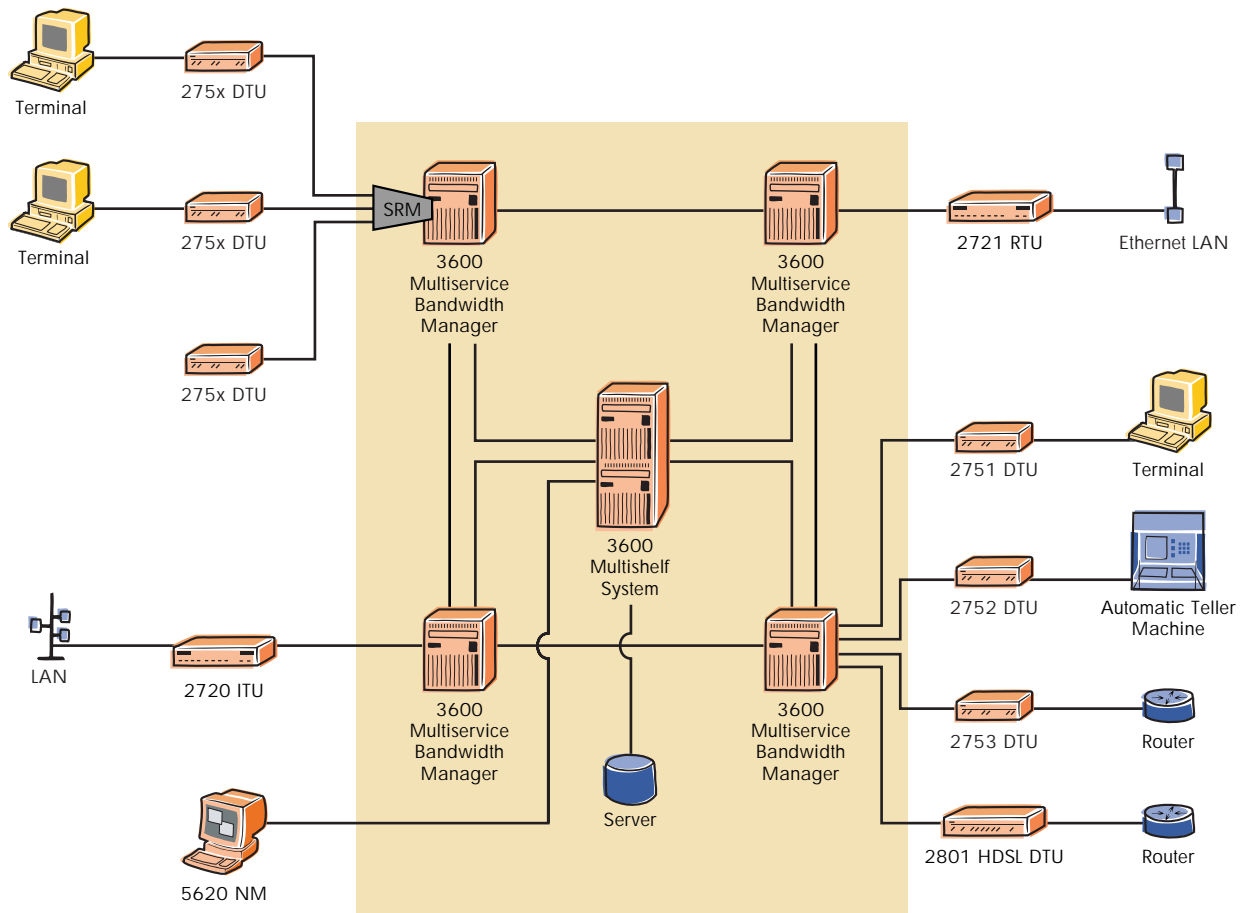
Three types of DTUs are available — the 2751, 2752 and 2753 MainStreet DTUs with TIA/EIA-232(RS-232), X.21 and V.35 user ports, respectively. All three DTUs share a common network port and can be mixed and matched on the same 6- and 12-port line cards. Subrate (<64 kb/s) data is supported and can be multiplexed onto the same DSO. This multiplexing of data allows for efficient utilization of bandwidth and real cost savings. Both the 6- and 12-port line cards can be installed in the 3600 MainStreet and 3600+ MainStreet Multiservice Bandwidth Managers.

### Configuration

The 275x MainStreet DTUs connect to the 3600 MainStreet and 3600+ MainStreet via the 27LC2 line card or 27LC3 line card, 6- or 12-ports, respectively. The 275X MainStreet DTUs connect to the line card in any combination up to the line card port limits. Modules are available that will also allow the 275x MainStreet DTU to be connected to the 3612 MainStreet Narrowband Multiplexer (NBM), 3624 MainStreet Intelligent T1 Channel Bank (ICB), 3630 MainStreet Primary Rate Multiplexer (PRM), and the 2902 MainStreet Network Termination Unit (NTU).

The 2751 MainStreet DTU has two TIA/EIA-232 user ports, while the 2752 MainStreet DTU has two X.21 user ports, and the 2753 MainStreet DTU has two V.35 user ports. The speeds and attributes of these ports are software configurable either locally, via a craft interface, or remotely from the network operations center via the 5620 NM. The 275x MainStreet DTUs are fully software downloadable and programmable, making release upgrades and DTU attribute changes easy and inexpensive.

▼ Figure 1: MainStreet DTU applications



### Diagnostic features

The 275X MainStreet DTUs have many advanced diagnostic features including line monitoring and power fail detection, open and short detection. Automatic self-diagnostics, extensive functional displays, automatic reconfiguration of replaced units, performance statistics and many more features make the MainStreet DTUs the ideal choice for delivering data services to customers.

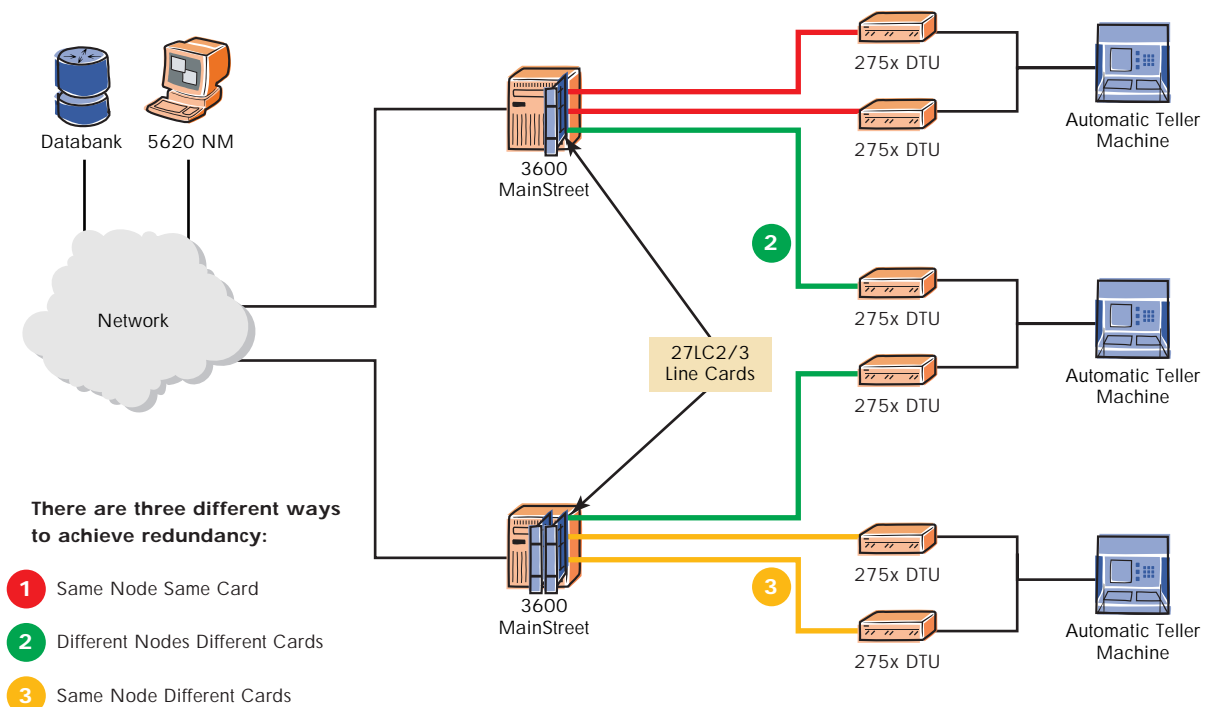
### Redundancy features

This family of DTUs supports full redundancy on the network interface, the line, and the DTU itself. These DTUs can be connected to separate ports on the same line card, on different line cards in the same node, or in different nodes to give the maximum redundancy service, as illustrated in Figure 2. In redundant mode, when there are two DTUs at the customer premises, use of a 'Y' cable presents only a single interface to the CPE device (i.e., a terminal or a router), which affords additional cost savings.

### MainStreet Data Termination Units Feature Summary

General	2801 HDSL DTU	2751 DTU	2752 DTU	2753 DTU	2720 ITU/ 2721 RTU
Maximum loop distance (26 AWG)	4 km/ 2.5 mi.	5.5 km/ 3.5 mi.	5.5 km/ 3.5 mi.	5.5 km/ 3.5 mi.	5.5 km/ 3.5 mi.
Maximum speed	2048 kb/s	64 kb/s	128 kb/s	128 kb/s	128 kb/s
Aggregate Interfaces					
V.24	—	2	—	—	—
V.35	1	—	—	2	—
V.36	1	—	—	—	—
X.21	1	—	2	—	—
TIA/EIA-449	1	—	—	—	—
10Base-T	—	—	—	—	1

▼ Figure 2: 275x MainStreet DTU redundant operation



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## Technical Summary

### General

- ▼ Fully software configurable
- ▼ Software downloadable
- ▼ Local or remote management
- ▼ End-to-end path management and configuration via the 5620 NM
- ▼ Full range of automatic and user directed diagnostics
- ▼ Integral BERT
- ▼ Line, port and DTU redundancy
- ▼ Advanced line monitoring for line quality
- ▼ Open and short detection
- ▼ Power failure detection

### Network and Service Management

- ▼ Full end-to-end path management and provisioning
- ▼ Local or remote management interface through NMTI, Craft Interface or the Alcatel 5620 NM
- ▼ Centralized alarm management with audible and visual alarm notification
- ▼ Centralized software administration
- ▼ Automatic discovery of equipment additions, deletions and changes
- ▼ Extensive performance data for SLAs and billing
- ▼ Multiple graphical displays of performance data

### Features

#### 2751 MainStreet DTU

- ▼ Ports: dual V.24, TIA/EIA-232
- ▼ Connectors: DB-25
- ▼ Physical interface: TIA/EIA-232C, CCITT V.24/28
- ▼ Mode of operation: DTE/DCE
- ▼ Control signals supported: RTS, CTS, ALB, RDL, DCD, DSR, DTR, RI

- ▼ Variable character length: nine, 10 or 11 (start, data, parity, stop bits)

- ▼ Rate adaptation: HCM
- ▼ Synchronous data rates: 0.15 up to 64 kb/s
- ▼ Asynchronous data rates: 0.15 up to 38.4 kb/s

#### 2752 MainStreet DTU

- ▼ Ports: dual X.21, TIA/EIA-449
- ▼ Connectors: DB-15
- ▼ Physical interface: TIA/EIA-449/442, CCITT X.21, ISO 4903
- ▼ Mode of operation: DTE/DCE
- ▼ Control signals supported: C, I

- ▼ Variable character length: 9, 10 or 11 (start, data, parity, stop bits)

- ▼ Rate adaptation: HCM
- ▼ Synchronous data rates: 0.15 up to 128 kb/s
- ▼ Asynchronous data rates: 0.15 up to 57.6 kb/s

#### 2753 MainStreet DTU

- ▼ Ports: dual V.35
- ▼ Connectors: DB-25
- ▼ Physical interface: CCITT V.35, ISO 2593
- ▼ Mode of operation: DTE/DCE

- ▼ Control signals supported: RTS, CTS, ALB, RDL, DCD, DSR, DTR, RI

- ▼ Variable character length: nine, 10 or 11 (start, data, parity, stop bits)

- ▼ Rate adaptation: HCM

- ▼ Synchronous data rates: 0.15 up to 128 kb/s

- ▼ Asynchronous data rates: 0.15 up to 57.6 kb/s

### Line Connection

- ▼ Single twisted pair
- ▼ RJ-45 connector
- ▼ Transmission using adaptive echo cancellation techniques
- ▼ D channel used for control and management of the DTU

### Physical Description

- ▼ Height: 3.7 cm (1.5 in.)
- ▼ Width: 19.4 cm (7.6 in.)
- ▼ Depth: 27.0 cm (10.6 in.)
- ▼ Weight: approximately 0.85 kg (1.8 lbs.)

### Shipping and Storage

- ▼ -40° C to 66° C (-40° F to 150° F)

### Operating Environment

- ▼ 0° C to 40° C (32° F to 104° F)
- ▼ 5% to 95% relative humidity, noncondensing
- ▼ 60 m (197 ft.) below sea level to 1,800 m (5,905 ft.) above sea level

### Product Safety

- ▼ CSA C22.2 No 950 (Canada)
- ▼ UL1950 (United States)
- ▼ TR-NWT-000063 Issue 5 (U.S. Bellcore)
- ▼ TR-NWT-001089 (U.S. Bellcore)
- ▼ EN 60950 (Europe)

### EMC Emission

- ▼ ICES-003 (Class A) (Canada)
- ▼ FCC Part 15 (Class A) (United States)
- ▼ TR-NWT-000063 Issue 5 (U.S. Bellcore)
- ▼ TR-NWT-001089 (U.S. Bellcore)
- ▼ EN 55022 (Class B) (Europe)
- ▼ EN 60555 (Europe)

### EMC Immunity

- ▼ ANSI C62.41 (AC power surge) (United States)
- ▼ TR-NWT-000063 Issue 5 (U.S. Bellcore)
- ▼ TR-NWT-001089 (U.S. Bellcore)
- ▼ EN 50082-1 (Europe)

### Network Attachment

- ▼ DOC CS-03 (Canada)
- ▼ FCC Part 68 (United States)
- ▼ OTR001 (United Kingdom)
- ▼ CTR14 (ONP leased lines 64 kb/s) (Europe)

### Power

- ▼ Maximum 5.0 W
- ▼ 110 V 60Hz, 230 V 50 Hz
- ▼ AC powering

Contact Alcatel for information on upcoming feature enhancements.



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