This Product Survey summarizes the characteristics of terminals/cluster controllers that replace components of the IBM 3270 Information Display System. It does not include protocol converters that simulate IBM 3270 components, nor does it include personal computers/user-programmable and other terminals, or printers. For a description of those components, see reports 737, Protocol Converters; 720, Data Communication Terminals; and 724, Teleprinters.

The products presented in this survey replace their IBM counterparts in a fully transparent manner. Their connection to the host is software/hardware identical to the products replaced. For those products operating in remote environments, all support standard 3270 protocols and interface with the same communication-handling software used by the replaced product. Any exceptions are noted in the Communications entry of the description. All products also communicate over conventional leased or dial-up lines.

This edition of the IBM 3270-Compatible & Replacement Products survey presents the specifications for **78 products** manufactured/marketed by **15 vendors**. Included in this Introduction is a list of the vendors and their associated systems; to expedite your search, a dot chart showing Company Name, Model Number, and the 3270 product replaced/emulated. Following the dot chart are summaries of the technical characteristics of the products, as well as typical maintenance costs.

The IBM 3270 replacement market has undergone a number of changes since our last survey in October 1983. IBM caught most competitors off guard when it announced a series of new low-cost terminals (3178, 3179, and 3180) to replace the aging and high-cost 3278 and 3279, and further sent shock waves through the industry by invoking a series of price cuts. The impact of these cuts rippled down through the profit sheets of all competitors as they rushed to meet IBM's challenge, and a few companies (notably Raytheon and Racal-Milgo) opted out of the race altogether.

With all combatants maneuvering for market share, 2 new challengers mounted very aggressive campaigns to make inroads into the marketplace. The so-called "protocol converter" vendors, which actually offer products that emulate IBM terminal/controller, began offering advanced features such as multihost addressing and remote terminal dial-in. They also increased the number of terminals/printers handled to increase their appeal to medium-sized IBM prospects. This, coupled with prices averaging one-third to one-half IBM and compatible products, added further pressure on the marketplace.

The second challenge came from personal computer

vendors. Quick to recognize the advantages of protocol conversion as a tool to penetrate IBM markets, these vendors began offering protocol converter boards that fit into the PC and emulate IBM terminals/controllers. Such facilities (coupled with autonomous local processing provided by the PC itself) appeals to many users—especially those at remote sites that cannot justify the cost of a 3270. The PC-emulator marriage, however, had a serious limitation: there was no way to efficiently download/upload large files. This problem appears to have been solved with the recently announced file transfer firmware from Forte, Winterhalter, AST, and DCA.

In the latter part of 1984, the "plug-compatible" vendors opened a new front by offering terminals/controllers that are truely plug replacements for IBM units. In the past, Beehive, Memorex, and Telex Corporation offered terminals that could plug into an IBM controller as well as controllers that could accept IBM terminals/printers. The others sold products that emulated the IBM components, but no mixing was permitted. Now ITT Courier, Harris, and, we understand, MDS are all offering **true** plug compatibility. While this plug-for-plug swap will certainly impact IBM, the independents will undoubtedly feel the heat even more. As anyone who has gone head-to-head with IBM knows, it's a tough fight to replace a well-respected incumbent that enjoys the reputation of supporting its customers no matter what.

In any event, the end user is now in the enviable position of choosing from a myriad of excellent products and prices considered bargains by yesterday's measures.

The following is a list of the vendors and products covered in this Survey; product specifications are contained in the body of this report.

AT&T-IS • 4540, 4540-LCC, 4540-SDS.

**AT&T Teletype Corporation** • 4540, 5544, 5546, 5548, 5549.

**Beehive •** ATL-078, ATL-178, ATL-3270, ATL-3270MS, CC-74.

**Braegen Corporation •** 8521, 8522, 8523, 8524, 8500, 8510, 8550, 8590, 8595.

Control Concepts Corporation • EM 3275, EM 3276, CC 3276

Davox • Series 811, 821, 911, 921.

Harris • Challenger Series; no details available.

**Informer, Inc** • 201-178, 203-178, 203-276, 205-178, 205-376, 207-376, 274, 276.

ITT Courier • 7411/7412, 7601, 9440, 9442, 9410, 9416,

9420, 9422, 1900, 9230, 9236.

**Lee Data** • 1221 all-in-one, 1214, 1230/31, 2130, 306/308, 310/410, 311, 320/420, 321/421.

Memorex • 2076-4, 2078, 2079, 2178.

**MDS** • 9174, 9274-4A, 9178.

Megadata Corporation • 8188-7.

**NCR Corporation** • 2950, 3274.

Northern Telecom • 296C, 298E, 294C, 294-51C.

Paradyne • PDS 270.

**Telex Terminal Communication** • TC279, TC476, TC174, TC178, TC276, TC289C, TC078, TC079, 1186.

## **IBM 3270-COMPATIBLE & REPLACEMENT PRODUCTS OUTLINE**

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## **IBM 3270-COMPATIBLE & REPLACEMENT PRODUCTS LISTINGS**

## ■ AT&T-INFORMATION SYSTEMS

100 Southgate Parkway, Morristown, NJ 07960 • 201-898-8000.

☐ AT&T-IS Dataspeed 4540 Series Terminal Cluster System

Replaces • 4540 (remote controller) replaces IBM 3271 and 3274 • 4540-LCC (local) replaces IBM 3272-2 and 3274-B • 4540-SDS replaces IBM 3275/3276.

**Configuration** • cluster system supporting up to 32 peripherals; offered in 8-, 16-, and 32-port configurations.

Workstation/Terminal • 13-inch CRT • 1920 characters @ 24 lines x 80 characters plus 25th status line • 96 ASCII/EBCDIC characters displayed; 64 EBCDIC • 2K-byte buffer • 24 program function keys; 2 or 3 program attention keys.

**Host Compatibility** • IBM S/360, 370, 3030, 3081, 4300, and S/3.

**Control Units/Adapters** • 2701, 2703, 3704, 3705 • S/3 through BC adapter • Type A/B adapters local attach to selector, byte/block multiplexer.

Communications • point-to-point/multipoint • 1200 to 9600 bps • half-duplex • BSC or ADCCP.

**Peripherals** • supports any combination of workstations provided at least 1 is a workstation and no more than 8 are printers • vendor offers 30-cps matrix printer; 300-/220-lpm belt printers.

Other Features • tilt-and-rotate display; detached keyboard • nonglare screen • choice of 7 keyboards.

**Price** • \$3,690 8-port controller purchase price • \$6,430 16-port controller purchase price • \$2,330 16-port expansion module

purchase price • 4540 cluster typewriter monitor and keyboard, \$2,680 purchase price; 4540-SDS standalone terminal, \$2,900 purchase price • leases offered.

Maintenance/Cost • on-site, vendor-supplied maintenance • \$21 to \$81 per month for cluster controllers • \$16.50 per month for workstation.

Availability • 90 to 120 days ARO.

#### ■ AT&T TELETYPE CORPORATION

5555 Touhy Avenue, Skokie, IL 60077; 312-982-2000 • Canadian Headquarters: AT&T Canada Inc; 1500 Don Mills Road, Suite 500, Don Mills, ON M3B 3K4; 416-449-4300.

#### ☐ Model 4540

Replaces • 3271-2.

**Configuration** • cluster system supporting up to 32 peripherals; offered in 8-, 16-, and 32-port configurations.

Workstation/Terminal • 13-inch CRT • 1920 characters @ 24 lines x 80 characters plus 25th status line • 96 ASCII/EBCDIC characters displayed; 64 EBCDIC and 96 EBCDIC • 2K-byte buffer • 24 program function keys; 3 program attention keys.

**Host Compatibility** • IBM S/360, 370, 3030, 3081, 4300, 8100, and S/3.

**Control Units/Adapters •** 2701, 2703, 3704, 3705 • S/3 through BC adapter • Type A/B adapters local attach to selector, byte/block multiplexer.

Communications • point-to-point/multipoint • 1200 to 9600 bps • half-duplex • BSC or SNA/SDLC.

**Peripherals** • supports any combination of workstations provided, at least 1 is a workstation and no more than 8 are printers • vendor offers 30-/340-cps matrix printers; 300-/110-lpm line printers.

Other Features • none.

**Price** • \$4,543 for 8 ports; \$5,315 for 16 ports; \$6,682 for 32 ports • no leases offered.

**Maintenance/Cost** • on-site, vendor-supplied maintenance • \$38 to \$48 per month for cluster controllers • \$31 per month for workstations and 4543-2.

Availability • 90 to 120 days ARO.

#### ☐ Teletype 5544 & 5546 Series Cluster Controller

**Replaces** • 3274-C models (5544) and 3276 (5546).

**Configuration** • 16 to 32 peripherals, 8 printers maximum with 1 display minimum (5544); 6 to 12 peripherals, 3 printers maximum with 1 display minimum (5546).

**Workstation/Terminal** • 12- or 13-inch CRT • 1920 characters @ 24 lines x 80 characters; 3564 characters @ 27 lines x 132 characters plus 25th status line • 96 EBCDIC characters • 24 programmable function keys; 12 program action keys.

Host Compatibility • IBM S/360, S/370, 3030, 3081, 4300.

Control Units/Adapters • 2701, 2703, 3704, 3705.

 $\begin{array}{lll} \textbf{Communications} \bullet \text{ point-to-point/multipoint} \bullet \text{ up to 9600 bps} \\ \bullet \text{ half-/full-duplex} \bullet \text{BSC/SNA/SDLC protocol}. \end{array}$ 

**Peripherals** • supports any combination of workstations provided at least 1 is a workstation and no more than 8 are printers • vendor offers 30-/340-cps matrix printers; 300-/220-lpm line printers.

Other Features • tilt display; detachable keyboard, choice of 2 keyboards, audible sound, dual 5.25-inch floppy disks.

**Price** • Model 5544—\$6,176 for 16 ports; \$8,038 for 32 ports • Model 5546—\$3,518 for 6 ports; \$3,727 for 12 ports.

Maintenance/Cost • on-site, vendor-supplied maintenance • \$30 to \$34 per month.

Availability • 45 to 90 days ARO.

#### □ Model 5548 Monochrome & Model 5549 Color Display Terminals

Replaces • 3278-2 through -5; 3279-S2B.

Configuration • single terminal.

**Workstation/Terminal** • 12- or 14-inch CRT monochrome; 13-inch CRT color • 1920 characters @ 24 lines x 80 characters (both models); 3564 characters @ 27 lines x 132 characters (Model 5548) • 96 EBCDIC/ASCII characters displayed • 24 program function keys; 2 program attention keys.

Host Compatibility • IBM S/360, 370, 303X, 4300.

**Control Units/Adapters** • supports Teletype 5544 and 5546 Series cluster controllers • Type A adapter.

 $\begin{array}{lll} \textbf{Communications} \bullet \text{ point-to-point/multipoint} \bullet \text{ up to 9600 bps} \\ \bullet \text{ half-/full-duplex} \bullet \text{BSC/SNA/SDLC}. \end{array}$ 

**Peripherals** • selector light pen; printer attached via controller.

Other Features • color monitor displays 4 colors.

**Price •** Model 5548 (12-inch)—\$1,411; 14-inch—\$1,785 • Model 5549—\$2,573 • no leases offered.

**Maintenance/Cost** • on-site, vendor-supplied maintenance— \$12 per month.

Availability • 45 to 90 days ARO.

#### **■** BEEHIVE

4910 Amelia Earhart Drive, Salt Lake City, UT 84116-2837; 801-355-6000 • Canadian Headquarters: none.

#### ☐ Model ATL-078 Terminal

Replaces • 3178/3278-2.

**Configuration** • standalone display station supporting 1 peripheral.

**Workstation/Terminal** • 14-inch CRT • 1920 characters @ 24 lines x 80 characters plus 25th status line • 256 EBCDIC characters displayed.

Host Compatibility • IBM S/370, 4300.

Control Units/Adapters • supports IBM 3274, 3276 • Type A

**Communications** • 110 to 19.2K bps • half-/full-duplex • ASCII Async.

**Peripherals** • attaches 1 serial ASCII printer via RS-232C or RS-422 interface • switch selectable 110 to 19.2K bps • double buffering.

Other Features • detachable keyboard.

Price • \$1,195 purchase price.

Maintenance/Cost • on-site, vendor-supplied maintenance.

Availability • 30 days ARO.

## ☐ Model ATL-178 Terminal

Replaces • 3178.

**Configuration** • standalone display station supporting 1 peripheral.

**Workstation/Terminal** • 14-inch CRT • 1920 characters @ 24 lines x 80 characters plus 25th status line • 256 EBCDIC characters displayed.

Host Compatibility • IBM S/370, 4300.

Control Units/Adapters • supports IBM 3724, 3276 • Type A adapter.

Communications • same as ATL-078.

 ${f Peripherals} ullet {f attaches} \ 1 \ {f serial} \ {f ASCII} \ {f printer} \ {f via Centronics-type} \ {f parallel} \ {f interface}.$ 

Other Features • detachable keyboard.

Price • \$1,395 purchase price.

Maintenance/Cost • on-site, vendor-supplied maintenance.

Availability • 30 days ARO.

#### ☐ Model ATL-3270 Cluster/Terminal

Replaces • 3276-2, 3276-12.

**Configuration** • standalone display station supporting 1 peripheral.

**Workstation/Terminal** • 14-inch CRT • 1920 characters @ 24 lines x 80 characters plus 25th status line • 256 EBCDIC characters displayed.

Host Compatibility • IBM S/370, 4300.

Control Units/Adapters • 3704, 3705, 3725, 4331 communications.

**Communications** • 110 to 19.2K bps • half-/full-duplex • BSC/SNA/SDLC.

**Peripherals** • attaches 1 serial ASCII printer via RS-232C or RS-422 interface • switch selectable 110 to 19.2K bps • double buffering.

Other Features • detachable keyboard.

Price • \$1,695 BSC, \$1,895 SNA/SDLC purchase price.

Maintenance/Cost • on-site, vendor-supplied maintenance.

Availability • 30 days ARO.

#### ☐ Model ATL-3270MS Cluster/Terminal

Replaces • 3276-2, 3276-12.

**Configuration** • standalone display station supporting up to 7 peripherals.

**Workstation/Terminal** • 14-inch CRT • 1920 characters @ 24 lines x 80 characters with 25th status line • 256 EBCDIC characters displayed.

Host Compatibility • IBM S/370, 4300.

Control Units/Adapters • 3704, 3705, 3725, 4331 communications

Communications • 110 to 19.2K bps • half-/full-duplex • BSC/SNA/SDLC.

**Peripherals** • attaches up to 7 serial ASCII printers or terminals via RS-232C or RS-422 interfaces • keyboard selectable 110 to 19.2K bps.

Other Features ullet detachable keyboard ullet cluster security log-on/-off.

Price • \$2,795 BSC; \$2,995 SNA/SDLC purchase price.

**Maintenance/Cost** • on-site, vendor-supplied maintenance.

Availability • 30 days ARO.

### ☐ Model CC-74 Cluster Controller

Replaces • 3276-2, 3276-12.

**Configuration** • cluster controller supporting up to 8 peripherals/ terminals

**Workstation/Terminal** • ATL-078, Topper PC, any ASCII async terminal.

Host Compatibility • IBM S/370, 4300.

Control Units/Adapters • 3704, 3705, 3725, 4331 communications.

**Communications** • 110 to 19.2K bps • half-/full-duplex • BSC/SNA/SDLC.

**Peripherals**  $\bullet$  attaches up to 8 ASCII terminals and/or printers via RS-232C or RS-422 interface (keyboard selectable 110 to 19.2K bps).

Other Features • supports 2 host computers • printer port sharing • cluster security log-on/-off features.

Price • \$3,995 purchase price.

Maintenance/Cost • on-site, vendor-supplied maintenance. Availability • 30 days ARO.

#### **■** BRAEGEN CORPORATION

525 Los Coches, Milpitos, CA 95035; 408-945-1900 • Canadian Headquarters: none.

## □ Model 8410 Remote Cluster Controller

Replaces • 3274.

Configuration • attaches up to 16 peripherals.

Workstation/Terminal • 15-inch CRT • 1920 characters @ 24 lines x 80 characters plus 25th status line • 96 EBCDIC characters displayed; 120 characters APL optional • 24 program function keys.

Host Compatibility • IBM S/360, 370, 303X, 4300.

Control Units/Adapters • 2701, 2703, 3704, 3705 • Type A/B adapters.

Communications • up to 19.2K bps • BSC/SNA/SDLC.

**Peripherals** • attaches up to 16 terminals/printers • RS-232C/RS-422 interfaced.

Other Features • displays can be simultaneously turned into personal computers, 16-bit microprocessor-based module, Winchester disk.

Price • \$7,600 for 16-port unit; 2-/3-year leases available.

Maintenance/Cost • on-site, vendor-supplied maintenance.

Availability • 60 days ARO.

#### ☐ Model 8420 Display Station

Replaces • 3178.

Configuration • single terminal.

Workstation/Terminal • 12-inch CRT • 1920 characters @ 24 lines x 80 characters plus 25th status line • 96 EBCDIC characters displayed; 120 characters APL optional • 24 program function keys

Host Compatibility • IBM S/370, 303X, 4300.

**Control Units/Adapters** • supports Braegen 8410 controller • Type A adapter.

Communications • same as Braegen 8410.

Peripherals • none.

Other Features • lower-cost, small desktop.

Price • \$1,500 purchase price; 2-/3-year leases available.

Maintenance/Cost • on-site, vendor-supplied maintenance.

Availability • 60 days ARO.

## ☐ Models 8521, 8522, 8523 & 8524 Display Terminals

Replaces • 3278 Models 2, 3, 4, and 5.

Configuration • single terminal attaches 1 printer.

Workstation/Terminal • 15-inch CRT • 1920 characters @ 24 lines x 80 characters; 2560 characters @ 32 lines x 80 characters; 3564 characters @ 27 lines x 132 characters • 96 EBCDIC/ASCII characters displayed • 24 program function keys • choice of typewriter, data entry, or typewriter/APL keyboards.

Host Compatibility • IBM S/370, 303X, 4300.

Control Units/Adapters • supports Braegen 8500, 8510, 8590, 8595 controllers • IBM RG-62U coaxial cable; Category A adapter.

Communications • point-to-point/multipoint • up to 9600 bps • half-/full-duplex • BSC/SNA/SDLC.

**Peripherals** • RS-232C interface for attaching 1 serial asynchronous printer; optional light pen.

Other Features • tilt/swivel pedestal.

**Price** • 8521—\$1,700; 8522—\$1,895; 8523—\$1,995; 8524— \$2,295 single-unit purchase price; 2-/3-year leases available.

Maintenance/Cost • on-site, vendor-supplied maintenance.

Availability • 60 days ARO.

☐ Model 8500 Controller

Replaces • 3274 Models 41A or 41D.

Configuration • floorstanding cluster LAN controller supporting up to 120 devices and address up to 4 IBM host processors.

**Workstation/Terminal** • supports Braegen 8521, 8522, 8523, 8524 terminals and 3270-type printers.

Host Compatibility • IBM S/360, 370, 4300, 8100.

Control Units/Adapters • RG-62U coaxial cable; supports 2 multipoint LANs.

Communications • point-to-point/multipoint • up to 9600 bps • full-/half-duplex • BSC/SNA/SDLC.

Peripherals • supports up to 120 serial devices; any combination of terminals and/or printers.

Other Features • used in the Elan Braegen local area network.

Price • \$18,495—60-device single-unit purchase price • 2-/ 3-year leases available.

Maintenance/Cost • on-site, vendor-supplied maintenance.

Availability • 60 days ARO.

#### ☐ Models 8510, 8550, 8590 & 8595 Controllers

Replaces • 3274 Model 61C with multiuser personal computing.

Configuration • floorstanding controller with 16 active devices on baseband local area network

Workstation/Terminal • supports Braegen Models 8521, 8522, 8523, 8524, and 3270-type printers.

Host Compatibility • IBM S/360, 370, 4300, 8100,

Control Units/Adapters • RG-62U coaxial cable; Category A

Communications • multipoint • up to 9600 bps • BSC or SNA/ SDLC • half-/full-duplex.

Peripherals • supports serial matrix, letter-quality, and document

Other Features • IBM-compatible access to personal computers.

**Price** • Model 8510 16-user remote connector with 8-user PC connection—\$19,275; Model 8590 16 users without PC connection—\$7,600; Model 8550 with 8 users—vendor quote; Model 8595—vendor quote.

Maintenance/Cost • on-site, vendor-supplied maintenance.

Availability • 60 days ARO.

### **■** CONTROL CONCEPTS CORP

12004B Ballsford Road, P.O. Box 2367, Manassas, VA 22110; 703-361-5545 • Canadian Headquarters: none

### ☐ EM 3275/EM 3276 Terminal System

Replaces • EM 3275 replaces 3275-1/3275-2 • EM 3276 replaces 3276-1/3276-2.

Configuration • standalone or multidropped terminal-controller • attaches one 3287-type printer.

Workstation/Terminal • 12-inch CRT • 1920 characters @ 24 lines x 80 characters plus 25th status line • 96 ASCII/EBCDIC characters displayed • 24 program function keys.

Host Compatibility • IBM S/370, 3030, 3081, 4300, and S/

Control Units/Adapters • 2701, 2703, 3704, 3705 • BSC adapter for S/3 • ICA on 4300.

Communications • point-to-point/multipoint • 110 to 9600 bps | Replaces • 3278-2.

• half-/full-duplex • BSC • integrated AT&T 201C-compatible

Peripherals • RS-232C interface for attaching 1 serial asynchronous printer • separate printer address to look like 3287.

Other Features • optional composite video output, rotating terminal base, multiline selector • integrated 2400-bps modem optional.

Price • \$1,995 EM 3275 purchase price; \$106 per month 2-year lease • \$2,195 EM 3276 purchase price; \$117 per month 2-year

Maintenance/Cost • on-site, third-party maintenance (Western Union): \$32 per month (EM 3275) or \$34 per month (EM 3276) • factory service: \$25 per month (EM 3275) or \$28 per month (EM 3276).

Availability • 30 days ARO.

□ CC3276

Replaces • 3276-12.

 $\textbf{Configuration} \ \bullet \ \text{standalone} \ \text{terminal-controller} \ \bullet \ \text{attaches} \ 1$ printer or multidrop cluster.

Workstation/Terminal • 12-inch CRT • 1920 characters @ 24 lines x 80 characters plus 25th status line • 96 EBCDIC characters displayed • 24 program function keys.

Host Compatibility • IBM S/370, 3030, 3081, 4300, and S/

Control Units/Adapters • 2701, 2703, 3704, 3705 • BSC adapter for S/3 • ICA for 4300.

Communications • multipoint • 110 to 9600 bps • half-/fullduplex • SDLC.

Peripherals • RS-232C interface for attaching 1 serial asynchronous printer • separate printer address to look like 3287.

Other Features • optional composite video output, rotating terminal base, multiline selector • integrated 2400-bps modem.

Price • \$2,395 single-unit purchase price; \$128 per month 2-year

Maintenance/Cost • factory service available.

Availability • 30 days ARO.

### ■ DAVOX

4 Federal Street, Billerica, MA 01821; 617-667-4455 • Canadian Headquarters: none.

## ☐ Series 811 Multimode Terminal

**Replaces** • 3278-2.

Configuration • single terminal attaching 1 printer.

Workstation/Terminal • 12-inch CRT • 1920 characters @ 24 lines x 80 characters plus 25th and 26th status lines • 96 EBCDIC/ ASCII characters displayed • 24 program function keys.

Host Compatibility • IBM S/370, 303X, 4300.

Control Units/Adapters • attaches to Davox 1000 controller via RG-62U interface

**Communications** • 75 to 1200 bps • asynchronous • RS-232C interface • SDLC/SNA/BSC.

Peripherals • any standard serial printer.

Other Features • self-diagnostics, green or amber screen, ASCII/ TTY and DEC VT52 emulation, local page print capability.

Price • \$1,795 single-unit purchase price.

Maintenance/Cost • depot repair: \$77 annually; depot replacement: \$129 annually.

Availability • not available.

☐ Series 821 Professional DeskSet

**Configuration** • single terminal attaching 1 printer.

Workstation/Terminal • same as Series 811.

Host Compatibility • attaches only to Davox controller.

Control Units/Adapters • same as Series 811.

Communications • same as Series 811.

Peripherals • any standard serial printer.

Other Features • same as Series 811, plus telephone with handsfree operation, headset attachment, multiline operation, automatic dialing from host computer directory or data entry screen.

Price • \$1,995 single-unit purchase price.

Maintenance/Cost • depot repair: \$82 annually; depot replacement: \$136 annually.

Availability • 30 days ARO.

#### ☐ Series 911 Maxi-Mode Intelligent Terminal

**Replaces** • 3278-2.

Configuration • single terminal attaching 1 printer.

**Workstation/Terminal** • 12-inch CRT • 1920 characters @ 24 lines x 80 characters plus 25th and 26th status lines; 2000 characters @ 25 lines x 80 characters for PC model • 96 EBCDIC/ASCII characters displayed • 24 program function keys.

Host Compatibility • attaches only to Davox controller.

Control Units/Adapters • same as Series 811.

Communications • same as Series 811.

Peripherals • any standard serial printer.

 $\begin{tabular}{ll} \textbf{Other Features} \bullet \textbf{same as Series 811 plus } IBM \textbf{ personal computer attachment.} \end{tabular}$ 

Price • \$1,895 single-unit purchase price.

**Maintenance/Cost** • depot repair: \$86 annually; depot replacement: \$145 annually.

Availability • 30 days ARO.

#### ☐ Series 921 Professional PC DeskSet

**Replaces** • 3278-2.

**Configuration** • single terminal attaching 1 printer.

Workstation/Terminal • same as Series 911.

**Host Compatibility** • attaches only to Davox controller.

Control Units/Adapters • same as Series 811.

Communications • same as Series 811.

Peripherals • any standard serial printer.

Other Features • same as Series 821 plus IBM personal computer attachment.

Price • \$2,180 single-unit purchase price.

**Maintenance/Cost** • depot repair: \$94 annually; depot replacement: \$156 annually.

Availability • 30 days ARO.

## ☐ 1911 Professional PC DeskSet

**Replaces** • 3278-2.

Configuration • single terminal attaching 1 printer.

Workstation/Terminal • 12-inch CRT • 1920 characters @ 24 lines x 80 characters plus 25th and 26th status lines • 96 EBCDIC/ASCII-B characters displayed • 24 program function keys.

Host Compatibility • IBM S/370, 303X, 4300.

**Control Units/Adapters** • attaches to Davox 1000 controller via standard RG-62U coaxial cable; or via most standard, existing telephone wires through the Davoxnet interface.

**Communications** • 75 to 19.2K bps • asynchronous • RS-232C interface • SDLC/SNA/BSC.

Peripherals • any standard serial printer; integrated featurephone provides simultaneous data and voice communications.

 $\begin{tabular}{ll} Other Features \bullet self-diagnostics upon power up, green or amber screen, IBM PC attachment; ANSI X3.41, X3.64, and TTY optional. \\ \end{tabular}$ 

Price • \$2,175 single-unit purchase price.

Maintenance/Cost • depot repair: \$100 annually; depot replacement: \$175 annually; on-call: \$211.

Availability • 30 days ARO.

### ☐ 1921 Professional PC DeskSet

Replaces • 3278-2.

**Configuration** • single terminal attaching 1 printer.

Workstation/Terminal • 12-inch CRT • 1920 characters @ 24 lines x 80 characters plus 25th and 26th status lines • 96 EBCDIC/ASCII-B characters displayed • 24 program function keys • integrated telephone handset.

Host Compatibility • IBM S/370, 303X, 4300.

**Control Units/Adapters** • attaches to Davox 1000 controller via standard RG-62U coaxial cable; or via most standard, existing telephone wires through the Davoxnet interface.

**Communications** • 75 to 19.2K bps • asynchronous • RS-232C interface • SDLC/SNA/BSC.

Peripherals • any standard serial printer; integrated feature phone provides simultaneous data and voice communications.

Other Features • green or amber screen, self-diagnostics upon power up; ANSI X3.41, X3.64, and TTY optional.

Price • \$2,310 single-unit purchase price.

Maintenance/Cost • depot repair: \$94 annually; depot replacement: \$153 annually; on-call: \$198 annually.

Availability • 30 days ARO.

## ☐ Series 2900 Models 2911, 2921

Replaces • 3279 S2B color display station.

**Configuration** • single terminal attaching 1 printer.

Workstation/Terminal • 12-inch CRT; supporting 7 colors • 1920 characters @ 24 lines x 80 characters plus 25th and 26th status lines • 96 EBCDIC characters displayed; optional 222-character APL/Text character set • 24 program function keys.

Host Compatibility • IBM S/370, 303X, 4300

Control Units/Adapters • attaches to Davox 2000 controller via standard RG-62U coaxial cable; or via most standard, existing telephone wires through the Davoxnet interface.

Communications • 75 to 19.2K bps • asynchronous • RS-232C interface • SNA/SDLC/BSC • switchable among 3270, Async, PC modes

**Peripherals** • any standard serial printer • integrated featurephone on Model 2921 provides simultaneous data and voice communications

Other Features • IBM PC attachment, self-diagnostics upon power up.

**Price •** 2911—\$5,600 single-unit purchase price; 2921—\$5,700 single-unit purchase price.

**Maintenance/Cost** • depot repair: \$197/\$201 annually; depot replacement: \$313/\$319 annually; on-call: \$370/\$383 for Models 2911 and 2921, respectively.

Availability • 30 days ARO.

## ☐ Series 3900 Models 3911, 3921

Replaces • 3279 S2B color display station.

**Configuration** • single terminal attaching 1 printer.

Workstation/Terminal • 12-inch CRT; supporting 7 colors • 1920 characters @ 24 lines x 80 characters plus 25th and 26th status

lines  $\bullet$  96 EBCDIC characters displayed; optional 222 APL/Text character set  $\bullet$  24 program function keys.

Host Compatibility • IBM S/370, 303X, 4300.

**Control Units/Adapters** • attaches to Davox 2000 controller via standard RG-62U coaxial cable; or via most standard, existing telephone wires through the Davoxnet interface.

Communications • 75 to 19.2K bps • asynchronous • RS-232C interface • SNA/SDLC/BSC 8 switchable among 3270, Async, PC modes.

**Peripherals** • any standard serial printer • integrated feature-phone on Model 3921 provides simultaneous data and voice communications.

Other Features • IBM PC attachment, self-diagnostics upon power up.

**Price** • 3911—\$5,915 single-unit purchase price; 3921—\$6,015 single-unit purchase price.

Maintenance/Cost • depot repair: \$208/\$211 annually; depot replacement: \$331/\$336 annually; on-call: \$396/\$409 for Models 3911 and 3921, respectively.

Availability • 30 days ARO.

#### ☐ Series 1000 Cluster Controller

Replaces • 3274C Series.

**Configuration** • cluster controller supporting 8 peripherals; can be expanded to 32 peripherals.

Workstation/Terminal • attaches any of Davox's terminals.

Host Compatibility • IBM S/360, 370, 30XX, 4300.

Control Units/Adapters • coaxial cable.

**Communications** • up to 19.2K bps BSC; up to 56K bps SNA/SDLC.

**Peripherals** • attaches up to 32 terminals/printers in any combination.

Other Features • none.

**Price** • \$3,880 single-unit purchase price (8-channel capacity unit) • \$155 per month 2-year lease.

Maintenance/Cost • depot repair: \$162 annually; depot replacement: \$268 annually.

Availability • 30 days ARO.

## ☐ Series 5000 Controller

Replaces • 3274C

**Configuration** • dual-host cluster controller supporting 8 peripherals; can be expanded to 32 peripherals.

Workstation/Terminal • attaches any of Davox's terminals.

Host Compatibility • IBM S/360, 370, 30XX, 4300.

Control Units/Adapters • coaxial cable; 2200 expansion unit to expand each 8-peripheral cluster.

Communications • up to 19.2K bps BSC; up to 56K bps SNA/SDLC

**Peripherals** • attaches up to 32 terminals/printers in any combination of 8-unit clusters.

**Other Features** • IBM PC attachment sharing within clusters • terminal switchable dual-host addressing.

**Price** • \$11,225 single-unit purchase price • \$432 per month 2-year lease.

Maintenance/Cost • depot replacement: \$745 per year.

Availability • 30 days ARO.

#### ☐ Series 2000 Controller

Replaces • 3274C Series.

**Configuration** • cluster controller supporting 8 peripherals; can be expanded to 32 peripherals.

Workstation/Terminal • attaches any of Davox's terminals.

Host Compatibility • IBM S/360, 370, 30XX, 4300.

**Control Units/Adapters** • coaxial cable connected; Category A adapter.

**Communications** • up to 19.2K bps BSC; 56K bps SNA/SDLC.

**Peripherals** • attaches up to 32 terminals/peripherals in any combination of 8-unit clusters.

Other Features • IBM PC attachment sharing within cluster.

**Price** • \$5,950 single-unit purchase price (8-channel capacity unit) • \$210 per month 2-year lease.

Maintenance/Cost • depot repair: \$226 annually; depot replacement: \$382 annually; on-call: \$502 annually.

Availability • 30 days ARO.

#### ☐ Series 3000 Controller

Replaces • no comparable IBM unit.

**Configuration** • cluster controller attaches to Davox Series 1000 and 2000 controllers • contains 8 RS-232C DCE ports for attaching to individual asynchronous ASCII hosts.

Workstation/Terminal • same as Series 1000 and 2000.

Host Compatibility • any asynchronous ASCII host.

Control Units/Adapters • RS-232C DTE/DCE; up to 8 per controller.

**Communications** • 8 point-to-point links, each operating at 19.2K bps asynchronous.

Peripherals • none; attaches to Series 1000 and 2000 controllers.

Other Features • none.

Price • \$2,295 single-unit purchase • \$89 per month 2-year lease.

Maintenance/Cost • depot replacement: \$156 annually.

Availability • third quarter 1985.

## ■ INFORMER, INC

12781 Pala Drive, Garden Grove, CA 92641; 714-891-1112. Canadian Headquarters: Opus Computer Ltd; 102-11400 Bridgeport Road, Richmond, BC V6X 1T4; 604-278-4018.

## □ Models 201-178, 201-178/100, 201-178/100 212A

Replaces • 3278-2.

Configuration • single terminal attaching 1 printer.

**Workstation/Terminal** • executive-type 9-inch CRT • 1920 characters @ 24 lines x 80 characters; 25th status line • 96 ASCII/EBCDIC characters displayed • 24 program function keys • 3 program access keys • local print key.

Host Compatibility • IBM S/370, 4300, 303X.

**Control Units/Adapters •** supports Informer 274 and 276 cluster controller (IBM 3274 and 3276 emulation) • Type A adapter.

**Communications** • point-to-point/multipoint • up to 9600 bps • half-/full-duplex • BSC/SNA/SDLC.

Peripherals • attaches 1 RS-232C interfaced serial printer.

Other Features • dual-host emulation to IBM and DEC VT100 environments on Model 178/100 • dual-host emulation to IBM and DEC VT100 environments with integral 212A modem on Model 178/100 212A • executive-type woodgrain cabinet.

**Price** • 178—\$1,750; 178/100—\$2,550; 178/100 212A—\$2,550 single-unit purchase price.

Maintenance/Cost • vendor quote.

Availability • 30 days ARO.

#### □ Models 203-178, 203-178/100, 203-178/100 212A

Replaces • 3278-2.

Configuration • single terminal attaching 1 printer.

Workstation/Terminal • 9-inch CRT • 1920 characters @ 24 lines x 80 characters; 25th status line • 96 ASCII/EBCDIC characters displayed • 24 program function keys • 3 program access keys • local print key.

Host Compatibility • IBM S/370, 303X, 4300.

**Control Units/Adapters •** supports Informer 274 and 276 cluster controller (IBM 3274 and 3276 emulation) • Type A adapter.

**Communications** • point-to-point/multipoint • up to 9600 bps • half-/full-duplex • BSC/SNA/SDLC.

Peripherals • attaches 1 RS-232C interfaced serial printer.

Other Features  $\bullet$  dual-host emulation to IBM and DEC VT100 environments on Model 178/100  $\bullet$  dual-host emulation to IBM and DEC VT100 environments with integral 212A modem on Model 178/100 212A.

**Price** • 178—\$1,350; 178/100—\$1,550; 178/100 212A—\$2,150 single-unit purchase price.

Maintenance/Cost • vendor quote.

Availability • 30 days ARO.

## ☐ Models 203-276 & 203-276 201C

Replaces • 3276 BSC or SNA (single emulation).

**Configuration** • single terminal attaching 1 printer.

**Workstation/Terminal** • 9-inch CRT • 1920 characters @ 24 lines x 80 characters; 25th status line • 96 ASCII/EBCDIC characters displayed • 24 program function keys • 3 program local print keys.

Host Compatibility • IBM S/370, 303X, 4300.

Control Units/Adapters • IBM 3704, 3705, 3725 • Type A adapter.

**Communications** • point-to-point/multipoint • up to 9600 bps in either BSC or SNA protocols; up to 2400 bps with integral 201C modem • half-/full-duplex.

Peripherals • attaches 1 RS-232C interfaced serial printer.

Other Features • terminal is either equipped to accept BSC or SNA communications protocol • Models 201C are equipped with integral 201C modem.

**Price** • 376 (BSC) and 376 (SNA)—\$2,160 single-unit purchase price; 201C (BSC) and 201C (SNA/SDLC)—\$2,860 single-unit purchase price.

Maintenance/Cost • vendor quote.

Availability • 30 days ARO.

#### □ Models 205-178, 205-178/100, 205-178/100 212A

**Replaces** • 3278-2

**Configuration** • single terminal attaching 1 printer.

Workstation/Terminal • 12-inch CRT • 1920 characters @ 24 lines x 80 characters; 25th status line • 96 ASCII/EBCDIC characters displayed • 24 program function keys • 3 program access keys • local print key.

Host Compatibility • IBM S/370, 303X, 4300.

**Control Units/Adapters** • supports Informer 274 and 286 (IBM 3274 and 3276) • Type A adapter.

**Communications** • point-to-point/multipoint • up to 19.2K bps • half-/full-duplex • BSC/SNA/SDLC.

Peripherals • attaches 1 RS-232C interfaced serial printer.

Other Features • dual-host emulation to IBM 3278 and DEC VT100 environments on Model 178/100 • dual-host emulation to IBM 3278 and DEC VT100 environments with integral 212A modem on Model 178/100 212A.

**Price** • 205-178—\$1,350; 205-178/100—\$1,550; 205-178/100 212A—\$2,150 single-unit purchase price.

Maintenance/Cost • vendor quote.

Availability • 30 days ARO.

#### ☐ Models 205-376 & 203-276 201C

Replaces • 3276 BSC or SNA/SDLC (single emulation).

Configuration • single terminal attaching 1 printer.

Workstation/Terminal • 9-inch CRT • 1920 characters @ 24 lines x 80 characters; 25th status line • 96 ASCII/EBCDIC characters displayed • 24 program function keys • local print key.

Host Compatibility • IBM S/370, 303X, 4300.

Control Units/Adapters • IBM 3704, 3705, 3725 • Type A adapter.

**Communications** • point-to-point/multipoint • up to 9600 bps in either BSC or SNA protocols; up to 2400 bps with integral  $201C \mod e$  half-/full-duplex.

Peripherals • attaches 1 RS-232C interfaced serial printer.

Other Features • terminal is either equipped to accept BSC or SNA communications protocol • Models 201C are equipped with integral 201C modem.

**Price** • 203-276 (BSC) and 203-376 (SNA/SDLC)—\$2,160 single-unit purchase price; 203-276 201C (SNA/SDLC) and (BSC)—\$2,860 single-unit purchase price.

Maintenance/Cost • vendor quote.

Availability • 30 days ARO.

#### ☐ Models 207-376 & 207-376 201C

Replaces • 3276-2 and 12 BSC or SNA/SDLC single emulation.

Configuration • portable single terminal attaches 1 printer.

**Workstation/Terminal** • integral 9-inch CRT with flip-up keyboard • 1920 characters @ 24 lines x 80 characters; 25th status line • 96 ASCII/EBCDIC characters displayed • 24 program function keys • local print key.

Host Compatibility • IBM S/370, 303X, 4300.

Control Units/Adapters • IBM 3704, 3705, 3725 • Type A adapter.

**Communications** • point-to-point/multipoint • up to 9600 bps for both BSC and SNA/SDLC protocols; 2400 bps with integral 201C modem • half-/full-duplex.

Peripherals • attaches 1 RS-232C interfaced serial printer.

Other Features • terminal is either equipped to accept BSC or SNA/SDLC protocol • Model 201C equipped with integral 201C modem • unit is its own self-contained carrying case.

**Price** • 207-376 (BSC) and 207-376 (SNA/SDLC)—\$2,100 single-unit purchase price; 207-376 201C (BSC) and (SNA/SDLC)—\$2,800 single-unit purchase price.

Maintenance/Cost • vendor quote.

Availability • 30 days ARO.

## ☐ Model 274 & 276 Cluster Controller

**Replaces** • 3274 and 3276.

**Configuration**  $\bullet$  cluster controller supporting 4, 8, 16, or 32 terminals; up to 7 RS-232C serial ports for printer devices.

**Workstation/Terminal** • attaches any Informer terminal equipped with 178 option.

Host Compatibility • S/370, 303X, 4300.

Control Units/Adapters • IBM 3704, 3705, 3725, or equivalent.

**Communications** • BSC or SNA/SDLC protocols • supports transmission speed up to 9600 bps • half-/full-duplex.

**Peripherals** • fully configured will support 7 RS-232C serial devices.

Other Features • dial-up (remote) workstation connections; dial-up security option.

**Price** • 276 4-port—\$3,000; 276 8-port—\$4,000; 274 16-port—\$5,600; 274 32-port—\$6,400 single-unit purchase price.

Maintenance/Cost • vendor quote.

Availability • 30 days ARO.

#### ■ ITT COURIER

1515 West 14th Street, Tempe, AZ 85281; 602-275-7555; 800-528-1400 • Canadian Headquarters: ITT Courier; 6889 Rexwood Road, Units 8 & 9, Mississauga, ON L4V 1R2; 416-676-9930.

#### ☐ Model 7411/7412-A, -B, -C Local Controller

**Replaces** • 3274-31A (7411-A, -C), 3274-21B (7411-B), 3276.

**Configuration** • cluster controller supporting up to 32 terminals/printers.

Workstation/Terminal • Models 1700 and 2700 terminals.

Host Compatibility • IBM S/360/370, 300X, 4300, 308X.

**Control Units/Adapters •** IBM 270X, 3704, 3705, 3725 • Type A/B adapters.

Communications • up to 9600 bps • BSC, SNA/SDLC.

**Peripherals** • attaches from 8 to 32 terminals/printers; 1 terminal mandatory; 3 device adapters can be added for maximum configuration of 32.

Other Features • redundancy option included in 7412.

Price • contact vendor.

Maintenance/Cost • on-site, vendor-supplied maintenance.

Availability • 30 to 90 days ARO.

## ☐ Model 7601-0, -1, -16 Remote Controller

**Replaces** • 3276 Models 1, 2, 3, 4 (7601-0, 7601-16), 3276 Models 11, 12, 13, 14 (7601-1, 7601-16).

**Configuration** • terminal-controller supporting up to 16 terminals/printers.

Workstation/Terminal • same as 7411/7412.

Host Compatibility • IBM S/360/370, 300X, 4300, 308X.

Control Units/Adapters • IBM 270X, 3704, 3705, 3725 • Type A/B adapters.

**Communications** • up to 9600 bps • BSC, SNA/SDLC.

**Peripherals**  $\bullet$  attaches up to 16 terminals/printers; 1 terminal mandatory.

Other Features • supports subset of APL/TEXT Data Stream, builtin Datascope, all field upgradable.

Price • \$7,950 single-unit purchase price (7601-16).

Maintenance/Cost • on-site, vendor-supplied maintenance.

Availability • 30 to 90 days ARO.

#### ☐ Models 9440, 9442 Local Cluster Controllers

Replaces • 3274A

**Configuration** • floor-console cluster controller supporting 11 to 32 terminals/printers; device expansion adapter accommodates 7 terminals/printers.

**Workstation/Terminal** • ITT Courier 270 display terminals (no longer being manufactured, but are still supported) and 9000 series terminals Models 9230, 9236, and 1900.

Host Compatibility • IBM S/360, S/370, 30XX, 43XX.

Control Units/Adapters • byte, selector, or block-multiplexer processor channel • Type A adapter.

Communications • point-to-point/multipoint • 1200 to 19.2K bps SNA/SDLC; up to 9600 bps BSC; CCITT X.25 optional • half-full-duplex

Other Features  $\bullet$  IBM PC attachment features or may attach the ITT Courier XTRA.

**Price** • Model 9440—\$10,700; Model 9442—\$21,200 • 2/3/5-year leases available.

**Maintenance/Cost** • monthly maintenance charge for 9440 and 9442—\$43 and \$49, respectively.

Availability • 30 to 90 days ARO.

 Models 9410, 9416, 9420, 9422 Remote Cluster Controllers

Replaces • 3274C.

**Configuration** • tabletop and floor-console cluster controllers supporting 8, 11, 16, and 32 terminals/printers; device expansion adapter accommodates 7 terminals/printers.

**Workstation/Terminal** • ITT Courier 270 display terminals (no longer being manufactured, but are still supported) and 9000 Series terminals Models 9230, 9236, and 1900.

Host Compatibility • IBM S/360, S/370, 43XX, 30XX.

Control Units/Adapters • 3704/3705/3725 • Type A adapter.

**Communications** • point-to-point/multipoint • 1200 to 19.2K bps SNA/SDLC; up to 9600 bps BSC • half-/full-duplex.

**Peripherals** • device expansion adapter accommodates 7 terminals/printers.

Other Features • IBM PC attachment feature or may attach the ITT Courier XTRA.

**Price** • 9410 8-port nonexpandable—\$4,400; 9416 16-port nonexpandable—\$5,100; 9420 11-port expandable to 32; 9422 11-port expandable to 32 includes redundant control logic and power supplies—\$10,950 single-unit purchase price • 2/3/5-year leases available.

Maintenance/Cost • monthly maintenance charge for 9410, 9416, 9420, and 9422—\$25, \$40, \$29, and \$34, respectively.

Availability • 30 to 90 days ARO.

## ☐ Model 1900 Color Display Terminal

Replaces • 3179-S2B.

Configuration • single terminal.

Workstation/Terminal • 14-inch CRT • 1920 characters @ 24 lines x 80 characters; 25th status line • 96 EBCDIC/ASCII; EBCDIC/APL characters displayed • typewriter, data entry, typewriter/text, and typewriter/APL keyboards • optional numeric keypad, 24 program function keypad.

Host Compatibility • IBM S/360, 370, 303X, 4300.

Control Units/Adapters • supports Models 9410, 9416, 9420, 9422 • Type A adapter.

 $\begin{array}{lll} \textbf{Communications} \bullet \text{via controller point-to-point/multipoint} \bullet 1200 \\ \text{to} & 19.2 \text{K} & \text{bps SNA/SDLC; up to 9600 bps BSC; CCITT X.25} \\ \text{optional} \bullet & \text{half-/full-duplex.} \end{array}$ 

Peripherals • cluster printers via controller.

Other Features • displays 7 colors.

Price • \$1,900 single-unit purchase price; 2/3/5-year leases available

**Maintenance/Cost** • vendor quote on-site, vendor-supplied maintenance; mail-/carry-in service available.

Availability • 30 to 90 days ARO.

### ☐ Model 9230 Display Terminal

Replaces • 3180 Model 1 and 3278 Models 2 through 5.

Configuration • single terminal attaching 1 printer.

Workstation/Terminal • 15-inch CRT • 1920/2560/3440/3564 characters @ 24x80, 32x80, 43x80, and 27x132 characters/line format plus status line • 96 ASCII/EBCDIC characters; APL character set display • typewriter-style, data entry typewriter/text, or typewriter/APL keyboards • optional numeric keypad, 24 program function keys.

Host Compatibility • IBM S/360, 370, 43XX.

Control Units/Adapters • supports Model 9410, 9416, 9420, 9422 controllers • Type A adapter.

**Communications** • via controller point-to-point/multipoint • 1200 to 19.2K bps SNA/SDLC; up to 9600 bps BSC; CCITT X.25 optional • half-/full-duplex.

Peripherals • supports matrix printer or cluster-controlled printer.

Other Features • none.

**Price** • \$2,180 single-unit purchase price • 2/3/5-year leases available.

**Maintenance/Cost** • \$10 per month maintenance charge for on-site service • other service contracts available.

Availability • 30 to 90 days ARO.

#### ☐ Model 9236 Color Display Terminal

Replaces • 3179 and 3279 Models S2B and S3G.

**Configuration** • single terminal attaching 1 printer.

Workstation/Terminal • 14-inch CRT • 1920/2560 characters @ 24x80 or 32x80 characters/line format; plus status line • 96 EBCDIC/ASCII characters; APL characters displayed • typewriter-style, data entry, typewriter/text, or typewriter/APL keyboards • optional numeric keypad, 24 program function keys.

**Host Compatibility • IBM S/360, 370, 43XX controllers (IBM 3274 replacement).** 

Control Units/Adapters • supports Model 9410, 9416, 9420, 9422 controllers • Type A adapter.

 $\begin{array}{lll} \textbf{Communications} \bullet \text{via controller point-to-point/multipoint} \bullet 1200 \\ \text{to} & 19.2 \text{K} & \text{bps SNA/SDLC; up to 9600 bps BSC; CCITT X.25} \\ \text{optional} \bullet & \text{half-/full-duplex.} \end{array}$ 

**Peripherals** • supports matrix printer or cluster-controlled printer.

**Other Features** • 7-color and graphics presentation.

**Price** • \$3,600 single-unit purchase price • 2/3/5-year leases available.

**Maintenance/Cost** • \$14 per month maintenance charge for on-site service • other service contracts available.

Availability • 30 to 90 days ARO.

### ■ LEE DATA CORPORATION

10206 Crosstown Circle, Minneapolis, MN 55344; 612-828-0300 • Canadian Headquarters: Lee Data Canada; Huntley Square, 7181 Woodbine Avenue, Markham, ON L3R 1A3; 416-477-8585.

#### ☐ Model 1221/All-In-One Display

**Replaces** • 3278-2, -3, -4, -5.

**Configuration** • single terminal attaches 1 peripheral.

Workstation/Terminal • 15-inch CRT • 1920 characters @ 24 lines x 80 characters • 2560 characters @ 32 lines x 80 characters • 3440 characters @ 43 lines x 80 characters • 3564 characters @ 27 lines x 132 characters • 75/87 EBCDIC characters displayed; APL and PC keyboards also available.

**Host Compatibility** • IBM S/360, 370, 3030, 3081, 4300, and 3790 Communications Systems.

**Control Units/Adapters** • attaches to Lee Data 300 and 400 Cluster Controllers (IBM 3274 replacement) • Type A adapter.

**Communications** • up to 19.2K bps • asynchronous/synchronous • multipoint polling/addressing • BSC/SNA/SDLC • RS-232C interface.

Peripherals • attaches 1 printer.

Other Features • provides features of 4 IBM 3278 Display Stations in 1 physical unit, tilt-and-swivel display, detachable keyboard.

**Price** • \$1,650 single-unit purchase price; \$57 per month 3-year lease; lease price includes maintenance.

**Maintenance/Cost •** on-site, vendor-supplied maintenance \$9 per month; and third-party maintenance.

Availability • quoted.

#### ☐ Model 1214 Display Terminal

Replaces • 3178.

**Configuration** • single terminal attaches 1 peripheral.

Workstation/Terminal • 14-inch CRT • 1920 characters @ 24 lines x 80 characters • 94 ASCII characters displayed.

Host Compatibility • same as Model 1221.

Control Units/Adapters • same as Model 1221.

Communications • same as Model 1221.

Peripherals • can be enhanced to operate as a personal computer.

Other Features • tilt-and-swivel display, detachable keyboard • available with various screen formats, same as the 1221.

**Price** • \$1,146 single-unit purchase price • \$39 per month 3-year lease; 1- to 5-year leases available.

**Maintenance/Cost** • on-site, vendor-supplied maintenance \$8 per month; and third-party maintenance.

Availability • quoted.

## ☐ Model 1230/31 Color Display Terminal

Replaces • 3279-2A, -3A.

Configuration • single terminal attaches 1 peripheral.

Workstation/Terminal • 15-inch CRT • 1920 characters @ 24 lines x 80 characters; 2560 characters @ 32 lines x 80 characters • 75/87 EBCDIC characters displayed • 12 and 24 program function keys • APL keyboard • generates 4 colors (red, blue, green, and white).

Host Compatibility • same as Model 1221.

Control Units/Adapters • same as Model 1221.

Communications • same as Model 1221.

Peripherals • same as Model 1221.

Other Features • tilt-and-swivel display, detachable keyboard, antiglare screen, flicker free.

**Price** • \$1,879/\$2,199 single-unit purchase price (1230/1231) • \$53/\$63 per month 3-year lease (1230/1231); lease prices include maintenance.

**Maintenance/Cost** • on-site, vendor-supplied maintenance \$9/\$11 per month; and third-party maintenance.

Availability • quoted.

### ☐ Model 2130 Color Display Terminal

Replaces • 3279-S2A.

**Configuration** • single terminal attaches 1 peripheral.

Workstation/Terminal • 14-inch color CRT • 1920 characters @ 24 lines x 80 characters; 2560 characters @ 32 lines x 80 characters; 3440 characters @ 43 lines x 80 characters; 3564 characters @ 27 lines x 132 characters • 75/87 EBCDIC characters displayed; APL and PC keyboards also available.

Host Compatibility • same as Model 1221.

Control Units/Adapters • same as Model 1221.

Communications • same as Model 1221.

Peripherals • same as Model 1221.

**Other Features** • displays 7 colors; tilt-and-swivel display; detachable keyboard.

**Price** • \$1,650 single-unit purchase price; \$57 per month 3-year lease; lease price includes maintenance.

Maintenance/Cost • on-site, vendor-supplied maintenance \$9 per month; and third-party maintenance.

Availability • quoted.

## ☐ Model 306/308 Remote Controller

Replaces • 3274-51C (306); 3274-61C (308).

**Configuration** • cluster system supporting up to 8/16 (306/308) peripherals in any combination of printers or workstations.

**Workstation/Terminal** • same as Models 1216, 1218, 1220, 1230/1231.

**Host Compatibility**  $\bullet$  IBM S/360, 370, 3030, 3081, 4300, and 3790 Communications Systems.

Control Units/Adapters • IBM 3704/3705.

Communications • up to 9600 bps • BSC/SNA/SDLC.

**Peripherals** • attaches up to 8/16 (306/308) workstations/printers in any combination.

Other Features • coaxial eliminator; vendor offers 50-, 180-, 340-cps printers.

**Price** • \$3,720/\$6,960 single-unit purchase price (306/308) • \$128/\$240 per month 3-year lease; lease price includes maintenance.

**Maintenance/Cost** • on-site, vendor-supplied maintenance \$30/\$35 per month (306/308); and third-party maintenance.

Availability • quoted.

## ☐ Models 310/410 Remote Cluster Controllers

Replaces • 3274-1C, 21C, 31C.

**Configuration** • tabletop cluster system supporting up to 32 BSC/SDLC workstations/printers in any combination.

**Workstation/Terminal** • same as Models 1214, 1221, 1230/1231, 2130.

Host Compatibility • IBM S/360, 370, 303X, 4300.

Control Units/Adapters • same as Models 306/308.

Communications • same as Model 1221.

**Peripherals** • attaches up to 32 workstations/printers in any combination.

Other Features • coaxial eliminator; Model 410 also emulates up to 16 ASCII/TTY asynchronous terminals.

**Price** • \$11,764/\$11,856 single-unit purchase price (310/410) • \$406/\$408 per month 3-year lease; lease prices include maintenance

**Maintenance/Cost** • on-site, vendor-supplied maintenance \$60/\$95 per month (310/410); and third-party maintenance.

Availability • quoted.

## ☐ Model 311 Dual-Host Controller

**Replaces**  $\bullet$  no comparable IBM product; designed for 3270-type environments using 3274B and C controllers.

**Configuration** • floorstanding cluster system supporting 16 3270-type devices; addresses dual IBM hosts.

Workstation/Terminal • supports Models 1214, 1221, 1230/1231, 2130.

Host Compatibility • IBM S/360, 370, 303X, 4300.

Control Units/Adapters • same as Models 306/308.

Communications • up to 9600 bps • BSC/SNA/SDLC.

**Peripherals**  $\bullet$  attaches up to 16 workstations/printers in any combination.

Other Features • can interface with 2 IBM host processors.

**Price** • \$14,542 single-unit purchase price • \$501 per month 3-year lease; lease price includes maintenance.

**Maintenance/Cost** • on-site, vendor-supplied maintenance \$70 per month; third-party maintenance available.

Availability • quoted.

### ☐ Models 320/420 Local Cluster Controller

**Replaces** • 3274-1, -21, -31 Models A, B, D.

**Configuration** • floorstanding cluster system supporting up to 32 BSC/SDLC workstations/printers.

**Workstation/Terminal** • will support 1214, 1221, 1230/1231, 2130.

**Host Compatibility** • IBM S/360, S/370, 303X directly via byte, selector, or block multiplexer channels.

Control Units/Adapters • same as Models 306/308.

Communications • same as Model 1221.

Peripherals • same as Models 310/410.

**Other Features** • coaxial eliminator • Model 310 also emulates up to 16 ASCII/TTY asynchronous terminals.

**Price** • \$14,056/\$15,616 single-unit purchase price (320/420) • \$485/\$538 per month 3-year lease; lease price includes maintenance

**Maintenance/Cost •** on-site, vendor-supplied maintenance \$65/\$105 per month; and third-party maintenance.

Availability • quoted.

## ☐ Models 321/421 Local/Remote Cluster Controllers

Replaces • 3274-1A, B, C, D, -21A, C, -31A, C

 ${\bf Configuration} \bullet {\it floorstanding cluster system supporting up to 32 BSC/SDLC workstations/printers in any combination. }$ 

Workstation/Terminal • same as 1214, 1221, 1230/1231, 2130.

Host Compatibility • same as Models 320/420.

Control Units/Adapters • same as Models 306/308.

Communications • same as Model 1221.

Peripherals • same as Models 310/410.

Other Features • both units allow connection to local and remote hosts with concurrent operation • coaxial eliminator • Model 421 also emulates 16 ASCII asynchronous terminals.

**Price** • \$16,556/\$17,571 single-unit purchase price (321/421) • \$571/\$606 per month 1-year lease; lease prices include maintenance

Maintenance/Cost • on-site, vendor-supplied maintenance \$89/\$125 per month; and third-party maintenance.

Availability • quoted.

#### MDS/A Mohawk Data Science Company

7 Century Drive, Parsippany, NJ 07054; 201-540-9081 • Canadian Headquarters: MDS Canada; 235 Hood Road, Markham, ON L3R 4N5; 416-475-6060.

## ☐ MDS 9174 Remote Controller

Replaces • 3274 and 3276.

**Configuration** • tabletop remote controller supporting up to 32 terminals/printers; increments of 8 units per cluster.

**Workstation/Terminal** • supports any combination of either MDS 9178 terminals, IBM 3278/3178 terminals, and serial printers.

Host Compatibility • IBM S/370, 303X, 4300.

Control Units/Adapters • IBM 3704, 3705, 3725 controllers • Type A adapter • IBM 3299 coax cable multiplexer.

 $\begin{array}{lll} \textbf{Communications} \bullet \text{ point-to-point/multipoint} \bullet \text{ up to 9600 bps} \\ \bullet \text{BSC/SNA/SDLC} \bullet \text{half-/full-duplex}. \end{array}$ 

**Peripherals** • supports same peripherals as 3274 and 3276 devices.

Other Features • support of MDS 9098/9 Coax Cable multiplexer; optional switch control unit.

**Price** • \$5,349—single-unit 8-port device • \$124 per month 4-year lease.

Maintenance/Cost • \$38 per month on-site maintenance.

Availability • 30 to 45 days ARO.

#### ☐ MDS 9274-4A Local Controller

**Replaces** • 4274-41 A.

**Configuration** • floor-type local cluster controller supporting up to 32 devices in 8-unit increments.

**Workstation/Terminal** • supports any combination of either MDS 9178 terminals, IBM 3278/3178 terminals, and serial printers; will also support other 3270 plug-compatible devices.

Host Compatibility • IBM S/370, 303X, 4300

**Control Units/Adapters** • IBM 3704, 3705, 3725 controller • Type A adapter • IBM 3299 coax cable multiplexer.

**Communications** • up to 9600 bps • BSC/SNA/SDLC • half-full-duplex.

Peripherals • support same peripherals as IBM replaced units.

Other Features • Local Control Point (LCP) Menus, offer a variety of systems functions including summaries, enhanced configuration control, line monitoring, and performance monitoring.

**Price** • \$16,407 single-unit purchase price • \$410 per month 4-year lease.

Maintenance/Cost • \$58 per month on-site maintenance.

Availability • 30 to 45 days ARO.

#### ☐ MDS 9178 Display Station

Replaces • 3278/3178.

Configuration • single terminal.

Workstation/Terminal • 12- or 14-inch CRT • 1920 characters @ 24 lines x 80 characters • 96 EBCDIC/ASCII characters displayed • data entry or typewriter-style keyboard with program function keys and separate numeric keypad.

Host Compatibility • IBM S/370, 303X, 4300.

**Control Units/Adapters** • attaches to MDS 9174/9174-4A controllers • Type A adapter.

Communications • point-to-point/multipoint • up to 9600 bps • BSC/SNA/SDLC • half-/full-duplex.

**Peripherals** • peripherals are supported by controller.

Other Features • none.

Price • \$1,495 single-unit purchase price • \$38 per month lease.

**Maintenance/Cost** • \$10 per month on-site maintenance.

Availability • 30 to 45 days ARO.

#### ■ MEGADATA CORP

35 Orville Drive, Bohemia, NY 11716; 516-589-6800 ◆ Canadian Headquarters: none.

#### ☐ Megadata 8188-7 Terminal

Replaces • 3271, 3275, 3277.

**Configuration** • single terminal; integral controller; attaches 1 printer.

**Workstation/Terminal** • 15-inch CRT • 1920 characters @ 24 lines x 80 characters; 25th status line • 256 or 512 ASCII characters displayed.

Host Compatibility • IBM S/360, 370, 3030, 3081, 4300, 8100, and S/3.

**Control Units/Adapters** • integral Megadata controller interfaces with host.

**Communications** • point-to-point/multipoint • up to 19.2K bps • half-/full-duplex • BSC.

Peripherals • any RS-232C device.

Other Features • green, red, or amber phosphor CRT • all workstations' characteristics soft-loaded.

**Price** • varies with controller and options.

**Maintenance/Cost**  $\bullet$  on-site, third-party maintenance  $\bullet$  billed at 1 percent month of purchase price.

Availability • 120 days ARO.

#### **■ MEMOREX COMMUNICATIONS GROUP**

18922 Forge Drive, Cupertino, CA 95014; 408-996-9000 • Canadian Headquarters: Memorex Canada Ltd; 7050 Woodbine Avenue, Markham, ON L3R 4G8; 416-474-0100.

## ☐ Model 2076-4 Remote Cluster Controller

Replaces • 3276-1 through -4 controller only.

**Configuration •** cluster controller supporting up to 8 peripherals.

**Workstation/Terminal •** no workstation included; supports 3278 terminals.

Host Compatibility • IBM S/360, 370, 3030, 3081, 8100, 43XX; comparable Amdahl processor.

Control Units/Adapters • 2701, 2703, 3704, 3705 • Type A adapters.

**Communications** • point-to-point/multipoint • up to 9600 bps • half-/full-duplex • BSC.

**Peripherals** • supports same peripherals as 3276 controller replaced.

Other Features • none.

Price • \$3,595 list price; \$105 per month 2-year lease.

**Maintenance/Cost** • on-site, vendor-supplied maintenance \$33 per month.

Availability • 30 to 90 days ARO.

#### ☐ Model 2078 Model 1 Through 5 Display Stations

Replaces • all models 3278.

**Configuration** • single terminal attaching 1 peripheral.

Workstation/Terminal • 15-inch CRT • 960 characters @ 12 lines x 80 characters; 1920 characters @ 24 lines x 80 characters; 2560 characters @ 32 lines x 80 characters; 3440 characters @ 43 lines x 80 characters; 3564 characters @ 27 lines x 132 characters • 94 EBCDIC characters displayed; ASCII optional • 12 or 24 program function keys.

Host Compatibility • S/370, 303X, 4300.

**Control Units/Adapters** • attaches to IBM 3274/3276 cluster controller • Type A adapters.

Communications • up to 9600 bps.

Peripherals • attaches 1 light pen.

Other Features • line and column indicator; unprotected field indication; automatic display dimming; extended highlighting; APL/text capability; tiltable, nonglare screen.

Price • \$2,030 Model 1 purchase price • \$1,824 to \$2,295 Model 2 purchase price • \$2,685 Model 3 purchase price • \$2,790 Model 4 purchase price • \$3,145 Model 5 purchase price • no lease offered.

Maintenance/Cost • on-site, vendor-supplied maintenance \$18 per month.

Availability • 30 to 90 days ARO.

 Memorex 2079 Color Display Station Models S2A, S2B, S3G, 2X & 3X

Replaces • 3279-2A, -2B, -3A, -3B.

**Configuration** • single terminal attaching 1 peripheral.

Workstation/Terminal • 15-inch CRT • 1920 characters @ 24 lines x 80 characters; 2560 characters @ 32 lines x 80 characters • 94 EBCDIC characters displayed; ASCII, APL/X optional • 12 or 24 program function keys • generates 4 or 7 colors.

**Host Compatibility** • S/360, 370, 3030, 3081, 4300, 43XX, 8100, and Amdahl.

Control Units/Adapters • attaches to 3274 or 3276 • Type A adapter.

Communications • same as IBM 3274/3276.

Peripherals • 1 light pen • alternate coaxial switch • extended keyboard cable • security key lock • inhibit numeric keyboard lock

Other Features • line and column indicator unprotected field indication; automatic display dimming; tiltable, nonglare screen; extended highlighting; APL/text capability; graphics; keyboard numeric lock, field, underscore, block, blink.

**Price** • \$5,726 list price Model S3G, 7 colors, 2560 characters, graphics, APL/text, extended highlighting, choice of 3 selectable keyboards; lease available; contact vendor.

**Maintenance/Cost** • on-site, vendor-supplied maintenance; contact vendor.

Availability • 30 to 90 days ARO.

☐ Model 2178 Display Station

Replaces • 3178.

Configuration • single terminal attaching 1 printer.

Workstation/Terminal • 12-inch CRT • 1920 characters @ 24 lines x 80 characters • 96 EBCDIC/ASCII characters displayed • data entry, typewriter, and typewriter with 10-key numeric pad keyboards.

Host Compatibility • S/370, 303X, 308X, 43XX, and 8100.

**Control Units/Adapters** • attaches to Memorex 2074 and 2076 Cluster Controllers; or IBM 3274 and 3276 • Type A adapter.

Communications • up to 9600 bps • BSC/SNA/SDLC.

Peripherals • supports 1 local printer attachment.

Other Features • tilt/swivel monitor cabinet.

**Price**  $\bullet$  \$1,485 single-unit purchase price; no lease agreements available.

 ${f Maintenance/Cost}$  • no maintenance plans available for this product.

Availability • 30 to 90 days ARO.

## ■ NCR CORPORATION

1700 South Patterson Boulevard, Building 206, Dayton, OH 45479; 513-445-4180 • Canadian Headquarters: NCR Canada Ltd; 6865 Century Avenue, Mississauga, ON L5N 2E2; 416-826-9000.

## □ NCR 2950 Terminal-Controller

Replaces • 3275.

Configuration • up to 32 terminals.

Workstation/Terminal • 12- or 15-inch CRT • 1920 characters @ 24 lines x 80 characters plus 25th status line • 128 EBCDIC characters displayed • 24 program function keys; 3 program access keys.

Host Compatibility • NCR or IBM S/370, 303X, 4300.

Control Units/Adapters • 721, Comten 36X0, IBM 3705.

Communications • multipoint up to 48K bps • half-duplex • BSC • RS-232C interface.

 $\begin{tabular}{ll} \textbf{Peripherals} \bullet \textbf{OCR} wand reader, digital cassette, receipt/journal/forms/line printers. \end{tabular}$ 

Other Features • time-of-day clock, cash drawer, workstand.

**Price** • \$8,365 single-unit, display station, 2M-byte floppy disks, 128K-byte RAM, and slip/receipt/journal printers.

Maintenance/Cost • on-site, vendor-supplied maintenance.

Availability • quoted.

#### □ NCR 7950 Terminal-Controller

Replaces • 3274-C models.

Configuration • up to 32 terminals.

Workstation/Terminal • 12- or 15-inch CRT • 1920 characters @ 24 lines x 80 characters plus 25th status line • 128 EBCDIC characters displayed • 24 program function keys; 3 program access keys.

Host Compatibility • NCR or IBM S/370 or 43XX.

Control Units/Adapters • 721, Comten 36X0, IBM 3705.

 $\begin{array}{lll} \textbf{Communications} \bullet \text{ point-to-point/multipoint} \bullet \text{ up to 9600 bps} \\ \bullet \text{ half-/full-duplex} \bullet \text{SNA/SDLC}. \end{array}$ 

Peripherals • NCR 7958 and 7959 terminals; Model 7957.

Other Features • none.

**Price** • \$6,000 single-unit purchase price; supports 16 terminals/printers • \$300 per month for 1-year lease.

Maintenance/Cost • on-site, vendor-supplied maintenance \$32 per month.

Availability • quoted.

#### ☐ Model 7958 Workstation

Replaces • 3278-2, -3, and -5; IBM 3180 Model 1.

Configuration • single terminal.

Workstation/Terminal • 15-inch CRT • 3564 characters @ 27 lines x 132 characters (Model 5); 2560 characters @ 32 lines x 80 characters (Model 3); 1920 characters @ 24 lines x 80 characters (Model 2) • 96 EBCDIC or ASCII characters • 22 program function keys.

Host Compatibility • IBM S/370, 303X, 4300.

**Control Units/Adapters •** supports NCR 7950 cluster controller (IBM 3274 equivalent) • Type A adapter.

 $\begin{array}{ll} \textbf{Communications} \bullet \text{ point-to-point or multipoint up to 9600 bps} \\ \bullet \text{ half-/full-duplex} \bullet \text{SNA/SDLC}. \end{array}$ 

**Peripherals** • system printer via cluster controller.

Other Features • none.

**Price** • \$1,395 (Model 2); \$1,795 (Model 3); \$2,095 (Model 5) • \$80 per month (Model 2), \$98 per month (Model 3), \$117 per month (Model 5)—all 1-year leases.

**Maintenance/Cost** • on-site, vendor-supplied service \$14 (Model 2), \$15 (Model 3), \$18 (Model 5) monthly.

**Availability •** quoted.

## ☐ Model 7959 Color Workstation

Replaces • 3279-S2B; 3179.

Configuration • single terminal.

**Workstation/Terminal** • 14-inch CRT • 1920-character @ 24-line x 80-character format • 96 ASCII or EBCDIC characters • 22 program function keys.

Host Compatibility • IBM S/370, 303X, 4300.

Control Units/Adapters • same as Model 7958.

Communications • same as Model 7958.

Peripherals • same as Model 7958.

Other Features • none.

**Price** • \$3,350 single-unit purchase price • \$162 per month for 1-year lease.

Maintenance/Cost • on-site, vendor-supplied service \$162 per month.

Availability • quoted.

# ■ NORTHERN TELECOM INC, ELECTRONIC OFFICE SYSTEMS

Data Park, Minnetonka, MN 55343; 612-932-8000 • Canadian Headquarters: Northern Telecom; 33 City Centre Drive, Mississauga, ON L5A 3A2; 416-275-0960.

#### ☐ Model 296C Terminal-Cluster System

Replaces • 3276-2/3/4/12/13.

**Configuration** • standalone terminal-cluster system supporting up to 8 peripherals.

Workstation/Terminal • 15-inch CRT • 1920 characters @ 24 lines x 80 characters; 2560 characters @ 32 lines x 80 characters; 3440 characters @ 43 lines x 80 characters • 94 ASCII/EBCDIC characters displayed • 12 or 24 program function keys • emulates all keyboard/display functions of 3278-2, -3, -4.

Host Compatibility • IBM S/370, 4300, 8100, 3790.

Control Units/Adapters • 2701, 2703, 3704, 3705 • Type A adapters.

Communications • point-to-point/multipoint • 1200 to 9600 bps • half-duplex • BSC/SDLC.

Peripherals • attaches 8 Model 298E workstations or printers • 1 workstation minimum; maximum of 7 printers • emulates 3278 terminal and 3287 printers • vendor offers 72- and 180-cps matrix printers, line printer, 300-lpm printer, and desktop matrix printer • terminal attaches light pen, wand, badge reader.

 $\begin{tabular}{ll} \textbf{Other Features} \bullet \textbf{ allows activating/deactivating logic units from remote sites.} \end{tabular}$ 

Price • \$3,200 purchase price • leases offered on vendor quote.

Maintenance/Cost • on-site, vendor-supplied maintenance available on vendor quote.

Availability • 45 days ARO.

### ☐ Model 298E Display Station

Replaces • 3278-2/3/4/5

**Configuration** • single terminal attaching 1 peripheral.

Workstation/Terminal • 15-inch CRT • 1920 characters @ 24 lines x 80 characters (298E-2); 2560 characters @ 32 lines x 80 characters (298E-3); 3440 characters @ 43 lines x 80 characters (298E-4); 3564 characters @ 27 lines x 132 characters (298E-5) • 94 EBCDIC/ASCII characters displayed • 12 or 24 program function keys.

Host Compatibility • IBM S/370, 4300, 8100, 3790.

**Control Units/Adapters** • attaches to 294C/296 cluster controller • Type A adapter.

Communications • point-to-point/multipoint • 1200 to 9600 bps • half-duplex • BSC/SNA/SDLC.

Peripherals • attaches light pen, wand, badge reader.

**Other Features** • emulates all keyboard/display functions of 3278-2 through -5.

**Price** • 298E-2—\$1,300; 298E-3—\$1,790; 298E—\$1,920; 298E-5—\$2,130 single-unit purchase price • monthly leases offered on vendor quote.

Maintenance/Cost • on-site, vendor-supplied service; price on quote.

Availability • 45 days ARO.

### ☐ Model 294C Local Cluster Controller

**Replaces** • 3274-21C, -31C.

**Configuration** • standalone cluster controller supporting up to 32 peripherals.

**Workstation/Terminal** • supports Model 298E displays, Models-2/3/4/5.

Host Compatibility • IBM S/370, 4300, 8100, and 3790.

Control Units/Adapters • 2701, 2703, 3704, 3705 • Type A/B adapter.

Communications • point-to-point/multipoint • 1200 to 9600 bps • half-duplex • BSC/SDLC.

**Peripherals** • attaches up to 32 Model 298E workstations or printers • emulates 3278 terminals and 3287 printers • vendor offers 72- and 180-cps matrix printers, line printer, 300-lpm printer, and desktop matrix printer • terminal attaches light pen, wand, badge reader.

Other Features • allows activating/deactivating logic units from remote site.

**Price** • \$6,925 single-unit purchase price • leases offered on vendor quote.

Maintenance/Cost • on-site, vendor-supplied service; price on quote

Availability • 45 days ARO.

#### ☐ Model 294-51C Remote Cluster System

Replaces • 3274-51C; 3278-2 through -5; 3289.

Configuration • cluster controller attaching up to 12 peripherals.

**Workstation/Terminal** • supports Model 298E displays, Models-2/3/4/5.

Host Compatibility • IBM S/370, 4300, 8100, and 3790.

Control Units/Adapters • 2701, 2703, 3704, 3705 • Type A adapter.

**Communications** • point-to-point/multipoint • 1200 to 9600 bps • half-/full-duplex • BSC/SDLC.

**Peripherals** • controller attaches up to 12 Model 298Es or 11 printers • printer available consists of 72- or 180-cps matrix printers, 300-lpm line printer, letter-quality printer, or desktop matrix printer; printers emulate 3287/3289 • terminal attaches light pen, wand, badge reader.

Other Features • allows activating/deactivating logic units from remote sites.

**Price** • \$4,250 single-unit purchase price • lease is available on vendor quote.

**Maintenance/Cost** • on-site, vendor-supplied service; price quoted.

Availability • 45 days ARO.

### ■ PARADYNE CORPORATION

P.O. Box 1347, 8550 Ulmerton Road, Largo, FL 33540; 813-530-2000 • Canadian Headquarters: Paradyne Canada Ltd; 200 Consumers Road, Suite 504, Willowdale, ON K1P 5H9; 613-230-7060.

### □ PDS 270 Models 9476/9478 Terminal-Cluster

Replaces • 3276-2/3278-2.

 ${\bf Configuration} \ \, {\bf \bullet} \ \, {\bf display-cluster} \ \, {\bf system}; \ \, {\bf cluster} \ \, {\bf interfaces} \ \, {\bf up} \ \, {\bf to} \ \, 7 \ \, {\bf peripherals}.$ 

Workstation/Terminal • 15-inch CRT • 1920 characters @ 24 lines x 80 characters plus 25th status line • ASCII/EBCDIC characters • 24 program function keys; 2 program access keys.

Host Compatibility • IBM S/360, 370, 3030, 3081, 4300, 8100, and S/3.

Control Units/Adapters • 2701, 2703, 3704, 3705 • Type A adapter.

 $\begin{tabular}{ll} \textbf{Communications} \bullet point-to-point/multipoint} \bullet up to 56K bps \bullet half-/full-duplex \bullet SDLC (BSC optional). \end{tabular}$ 

**Peripherals** • attaches up to 7 workstations/printers in any combination.

Other Features • operates in local loops • tiltable CRT.

Price • \$3,450 Model 9476 purchase price • \$1,575 Model 9478 purchase price.

Maintenance/Cost • on-site, vendor-supplied maintenance \$28 per month 9478; \$17 per month 9476.

Availability • 30 to 45 days ARO.

### **■ TELEX TERMINAL COMMUNICATIONS**

6422 East 41st Street, Tulsa, OK 74135; 918-627-1111 • Canadian Headquarters: Tulsa Computer Products; 332 Consumers Road, Willowdale, ON M2J 1P8; 416-494-4444.

#### ☐ Model TC279 Color Keyboard-Display Station

Replaces • 3279-2A/B and -3A/B.

**Configuration** • single terminal attaching 1 peripheral.

Workstation/Terminal • 14-inch CRT • 1920 characters @ 24 lines x 80 characters; 2560 characters @ 32 lines x 80 characters; 3440 characters @ 43 lines x 80 characters • 96 ASCII/EBCDIC characters displayed • 4 colors (white, red, blue, and green) • 12 or 24 program function keys • emulates all 3279 keyboard functions.

**Host Compatibility** • Telex 174/276 or IBM 3274/3276 controllers.

Control Units/Adapters • Type A channel adapter.

Communications • same as IBM 3279 units.

Peripherals • attaches 1 serial printer or light pen.

Other Features ullet optional response-time indicator, row/column indicator; keystroke counter, security keylock, audible alarm.

Price • \$5,290 single-unit purchase price • \$195 per month 2-year losses

Maintenance/Cost • on-site, vendor-supplied service \$22.

Availability • 45 to 60 days ARO

### ☐ Model TC476 Terminal-Controller System

Replaces • 3276-2, -11.

Configuration • terminal-cluster controller attaches 1 peripheral.

Workstation/Terminal • 15-inch CRT • 1920 characters @ 24 lines x 80 characters; status line • 96 ASCII/EBCDIC characters displayed • 12 or 24 program function keys • emulates 3276 keyboard functions; typewriter/data entry keyboard styles.

Host Compatibility • IBM S/360, 370, 4300, 30XX.

Control Units/Adapters • 3704, 3705 • Type A adapter.

Communications • point-to-point/multipoint • 1200 to 9600 bps • BSC (Model 476B) or SNA/SDLC (Model 476S).

**Peripherals** • attaches optional Telex 281B 120-cps matrix printer or 1 user-specified card reader, OCR or bar-code readers.

Other Features • up to 16 476s can be daisychained up to 5,000 feet via Telex 909 Modem Cluster Controller.

**Price** • \$2,800 single-unit purchase price • leases are available on vendor quote.

Maintenance/Cost • on-site, vendor-supplied service; prices quoted

Availability • 45 to 60 days ARO.

## ☐ Telex TC174 Terminal-Controller

Replaces • 3274B.

**Configuration** • controls up to 16 peripherals, 2 Telex 276s combined.

**Workstation/Terminal** • 15-inch CRT • 1920 characters @ 24 lines x 80 characters; 2560 characters @ 32 lines x 80 characters; 3440 characters @ 43 lines x 80 characters; 3564 characters

@ 27 lines x 132 characters plus 25th status indicator line ullet 96 ASCII/EBCDIC characters displayed.

Host Compatibility • IBM S/360, S/370, 4300, 30XX.

Control Units/Adapters • 3704, 3705 • Type A adapter.

Communications • point-to-point • 1200 to 9600 bps • BSC/SDLC

**Peripherals** • attaches up to 16 additional peripherals; Telex 278, IBM 3278, Telex 285B/286C/278C/289C, IBM 3278-1, -2, 3289-1, -2.

Other Features • protected data, numeric only, nondisplay, dual intensity, selector pen, character insert/delete mode, nonglare, flicker free; optional response-time indicator, keystroke counter, security keylock, audible alarm, green phosphor screen, detachable keyboard.

**Price** • \$5,000 single-unit purchase price (8 ports); \$8,500 single-unit purchase price (16 ports) • \$178 per month 2-year lease (8 ports); \$285 per month 2-year lease (16 ports).

**Maintenance/Cost •** on-site, vendor-supplied maintenance \$28/\$36 per month (8/16 ports).

Availability • 45 to 60 days ARO.

#### ☐ Telex TC178 Terminal

Replaces • 3278-2.

Configuration • single terminal attaching 1 peripheral.

Workstation/Terminal • 12-inch CRT • 1920 characters @ 24 lines x 80 columns • 96 ASCII/EBCDIC characters displayed; 25th status line • 12 or 24 program function lines • emulates all 3278 keyboard functions.

Host Compatibility • IBM S/360, 370, 4300, 30XX.

**Control Units/Adapters •** supports Telex 174/276 or IBM 3274/3276 controllers • Type A adapter.

Communications • same as 3278 unit.

Peripherals • attaches 1 serial printer or light pen.

Other Features • optional response-time indicator, row/column indicator, keystroke counter, security keylock, audible alarm, tilt-and-swivel display, detachable keyboard.

**Price** • \$1,550 single-unit purchase price • \$42 per month 3-year lease.

**Maintenance/Cost •** on-site, vendor-supplied maintenance \$12 per month.

Availability • 45 to 60 days ARO.

## ☐ Telex TC276 Terminal-Controller

**Replaces** • 3276-2, -12.

Configuration • attaches up to 7 peripherals.

Workstation/Terminal • 15-inch CRT • 1920 characters @ 24 lines x 80 characters; 2560 characters @ 32 lines x 80 characters; 3440 characters @ 43 lines x 80 characters; 3564 characters @ 27 lines x 132 characters; 25th status indicator line • 96 ASCII/EBCDIC characters displayed.

Host Compatibility • IBM S/360, 370, 4300, 30XX.

Control Units/Adapters • 3704, 3705 • Type A adapter.

**Communications**  $\bullet$  point-to-point/multipoint  $\bullet$  1200 to 9600 bps  $\bullet$  BSC/SNA.

**Peripherals** • attaches up to 7 additional peripherals; Telex 278, IBM 3278, Telex 285B/286C/278C/289C, IBM 3287-1, -2, 3289-1, -2.

Other Features • protected data, numeric only, nondisplay, dual intensity, selector pen, character insert/delete mode, nonglare, flicker free; optional response-time indicator, keystroke counter, security keylock, audible alarm, green phosphor screen, detachable keyboard.

**Price** • \$5,350 single-unit purchase price • \$171 per month 2-year lease.

Maintenance/Cost • on-site, vendor-supplied maintenance \$30 per month.

Availability • 45 to 60 days ARO.

## ☐ Model 1186 Intelligent Workstation

Replaces • 3278-2; offers personal computer facilities.

**Configuration** • standalone workstation with local personal computing capabilities.

**Workstation/Terminal** • 12-inch CRT • 1920 characters @ 24 lines x 80 columns; 25th status line • 96 ASCII/EBCDIC characters displayed.

Host Compatibility • S/370, 30XX, 43XX, or equivalent.

**Control Units/Adapters •** attaches to local IBM 3274 or Telex 274

Communications • point-to-point • up to 9600 bps • BSC.

**Peripherals** • supports 1 RS-232C serial device, 1 RS-422 serial device, and 1 parallel printer • two 5.25-inch floppy drives, optional 10M-byte Winchester.

Other Features • Intel 80186 microprocessor controlled operating under MS-DOS operating system and GW-BASIC language; monochrome or color display available.

Price • \$3,025 single-unit purchase price • no leases available.

**Maintenance/Cost** • on-site, vendor-supplied maintenance or third-party agreement; price quoted by vendor.

Availability • 45 days ARO

## ☐ Model TC078 Display Terminal

Replaces • 3178.

**Configuration** • single terminal attaching 1 printer.

**Workstation/Terminal** • 12-inch CRT • 1920 characters @ 24 lines x 80 characters; 25th status line • 96 EBCDIC characters displayed with International character set option • typewriter or data entry keyboard.

Host Compatibility • S/370, 43XX, 30XX, or equivalent.

Control Units/Adapters • 3274/3276, Telex 174, 274/276, 43XX display/printer • Type A adapter.

Communications • point-to-point/multipoint • 1200 to 9600 bps • half-/full-duplex • BSC/SNA/SDLC.

Peripherals • optional display printer, light pen.

Other Features • tilt/swivel adjustable display stand.

**Price •** Model 1—\$1,550; Model 2—\$1,850 single-unit purchase price • \$55/\$66 per month 2-year lease.

**Maintenance/Cost** • on-site, vendor-supplied service \$12 per month.

Availability • 45 to 60 days ARO.

#### ☐ Model TC079 Color Display Terminal

Replaces • 3179-S2B.

Configuration • single terminal attaching 1 printer.

Workstation/Terminal • 12-inch CRT • 1920 characters @ 24 lines x 80 characters; 25th status line • 96 EBCDIC characters display with International character set option • typewriter or data entry keyboard.

Host Compatibility • S/370, 43XX, 30XX, or equivalent.

Control Units/Adapters • 3274, 3276, Telex 174/274/276, 43XX display/printer • Type A adapter.

Communications • point-to-point/multipoint • 1200 to 9600 bps • half-/full-duplex • BSC/SNA/SDLC.

Peripherals • optional display printer, light pen.

Other Features • tilt/swivel adjustable display stand; display 4 colors standard, 7 colors extended.

Price • Model 1—\$2,095; Model 2—\$2,195 single-unit purchase price • \$80/\$84 per month 2-year lease.

Maintenance/Cost • on-site, vendor-supplied service \$12 per

Availability • 45 to 60 days ARO.

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