DIGIPLEX NE™
DIGIPLEX™ PARADOX

High-Security, Access Control and Home Automation Systems

DigiplexNE and Digiplex systems are designed to provide the highest level of protection for banks, high-security military and government sites, luxurious residential homes and any place where maximum security is essential. With the breakthrough development of GuardWall Technology, DigiplexNE and Digiplex are the only systems in their class that can offer real sabotage-proof security. Designed with the installer in mind, the modular concept of these systems provides labour-saving features that make expanding, installing and servicing these systems quick and convenient.

GuardWall Technology uses a specialized encrypted communication protocol to efficiently communicate status data between the system and all its modules simultaneously—even when there are no status changes to report. This means that any attempt to sabotage or disable any module or the system's wiring is immediately recognized and causes an alarm or warning to be reported whether or not the system is armed. GuardWall Technology represents a major step in security system integrity when compared to conventional systems where an intruder can access the wiring and emulate the communication to fool the system—this is not possible when using DigiplexNE or Digiplex thanks to GuardWall Technology.

DigiplexNE also supports 32 virtual zones in addition to its 96 security zones and 32 access control doors. Virtual zones can be used to automate PGM activations without occupying a security zone and without affecting the system's security functions. DigiplexNE is a logical solution to every installer's security, access control and home automation installation needs.

DIGIPLEX NE™

Security
- 96 zones (in any combination)
- 8 partitions
- 999 user codes
- 127 modules (in any combination)
- 2048 event buffer

Access Control
- 32 doors
- 32 schedules with 2 intervals
- 16 access levels
- 1-year holiday schedule
- Arm/disarm with card

Home Automation
- 32 virtual zones (do not occupy security zones)
- Expandable to 250 PGM outputs
- Arm/disarm and control PGMs via phone and remote control
- Monitor and control system via installer or end-user software

DIGIPLEX™ PARADOX

Security
- 48 zones (in any combination)
- 4 partitions
- 96 user codes
- 95 modules (in any combination)
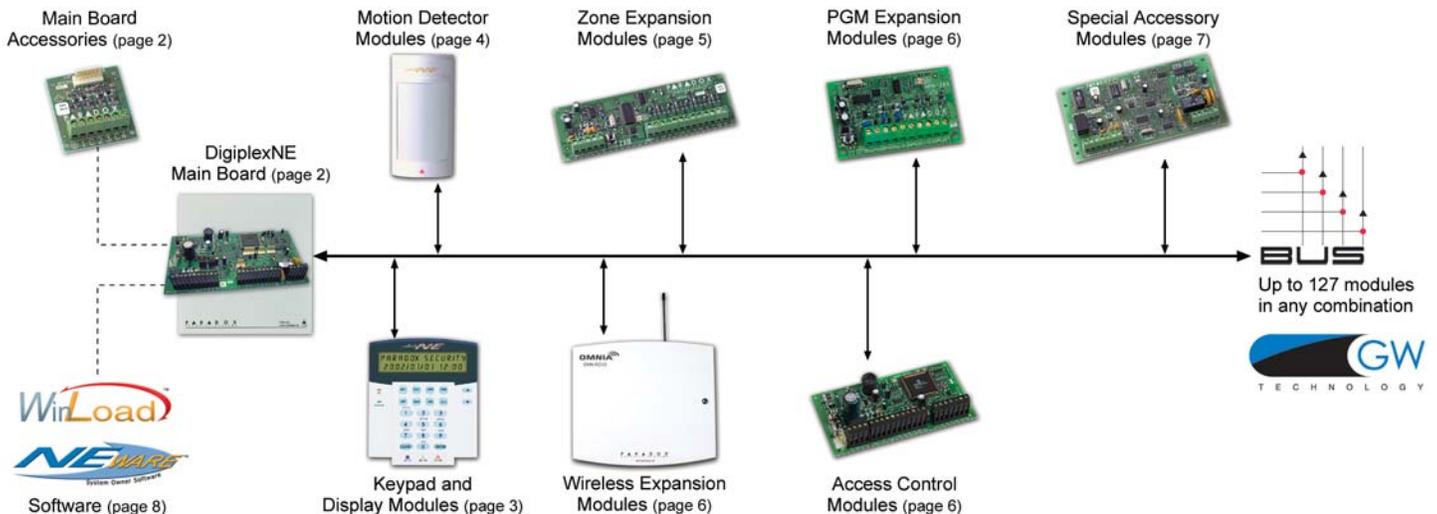- 1024 event buffer

Access Control
- 32 doors
- 16 schedules with 2 intervals
- 16 access levels
- 1-year holiday schedule
- Arm/disarm with card

Home Automation
- Expandable to 125 PGM outputs
- Arm/disarm and control PGMs via phone and remote control
- Monitor and control system via installer software

System Overview

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DigiplexNE Main Board (page 2)

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BUS — Up to 127 modules in any combination

GW TECHNOLOGY

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PARADOX SECURITY SYSTEMS

Control Panels

DGP-NE96: **DigiplexNE Main Board**
- 4-wire communication bus with GuardWall Technology
- 8 on-board zone inputs (16 with zone doubling)
- 3 on-board PGM outputs (PGM1 can be used as a 2-wire smoke input)
- 1 supervised bell output and 1 supervised auxiliary output
- 1 supervised telephone line and 1 optional backup telephone line (supports SIA, Contact ID, Pager, CID Pager and slow formats)
- Adjustable communication speed (normal/fast) for large installations
- Backup battery, service keypad, serial port, DGP2-ZX4 and Memory Key connectors
- Program with any LCD keypad through the bus, remotely using a modem through the dialer (300 baud), or on-site using a 306 adapter through the serial port (38.4k baud)
- Includes 11" x 11" x 3" (28cm x 28cm x 7.6cm) metal box or optional 14" x 12.5" x 4" (36cm x 32cm x 10cm) metal box

Specifications: connect modules up to 3000ft/900m using 18AWG or 1000ft/300m using 22AWG; 1.7A switching power supply (requires 16.5Vac/40VA transformer and 12Vdc/7Ah backup battery); 700mA auxiliary output (fuseless shutdown at 1.1A); 1A bell output (fuseless shutdown @ 3A); one 100mA PGM transistor output; two PGM form "C" relay outputs rated @ 125V, 5A resistive load.

DGP-48: **Digiplex Main Board**
- 4-wire communication bus with GuardWall Technology
- 4 on-board zone inputs (8 with zone doubling)
- 2 on-board PGM outputs (+3 optional; PGM1 can be used as a 2-wire smoke input)
- 1 supervised bell output and 1 supervised auxiliary output
- 1 supervised telephone line (supports SIA, Contact ID, Pager, and slow formats)
- Backup battery, service keypad, serial port, DGP2-ZX4 and Memory Key connectors
- Program with any LCD keypad through the bus, remotely using a modem through the dialer (300 baud), or on-site using a 306 adapter through the serial port (19.2k baud)
- Includes 11" x 11" x 3" (28cm x 28cm x 7.6cm) metal box or optional 14" x 12.5" x 4" (36cm x 32cm x 10cm) metal box

Specifications: connect modules up to 3000ft/900m with 18AWG or 1000ft/300m with 22AWG; 1.7A switching power supply (requires 16.5Vac/40VA transformer and 12Vdc/7Ah backup battery); 700mA auxiliary output (fuseless shutdown at 1.1A); 1A bell output (fuseless shutdown @ 3A); one 100mA and one 50mA PGM transistor output (+2 optional); one optional PGM form "C" relay output rated @ 125V, 5A resistiveresistive load.

Main Board Accessories

DGP2-ZX4: **4-Zone Expansion Plug-in Device**
- Connects directly on main board
- 4 addressable zones (8 with ATZ zone doubling feature)
- Set a different input speed for each zone (up to 7.65 seconds with DigiplexNE or up to 5.1 seconds with Digiplex)

New **::** **Hub and Bus Isolator**
- Used to divide the bus into two completely isolated outputs (one output failure does not affect the other)
- One input port, 2 completely isolated output ports
- To be added when over 2000ft (600m) of single or multiple bus wires are used
- Each output port can provide communications up to 3000ft (900m)

DGP2-TM1: **Real-Time Plug-in Device**
- Connects directly on main board
- Keeps time and date during a complete power failure
- 8-year battery life expectancy (battery included)

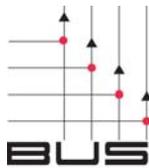**PMC-3**: **Hand-Held Plug-in Memory Key**
- Download or upload control panel programming in less than 10 seconds
- Connects directly to memory connector on main board or LCD Keypad
- No need for a telephone line, PC or any other peripheral device

306: **Direct Connect Interface**
- Enables main board to communicate with a PC at 25ft (8m)
- Connect from main board's serial port connector to PC's serial port (DB-9)
- 38.4k baud communication (DigiplexNE) or 19.2k baud communication (Digiplex)

DNE-CONV1: **RS-485/RS-232 Converter Kit**
- Enables main board to communicate with a PC at 1000ft (300m)
- Connect from main board's serial port connector to PC's serial port (DB-9)
- 38.4k baud communication (DigiplexNE) or 19.2k baud communication (Digiplex)

Overview of System Modules

Features and Specifications Common to All Modules
- All modules support GuardWall Technology for sabotage-proof protection without additional modules or EOL resistors
- All modules are addressable and can connect anywhere on the 4-wire communication bus in a star or daisy chain configuration
- Connect up to 127 (DigiplexNE) or 95 (Digiplex) modules in any combination on the 4-wire communication bus
- Program any module through the bus using a keypad, the WinLoad software or the Module Broadcast feature
- Modules with an APR3- prefix as part of their model number and the OMN-RCV3 feature Auto-Panel Recognition, enabling them to function with DigiplexNE, Digiplex, or Spectra
- Modules with a DGP2- prefix as part of their model number function with DigiplexNE or Digiplex
- Modules with a DNE- prefix function only with DigiplexNE
- Modules with a DGP- prefix function only with Digiplex
- Modules operate at 12 to 16Vdc
- Modules operate at -20°C to 50°C (-4°F to 122°F) and up to 95% humidity

Keypad and Display Modules

DNE-K07: **Grafica: Graphic LCD Keypad Module**
- View zone locations
- View and import floor plans
- Icon-driven menus and system status display
- Alarm clock and special reminders
- Up to 15 tunes for everyday functions
- Download or import tunes and graphics
- Supports up to 8 built-in languages
- Smart search functions
- User-friendly menus with step-by-step guidance
- Copy and paste user programming
- Assign to one or more partitions
- Independently set chime zones
- 3 one-touch panic alarms
- Adjustable backlight and contrast
- Upload/download labels with Memory Key, field programmer or through the bus using the Module Broadcast feature
- Available in two designer colors (silver or champagne)

Specifications: 150mA maximum current consumption; anti-tamper switch.

DGP2-641:   **32-Character LCD Keypad Module**
- 32-character LCD with programmable labels
- Available in one of 10 languages (English, Czech, French, German, Hebrew, Italian, Polish, Portuguese, Spanish, or Swedish)
- Displays zone and system status
- Assign to one or more partitions
- 1 addressable zone and 1 PGM output
- Independently set chime zones
- 14 one-touch action buttons
- 3 keypad-activated panic alarms
- Adjustable backlight, contrast and scroll speed
- Upload/download labels with Memory Key or through the bus using the Module Broadcast feature

Specifications: 80mA maximum current consumption; one 50mA PGM transistor output; anti-tamper switch (optional).

DGP2-648:   **48-Zone LED Keypad Module**
- 48-zone LED display (each LED can be set to display any zone number from 1 to 96)
- 4-partition LED display (each LED can be set to display any partition from 1 to 8)
- Assign to one or more partitions
- 1 addressable zone and 1 PGM output
- Independently set chime zones
- 14 one-touch action buttons
- 3 keypad-activated panic alarms

Specifications: 115mA maximum current consumption; one 50mA PGM transistor output; anti-tamper switch (optional).

DGP2-ANC1:   **Annunciator Module**
- LED display shows the status of up to 8 partitions, or zones 1-48, or zones 49-96
- 3-in-1 product (comes with three different display labels)
- Mount as a stand-alone unit or over any LCD or LED keypad module
- Stack up to three annunciators
- Assign to one or more partitions

Specifications: 105mA maximum current consumption.

Motion Detector Modules

* For more information on Digital Motion Detectors, refer to the Digigard Technical Publication.

DGP2-50:   **Dual Element Motion Detector Module**
- 100% Digital Motion Detection (no analogue circuitry)
- Digital Auto Pulse Signal Processing
- Digital Shield algorithm software
- Metal shield maximizes protection from EMI and RFI signals

Specifications: 30mA maximum current consumption; dual element sensor; 40' (12m) X 40' (12m) range; 110° viewing angle; anti-tamper switch; 10V/m rejection from 10MHz to 1GHz; 0.6' to 11.5'/sec. (0.2 to 3.5m/sec.) walk speed; 7' to 9' (2m to 2.7m) installation height.

DGP2-60:   **Quad Element Motion Detector Module**
- Digital Dual Opposed Detection
- Interlock Sensor Geometry (ISG)
- 100% Digital Motion Detection (no analogue circuitry)
- Digital Auto Pulse Signal Processing
- Digital Shield algorithm software
- Metal shield maximizes protection from EMI and RFI signals

Specifications: 30mA maximum current consumption; quad element sensor; 40' (12m) X 40' (12m) range; 110° viewing angle; anti-tamper switch; 10V/m rejection from 10MHz to 1GHz; 0.6' to 11.5'/sec. (0.2 to 3.5m/sec.) walk speed; 7' to 9' (2m to 2.7m) installation height.

DGP2-70: **High-Security Motion Detector Module with Pet Immunity**
- Dual optics (2 dual opposed element sensors)
- Provides superior pet immunity using a combination of advanced optics and digital processing technologies
- Immune to pets weighing up to 90lbs (40kg)
- Extremely reliable and false-alarm free
- 100% Digital Motion Detection (no analogue circuitry)
- Digital Auto Pulse Signal Processing
- Digital Shield algorithm software
- Metal shield maximizes protection from EMI and RFI signals

Specifications: 30mA maximum current consumption; two dual element sensors; 35' (10.5m) X 35' (10.5m) range; 90° viewing angle; anti-tamper switch; 10V/m rejection from 10MHz to 1GHz; 0.6' to 11.5'/sec. (0.2 to 3.5m/sec.) walk speed; 7' to 9' (2m to 2.7m) installation height.

Zone Expansion Modules

DGP2-ZC1: **Door Contact Module**
- 1 addressable zone
- Small size: 2.9" x 0.8" x 1.2" (74mm x 20mm x 30.5mm)

Specifications: 14mA maximum current consumption; form A reed switch; anti-tamper switch.

DGP2-ZX1: **1-Zone Expansion Module**
- 1 addressable zone (2 with ATZ zone doubling feature)
- Set a different input speed for each zone (up to 255 minutes), which is ideal for temperature monitoring applications

Specifications: 28mA maximum current consumption; anti-tamper switch.

APR3-ZX4: **4-Zone Expansion Module**
- 4 addressable zones (8 with ATZ zone doubling feature)
- Set a different input speed for each zone (up to 255 minutes), which is ideal for temperature monitoring applications
- Use zone input as an anti-tamper switch input

Specifications: 28mA maximum current consumption.

APR3-ZX8: **8-Zone Expansion Module**
- 8 addressable zones (16 with ATZ zone doubling feature)
- Set a different input speed for each zone (up to 255 minutes), which is ideal for temperature monitoring applications
- 1 PGM output
- Use zone input as an anti-tamper switch input
- Includes 11" x 11" x 3" (28cm x 28cm x 7.6cm) metal box

Specifications: 28mA maximum current consumption; one 50mA PGM transistor output.

Wireless Expansion Modules

OMN-RCV3: **Omnia Wireless Expansion Module**
- 16 addressable zones
- 16 remote controls (independent of security zones)
- Up to 6 receivers per system
- Supports all Omnia transmitters (refer to the Omnia technical brochure)
- Fully supervised (low battery, tamper and check-in)
- Code-hopping technology with high-security encryption
- Transmitter signal strength display
- 1 PGM output (+1 optional)

Specifications: 50mA maximum current consumption; frequency of 433MHz or 868MHz; -120dBm sensitivity; di-pole antenna; one PGM form "C" relay output rated @ 125V, 5A resistive load (+1 optional); anti-tamper switch.

DGP-319: **Wireless Expansion Module**
- 16 addressable zones
- 16 remote controls (independent of security zones)
- Up to 3 receivers per system
- Supports all Liberator transmitters (refer to the Liberator technical brochure)
- Fully supervised (low battery, tamper and check-in)
- 900MHz Spread Spectrum Technology
- Manchester decoding with error detection and correction
- 1 PGM output (+1 optional)

Specifications: 70mA maximum current consumption; frequency of 902 to 928MHz; -105dBm sensitivity; diversity antennas; one PGM form "C" relay output rated @ 125V, 5A resistive load (+1 optional); anti-tamper switch.

PGM Expansion Modules

APR3-PGM1: **1-PGM Expansion Module**
- 1 PGM output

Specifications: 28mA maximum current consumption; one PGM form "C" relay rated @ 125V, 5A resistive load.

APR3-PGM4: **4-PGM Expansion Module**
- 4 PGM outputs

Specifications:
150mA maximum current consumption (with all 4 PGMs active); four PGM form "C" relay outputs rated @ 125V, 5A resistive load.

Access Control Modules

DGP2-641AC: **Security and Access Control Keypad Module**

Same features as the DGP2-641 plus:
- Connections for card reader, REX, door contact and lock output
- Automatic unlocking schedule
- Door left open and door forced options
- Door unlock and extended delay timers
- Grant access via card and/or access code (supports CR-R885-BL PosiPIN reader)
- Supports 26-bit Wiegand card readers

Specifications: 200mA maximum current consumption; 50mA transistor lock output; anti-tamper switch (optional).

DGP2-ACM1P: **Access Control Module**
- Connections for card reader, REX, door contact and lock output
- Automatic unlocking schedule
- Door left open and door forced options
- Door unlock and extended delay timers
- Grant access via card and/or access code (supports CR-R885-BL PosiPIN reader)
- Unlock door manually with button or PGM event
- Built-in 1.5A switching power supply (supervised only if used)
- Supports 26-bit Wiegand card readers
- Includes 8" x 10" x 3" (20cm x 25.5cm x 7.6cm) metal box

Specifications: 1.5A switching power supply (requires 16.5Vac/40VA transformer and 12Vdc/4Ah backup battery); 700mA auxiliary output (fuseless shutdown at 1.1A); anti-tamper switch input; one form "C" lock output relay rated @125V, 5A resistive load; one 50mA PGM transistor output.

Special Accessory Modules

APR3-ADM2: **InTouch Voice-Assisted Arm/Disarm Module**
- Arm, disarm, control PGMs and verify system status via telephone
- Clear and concise voice prompts
- Available in 8 languages (English, Czech, French, Greek, Italian, Portuguese, Spanish, and Turkish)
- 1 PGM output

Specifications: 105mA maximum current consumption; one 50mA PGM transistor output.

APR3-PRT1: **Printer Module**
- Send detailed reports of zones or system events to a printer and/or PC for on-screen viewing
- Parallel and serial port connectors
- Assign to any or all partitions
- Automatically print events from selected event groups and/or zones as they occur
- Program event groups to print when a specified PGM event occurs
- 1 PGM output
- Selectable baud rate
- Available in English or Spanish

Specifications: 40mA maximum current consumption; one 25-pin parallel port; one 9-pin serial port; anti-tamper switch; one 50mA PGM transistor output; 2400, 9600, 19.2k, or 57.6k baud rate.

DGP2-PS17: **Power Supply Module**
- Fully supervised (AC, battery, low battery and auxiliary limit)
- Selectable battery charge current (350mA/700mA)
- 1 PGM output
- Includes 8" x 10" x 3" (20cm x 25.5cm x 7.6cm) metal box

Specifications: 1.7A switching power supply (requires 16.5Vac/40VA transformer and 12Vdc/4Ah backup battery); 700mA auxiliary output (fuseless shutdown at 1.1A); anti-tamper switch; one PGM form "C" relay output rated @125V, 5A resistive load.

UDS-2000: **WinLoad Installer Upload/Download Software**
- User-friendly programming and monitoring of DigiplexNE, Digiplex and Spectra control panels and modules
- Remote uploading and downloading using most standard modems at 300 baud
- On-site (local) uploading and downloading at 38.4k baud (DigiplexNE) or 19.2k baud (Digiplex) using a 306 Direct Connect Interface (25ft/8m) or a DNE-CONV1 Converter (1000ft/300m)
- Multiple users, groups and databases
- Network compatible
- Event display and event reports with advanced printing of zone and user programming
- Comprehensive database management tools
- Supports 9 languages simultaneously

Minimum requirements: Microsoft Windows 95, 98, 2000, NT, ME or XP; 400MHz CPU; 64MB RAM; 250MB of free hard disk space.

NEware End-User Management Software
- Program access codes, options and settings of all users in a DigiplexNE system
- Live system monitoring (view system and zone status and troubles) without interrupting central station communication or system operation
- Arm/disarm, bypass zones and control PGMs
- Search, sort and filter saved system events
- Generate and print customized reports
- Download floor plans, tunes, graphics and screen savers into Grafica
- On-site (local) uploading and downloading at 38.4k baud (DigiplexNE) or 19.2k baud (Digiplex) using a 306 Direct Connect Interface (25ft/8m) or a DNE-CONV1 Converter (1000ft/300m)
- Supports 9 languages simultaneously
- Available in three editions: Demo Edition (DNEWARE-DM), Security Edition (NEW-SEC), and Security and Access Control Edition (NEW-ACC)

Minimum requirements: Microsoft Windows 95, 98, 2000, NT, ME or XP; 400MHz CPU; 64MB RAM; 250MB of free hard disk space.

Available Modules and Main Board Accessories

- **DGP2-ZX4**: 4-Zone Expansion Plug-In Device (p. 2)
- **APR3-HUB2**: Hub and Bus Isolator (p. 2)
- **DGP2-TM1**: Real-Time Plug-In Device (p. 2)
- **PMC-3**: Hand-Held Plug-In Memory Key (p. 3)
- **306**: Direct Connect Serial Interface (p. 3)
- **DNE-CONV1**: RS-485/RS-232 Converter (p. 3)
- **DNE-K07**: Graphic LCD Keypad Module (p. 3)
- **DGP2-641**: 32-Character LCD Keypad Module (p. 4)
- **DGP2-648**: 48-Zone LED Keypad Module (p. 4)
- **DGP2-ANC1**: Annunciator Module (p. 4)
- **DGP2-50**: Dual Element PIR Module (p. 4)
- **DGP2-60**: Quad Element PIR Module (p. 4)
- **DGP2-70**: High-Security PIR Module w/ Pet Immunity (p. 5)

- **DGP2-ZC1**: Door Contact Module (p. 5)
- **DGP2-ZX1**: 1-Zone Expansion Module (p. 5)
- **APR3-ZX4**: 4-Zone Expansion Module (p. 5)
- **APR3-ZX8**: 8-Zone Expansion Module (p. 5)
- **OMN-RCV3**: Omnia Wireless Expansion Module (p. 6)
- **DGP-319**: Wireless Expansion Module (p. 6)
- **APR3-PGM1**: 1-PGM Output Expansion Module (p. 6)
- **APR3-PGM4**: 4-PGM Output Expansion Module (p. 6)
- **DGP2-641AC**: Security & Access Control LCD Keypad Module (p. 6)
- **DGP2-ACM1P**: Access Control Module (p. 7)
- **APR3-ADM2**: Voice-Assisted Arm/Disarm Module (p. 7)
- **APR3-PRT1**: Printer Module (p. 7)
- **DGP2-PS17**: Power Supply Module (p. 7)

For the latest information on product approvals, such as UL and CE, please visit our Web site at www.paradox.ca.

P△R△DOX®
S E C U R I T Y   S Y S T E M S
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