GV4 panels are the premier commercial control panel line from Bosch. GV4 panels integrate intrusion, fire and access control providing one simple user interface for all systems. With the ability to adapt to large and small applications, the D7412GV4 provides up to 75 individually identified points that can be split into 8 areas. The control panel includes a communicator that sends events to selected public switched telephone network (PSTN), IP network, or cellular network destinations through four programmable route groups. With the D7412GV4 you can:

- Monitor alarm points for intruder or fire alarms while operating keypads and other outputs
- Program all system functions local or remote using Remote Programming Software (RPS) or by using basic programming through the keypad.
- Add up to two doors of access control using the optional D9210C Access Control Interface Module.

**Functions**

**Programmable outputs**
- 2 A alarm power at 12 VDC
- 1.4 A auxiliary power at 12 VDC

- Fully integrated intrusion, fire, and access control allows users to interface with one system instead of three
- Conettix IP-based communication options provide high-speed, secure alarm transport and control through connection of wired and/or wireless cellular network interfaces
- Up to 8 programmable areas each supporting both with perimeter and interior points with your choice of touch screen, ATM style, or LED keypads
- 75 points with flexible configuration options to meet multiple installation requirements
- OPTIONAL GV4 version 2.00 firmware upgrade available (NEW)

**System response**
- High-performance micro-controller provides industry-leading system response
- High-speed device bus
- 31 custom point indexes, including fire supervisory
- Selectable point response time
- Cross point capability
- Fire alarm verification
- Fire inspector’s local test
- Watch mode
- Scheduled events (SKEDS) arm, disarm, bypass and unbypass points, control relays, control authority levels, and control door access

**User interface**
- Supervision of up to 16 keypads
- Remote Programming Software (RPS) allows end users to perform control panel management tasks – Add/Delete/Change user passcodes and authorities, view and print the panel history event log
- Custom keypad text is fully programmable, including remote programming
Area configurations

Area programming offers a wide selection of different system configurations. Each area is assigned an account number to define annunciation, control, and system configurations. Multiple areas can be linked to a shared area which is automatically controlled (hallway or lobby). Area arming can be conditional on other areas (master or associate). Any area can be configured for perimeter and interior arming, not requiring a separate area for this function.

Custom functions

For added convenience, Custom Functions can be programmed to eliminate keystrokes for users allowing the installer to program an easy command for a complex function. For example, a custom function can be written to bypass a group of points and arm the system, allowing the user to perform this function with one easy command. This can be used to control a particular room, or even a single door allowing customized access. In additions, Custom Functions can be activated with a token or card, or automatically as a scheduled event (SKED) providing further flexibility and ease of use.

Door-activated custom function

A custom function activates when user credentials are presented to a B901 or D9210C access control module’s door controller’s reader. The custom function behaves as though the user performed a function at the keypad associated with the door controller.

Passcode security

For high security applications, GV4 can be configured for several different passcode options.

- Dual Authentication – requires a user to enter their passcode and also use a token or card.
- Two-Man Rule - Requires two people with two unique passcodes to be present at the time of opening.
- Early Ambush - Allows users to verify that the facility is safe by requiring two passcode entries at different keypads within the same area, sending a duress event if the user does not enter the passcode a second time after inspecting the premises.

Easy Exit control

The control panel changes from one armed state to another armed state without disarming. For example, if you change the state from Perimeter Arm to Master Arm, the control panel complies and reports the change. Easy Exit Control reduces the number of keystrokes, simplifying system operation.

Programmable passcode-controlled Menu List

The system prompts users to enter a passcode prior to viewing the keypad menu. The keypad display shows the user the menu options allowed according to the user’s authority level. Passcode-controlled menus provide users only with the options and information pertinent to them, simplifying system operation.

Flexible control

The system provides the flexibility to select added convenience or high security. For example, you can restrict passcode arming and disarming to a keypad’s immediate local area, even if the user has access to other areas. This is particularly useful for high security areas, where a user may have access to the area, but would prefer to only disarm the area individually rather than with the rest of the system. Another option is to program the system to disarm all areas the user can access from any keypad.

Invisible walk test

A menu item allows the user to test invisible 24-hour points within the scope of the keypad without sending a report to the central station.

System users

The system supports up to 399 users, each can have a passcode, an access token and a wireless keyfob. User passcodes contain three to six digits. Passcodes can be assigned to one of 14 customized authority levels in each area and can be restricted to operate only during certain times.

Communication formats

The control panel prioritizes and sends reports in Contact ID or Modem IIIa communications formats to four route groups. Each group has a programmable primary and backup destination. The control panel provides flexible communications for most central stations with reporting capabilities such as:

- Individual point numbers
- Opening or closing reports by user and area number
- Remote programming attempts
- Diagnostic reports

IP communication

The control panel uses the B426/B420 Connetix Ethernet Communication Module, DX4020 and/or the ITS-DX4020-G Cellular Communicator to communicate with the Conettix D6600 and D6100i Communications Receiver/Gateways. Using Conettix IP communication offers a secure path that includes anti-replay/anti-substitution features and provides enhanced security with encryption. The B420, DX4020 and ITS-DX4020-G can all be used for remote programming. GV4 is the first Security Control panel to support DNS (Domain Name System) for both remote programming and central station communication. DNS provides ease of use, eliminating the need to use static IP addresses as your reporting destination and accommodates a simple solution for central station disaster recovery.
IP Setup is available via the installer keypad menus and the remote programming software, eliminating the need to use complicated internet programming tools such as ARP and Telnet.

**Communication paths**
The control panel accommodates up to four separate destinations for primary, alternate, and backup receivers for automatic test reports. When resetting alarms or arming or disarming a system, the user is identified by name and number.

**Firmware updates**
Remote firmware updates using the RPS Firmware Update wizard through the IP connection (B426/B420 Connetix Ethernet Communication Module) as well as an on-site flash update key, provides for easy feature enhancements without replacing ROM chips.

*For GV4 version 2.00 firmware update information, refer to the, “GV4 version 2.00 firmware updates” datasheet to learn more about key enhancements, and supported products.*

**A wide variety of input options**
Each point:
- Accommodates normally-open (NO) and normally-closed (NC) devices with end-of-line (EOL) resistor supervision.
- Is programmable for fire, fire supervisory, or intrusion application.
- Can be hard-wired, addressable, or wireless.

**Security and Fire detection**
The control panel provides eight on-board points, and up to 67 additional off-board points. You can program individual points to monitor all types of burglar alarms, fire alarms, and supervision devices.

**Scheduled events (SKEDS)**
The internal clock and calendar start individually scheduled events (SKEDs). SKEDs perform functions such as arm or disarm, relay control, or point bypassing. The D7412GV4 Control Panel offers:
- 40 scheduled events with up to 25 different functions
- Eight opening windows and eight closing windows
- Eight user windows
- Day-of-week, date-of-month, or holiday only schedules
- Four holiday schedules of 366 days each (leap year)

**Access control**
The control panel provides custom door strike, point shunt and auto disarming response by area. There are 14 panel-wide access levels with both manual and scheduled control.

Store, view, or print access events such as:
- Access granted
- No entry
- Request to enter
- Request to exit

**Wireless interface**
The B820 SDI2 Inovonics Interface Module connects an Inovonics EN4200 Serial Receiver to the control panel SDI2 bus, allowing this UL Listed wireless system to be programmed locally via the panel keypad, as well as remotely through RPS.

**Event log**
The event log stores up to 1,000 local and transmitted events. The event log includes time, date, event, area, point, user number, and transmission status. View the event log from a keypad or use RPS to remotely retrieve event information. RPS operators can retrieve events periodically using one call, rather than receiving several calls each day. When the event log reaches a programmed threshold of stored events, it can send an optional report to a receiver.

**Fire test**
When a user activates Fire Test Mode, the control panel suppresses all reports to the central station. The keypad and annunciator show all testing data. An automatic sensor reset feature saves time; you do not need to reset the sensors manually. At the end of test, the keypad shows the number of untested points.

**Programming, diagnostics and controls**
Installers can program locally or remotely through RPS as well as basic keypad programming. A programmable system passcode prevents unauthorized remote programming.

**Two data buses**
GV4 provides 2 data buses which support a wide array of components. The SDI bus supports keypads, access, and communications modules and also allows connection of existing components in a retrofit application. The new SDI2 bus supports input and output devices as well as a new wireless interface module, and an Ethernet communicator. SDI2 allows these devices to be mounted up to 1000 ft (305 m) from the control panel, providing installation convenience and flexibility.

**Commercial Fire Alarm support**

**Bosch Video Management System integration**
With Bosch Video Management System (Bosch VMS) and an intrusion system, the VMS operator has a single user interface to monitor and control the intrusion system combined with video surveillance. With Bosch VMS and a control panel, the operator can, for example:
- View videos triggered by intrusion events, including all relevant information such as areas, point, and user show in the display with the event
- View areas, points, outputs, and doors – with their statuses – on the Bosch VMS map, providing the exact location in the system.
- Turn on (arm) and turn off (disarm) areas.
- Bypass and unbypass points.
• Lock and unlock doors (Bosch VMS 6.0 and higher). Requirements to integrate Bosch VMS with a control panel:
  • A licensed Bosch VMS system using Professional Editions v5.5 or higher or Bosch VMS Enterprise Edition v5.5 or higher.
  • Expansion license to integrate the intrusion control panel. One license needed per control panel. Order number MBX-XINT-xx for the expansion license added to a Bosch VMS base license. Refer to the Bosch Video Management Software product page on the Bosch website, www.boschsecurity.com.
  • Access to Remote Programming Software (RPS).
  • Control panel firmware v2.xx

Certifications and approvals

USA:

UL 365  Police Station Connected Burglar Alarm Units and Systems
UL 609  Local Burglar Alarm Units and Systems
UL 636 (NEW)  Holdup Alarm Units and Systems
UL 864  Control Units and Accessories for Fire Alarm Systems (Commercial Fire)
UL 985  Household Fire Warning System Units
UL 1023  Household Burglar Alarm System Units
UL 1076  Proprietary Burglar Alarm Units and Systems
UL 1610  Central Station Burglar Alarm Units
ANSI/SIA CP-01:2010  False Alarm Reduction
FM 3010  Fire Alarm Signaling Systems
CSFM  California Office of The State Fire Marshall 7165-1615:0242 Control Unit (Commercial)

FCC Part 15 Class B, Part 68

Installation/configuration notes

Compatible Products

Keypads
D1265 Touch Screen Keypad
D1255 Series Keypads (D1255, D1255W, D1255B, D1255RB, D1265)
D1260 Series Keypads (D1260, D1260W, D1260R, D1260BLK, D1260B)
D1256RB Fire Keypad
D1257RB Remote Fire Alarm Annunciator
D720 Series Keypads (D720, D720W, D720R, D720B)
D279A Independent Zone Control

Detectors
D278S Four-wire Addressable Detector Base, 12 VDC
D285/TH Photoelectric Smoke Detector Heads
D298S Addressable Detector Base, 24 VDC
D7050 Series Addressable Photoelectric Smoke and Smoke Heat Detector Heads
F220-6FP/S 12/24 VDC Addressable Detector Bases with POPITs
FCC-380 Carbon Monoxide Detector
MX775i Addressable PIR Detector
MX794i Long Range Multiplex PIR Detector
MX934i Addressable PIR Detector
MX938i Addressable PIR Detector
ZX776Z PIR Detector
ZX794Z Long Range PIR Detector
ZX835 TriTech Microwave/PIR Detector
ZX935Z PIR Detector
ZX938Z PIR Detector
ZX970 PIR/Microwave Detector

Bosch conventional detectors, including Professional Series, Blue Line Gen2, Blue Line, Classic Line, Commercial Line, and Ceiling Mount motion detectors, as well as glass break, seismic, request-to-exit, photoelectric, heat, and smoke detectors.

Enclosures
D8103 Universal Enclosure
D8108A Attack-resistant Enclosure
D8109 Fire Enclosure
Magnetic Contacts
Bosch magnetic contacts include recessed, terminal connection, miniature, overhead door, and surface mount.

Modules
Conettix B426 Ethernet Communication Module (NEW)
B208 Octo-input Module
B308 Octo-output Module
B520 Auxiliary Power Supply Module (NEW)
B820 SDI2 Inovonics Interface Module
Conettix B420 Ethernet Communication Module
Conettix ITS-DX4020-G Cellular Integrated Communicator
Conettix DX4020 Network Interface Module
Conettix DX4010V2 USB/Serial Interface Module
Conettix C900V2 Dialer Capture Module
D113 Battery Lead Supervision Module
D125B Dual Class B Initiating Module
D127 Reversing Relay Module
D129 Class A Initiating Module
D130 Auxiliary Relay Module
D185 Reverse Polarity Signaling Module
D192G Notification Appliance Circuit Module
D928 Phone Line Switcher
D5060 MUX Programmer
D8125 POPEX Point Expander
D8128D OctoPOPIT Eight-point Expander
D8125MUX Point Expander
D8125INV Wireless Interface Module
D8129 Octo-relay Module
D8130 Door Release Module
D9127 Series POPIT Modules
D9131A Parallel Printer Interface Module
D9210C Access Control Interface Module
DS7432 Eight-input Remote Module
DS7457i Series Single-zone Multiplex Input Modules
DS7460i Two-input Module
DS7461i Single-input Multiplex Module
DS7465i Input and Output Module
ICP-SDI-9114 SDI Splitter

Transformers
D1640 Transformer
D1640-CA Transformer

Programming
RPS or RPS-LITE Remote Programming Software

Readers
ARD-R10 iCLASS Mullion Reader
ARD-R40 iCLASS Switchplate Reader
ARD-RK40-09 iCLASS PIN Reader
ARD-VSMART iCLASS Reader
D8223 Prox Pro Reader
D8224 Mullion Reader
D8224-SP Switch Plate Reader
D8225 Mini Mullion Reader
D8301W Low-profile Proximity Readers

Wireless
B820 SDI2 Inovonics Interface Module
SDI2 Inovonics Interface and Receiver Kit. Includes B820 and EN4200 (ENKIT-SDI2)
EN1210 Universal Transmitter (Single-input)
EN1210EOL Universal Transmitter with EOL Resistor
EN1210W Door-Window Transmitter with Reed Switch
EN1215EOL Universal Transmitter with Wall Tamper, Reed Switch, and EOL Resistor
EN1223D Water-resistant Pendant Transmitter (Double-button)
EN1223S Water-resistant Pendant Transmitter (Single-button)
EN1224-ON Multiple-Condition Pendant Transmitter
EN1233D Necklace Pendant Transmitter (Double-button)
EN1233S Necklace Pendant Transmitter (Single-button)
EN1235D Beltclip Pendant Transmitter (Double-button)
EN1235DF Fixed-location Transmitter (Double-button)
EN1235S Beltclip Pendant Transmitter (Single-button)
EN1235SF Fixed-location Transmitter (Single-button)
EN1247 Glass-break Detector Transmitter
EN1249 Bill Trap Transmitter
EN1242 Smoke Detector Transmitter
EN1260 Wall Mount Motion Detector
EN1261HT High Traffic Motion Detector
The D7412GV4 includes the following parts:

<table>
<thead>
<tr>
<th>Quant.</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>D7412GV4 Board</td>
</tr>
<tr>
<td>1</td>
<td>Mounting Skirt</td>
</tr>
<tr>
<td>1</td>
<td>Faceplate with D7412GV4 Label</td>
</tr>
<tr>
<td>1</td>
<td>Literature pack —</td>
</tr>
<tr>
<td>1</td>
<td>• Installation Instructions</td>
</tr>
<tr>
<td></td>
<td>• Owners Manual</td>
</tr>
<tr>
<td></td>
<td>• Release Notes</td>
</tr>
<tr>
<td>1</td>
<td>Literature CD containing all product literature</td>
</tr>
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</table>

The available kits come with the parts indicated in the following table:

<table>
<thead>
<tr>
<th>Components</th>
<th>Kits</th>
</tr>
</thead>
<tbody>
<tr>
<td>D7412GV4 Board</td>
<td>-A</td>
</tr>
<tr>
<td></td>
<td>-B</td>
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<td></td>
<td>-C</td>
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<td></td>
<td>-D</td>
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<tr>
<td>D101 Lock and Key Set</td>
<td>1</td>
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<td></td>
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<td></td>
<td>1</td>
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<tr>
<td>D101F Lock and Key Set</td>
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</tr>
<tr>
<td>D122 Dual Battery Harness</td>
<td>1</td>
</tr>
<tr>
<td>D161 Dual Modular Phone Cord</td>
<td>2</td>
</tr>
<tr>
<td>D928 Dual Phone Line Switcher</td>
<td>1</td>
</tr>
<tr>
<td>D1640 Transformer</td>
<td>1</td>
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<td></td>
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<td></td>
<td>1</td>
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<tr>
<td>D6103 Enclosure</td>
<td>1</td>
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<tr>
<td>D8103 Enclosure</td>
<td>1</td>
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<tr>
<td>D8108A Attack-resistant Enclosure</td>
<td>1</td>
</tr>
<tr>
<td>D8109 Fire Enclosure</td>
<td>1</td>
</tr>
</tbody>
</table>

Environmental considerations

<table>
<thead>
<tr>
<th>Relative Humidity:</th>
<th>5% to 93% at +30°C (+86°F), non-condensing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature (Operating):</td>
<td>0°C to +50°C (+32°F to +122°F)</td>
</tr>
</tbody>
</table>

Number of...

| Areas:  | 8 |
| Card Readers (Doors): | 2 |
| Credentials (Tokens): | 399 |
| Custom Functions: | 4 |
| Events: | Up to 1000 |
| Passcode Users: | 399, plus 1 service passcode |
| Parallel Printers: | 1 |
| Points: | 75 (8 on-board, up to 67 off-board) |
| Programmable Relay Outputs: | 67 |
| RF Points: | 67 |
| SKEDs: | 40 |

Power requirements

| Current Draw (Maximum): | 300 mA |
| Output (Alarm): | 2 A at 12 VDC |
| Output (Auxiliary, Continuous Power, and Switched Auxiliary combined): | 1.4 A at 12 VDC nominal |
| Voltage (Operating): | 12 VDC nominal |
| Voltage (AC): | 16.5 VAC 40 VA plug-in transformer (D1640) |

Ordering information

**D7412GV4 Control Panel**
The D7412GV4 is sold individually or in kits. It supports 75 points.
Order number **D7412GV4**

**D7412GV4-A Attack-resistant Package**
Contains one PCB, one transformer, and one attack-resistant enclosure.
Order number **D7412GV4-A**

**D7412GV4-B Fire/Burglar Package**
Contains one PCB, one dual battery harness, two telephone cords, one telephone line switcher, one transformer, and one fire enclosure.
Order number **D7412GV4-B**
D7412GV4-C Standard Burglar Package
Contains one PCB, one lock and key set, one transformer, and one universal enclosure.
Order number D7412GV4-C

D7412GV4-D Burglar Package
Contains one PCB, one lock and key set, one transformer, and one D6103 Enclosure.
Order number D7412GV4-D

Accessories
SDI2 Inovonics Interface and Receiver Kit
Kit containing B820 and EN4200 for use on SDI2 bus panels.
Order number ENKIT-SDI2

D928 Dual Phone Line Switcher
Allows the control panel to operate over and supervise two separate phone lines. Only one D162 phone cord is supplied. Two additional D161 or D162 phone cords are required.
Order number D928

D101 Lock and Key Set
Short-body lock set with one key supplied. Uses the D102 (#1358) replacement key.
Order number D101

D122 Dual Battery Harness
Harness with circuit breaker. Connects two batteries to a compatible control panel.
Order number D122

D122L Dual Battery Harness with Long Leads
Color-coded harness with circuit breaker and leads measuring 89 cm (35 in.). Connects 12 V batteries to compatible control panels.
Order number D122L

D126 Standby Battery (12 V, 7 Ah)
A rechargeable sealed lead-acid power supply used as a secondary power supply or in auxiliary or ancillary functions.
Order number D126

D1218 Battery (12 V, 18 Ah)
A 12 V sealed lead-acid battery for standby and auxiliary power with two bolt-fastened terminals. Includes hardware for attaching battery leads or spade connectors.
Order number D1218

D1224 Battery (12 V, 26-28 Ah)
A 12 V sealed lead-acid battery for standby and auxiliary power with two bolt-fastened terminals. Includes hardware for attaching battery leads or spade connectors.
Order number D1224

D1238 Battery (12 V, 38 Ah)
A 12 V sealed lead-acid battery for standby and auxiliary power with two bolt-fastened terminals. Includes hardware for attaching battery leads or spade connectors.
Order number D1238

D137 Mounting Bracket
Used to mount accessory modules in D8103, D8108A, and D8109 enclosures.
Order number D137

D138 Mounting Bracket, Right Angle
Used to mount accessory modules in D8103, D8108A, and D8109 enclosures.
Order number D138

D1640 Transformer
System transformer rated at 16.5 VAC, 40 VA.
Order number D1640

D8004 Transformer Enclosure
For applications such as fire alarm that might require a transformer enclosure.
Order number D8004

D9002-5 Mounting Skirt
Mounts inside B8103, D8103, D8108A, and D8109 enclosures. Can accept up to six standard 7.62 cm x 12.7 cm (3 in. x 5 in.) cards.
Order number D9002-5

D110 Tamper Switch
Screw-on tamper switch that fits all enclosures. Shipped in packages of two.
Order number D110

ICP-EZTS Dual Tamper Switch
Combination tamper switch with a wire loop for additional tamper outputs.
Order number ICP-EZTS

D8108A Attack Resistant Enclosure
Grey steel enclosure measuring 41 cm x 41 cm x 9 cm (16 in. x 16 in. x 3.5 in.). UL Listed. Includes lock and key set. B520, B4512, and B5512 require the B12 mounting plate.
Order number D8108A

D8103 Enclosure
Grey steel enclosure measuring 41 cm x 41 cm x 9 cm (16 in. x 16 in. x 3.5 in.).
Order number D8103

D8109 Fire Enclosure
Red steel enclosure measuring 40.6 cm x 40.6 cm x 8.9 cm (16 in. x 16 in. x 3.5 in.). UL Listed. Includes a lock and key set.
Order number D8109
Software Options

RPS Kit (USB)
Account management and control panel programming software with USB security key (dongle).
Order number D5500C-USB