

B450 Conettix Plug-in Communicator Interface

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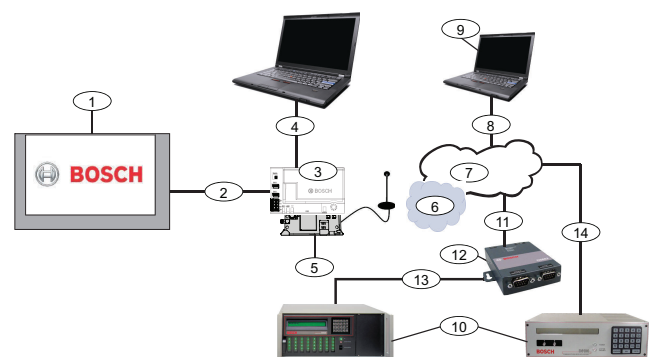


- ▶ Enables full two-way IP communication using Plug-in Cellular Communicators
- ▶ Plug and Play installation makes future radio technology changes easy
- ▶ Compatible with new and most deployed Bosch control panels
- ▶ Supports remote installation of cellular modules for improved signal

The B450 Conettix Plug-in Communicator Interface is a four-wire powered SDI2, SDI, or option bus device that provides two-way communication with compatible control panels over commercial cellular networks using a plug-in communicator (available separately).

System overview

Use B450 in combination with a plug-in communicator for primary or backup alarm communication, remote panel programming and other remote applications. The B450 supports Conettix IP protocol with full authentication, 256 bit AES encryption and resistance to Denial of Service attacks. It is a reliable way to add cellular network communications to existing or new commercial security and fire installations.



B450 system overview

Callout – Description	Callout – Description
1 – Compatible Bosch control panel	6 – Cellular carrier network
2 – Panel data bus (SDI2, SDI, or Option)	7 – Internet/LAN/WAN
3 – B450 Plug-in Communicator Interface	8 – Remote Programming Workstation

4 – USB connection for B450 configuration	9 – Bosch Conettix IP receiver (D6600, D6100i, or D6100IPv6)
5 – B44x Plug-in Cellular Communicator (available separately)	

Functions

Conettix IP communication

The B450 uses Conettix IP protocol which supports:

- Full event code reporting and administration
- Flexible supervision intervals
- Resistance to Denial of Service attacks
- 128, 192 or 256-bit AES encryption
- Anti-replay and anti-substitution

Switch addressing

Use the address switch to easily assign a bus address or setup for USB or SMS configuration where required.

Easy configuration

For most installations, the default B450 settings allow installation with no device programming required. An address switch allows easy bus address selection. For customized network settings, the B450 supports a USB configuration menu, or configuration via SMS. B Series and GV4 Series control panels support limited keypad and RPS programming of B450 settings.

LEDs

Three LEDs provide status and troubleshooting information about the module and its connection.

LED	Description
Heartbeat	Indicates the system status of the B450 and its connection to the panel.
RX	Indicates when an inbound packet is received on the bus.
TX	Indicates when an outbound packet is transmitted on the bus.

Certifications and approvals

Region	
US	NIST FIPS 197
	FCC Part 15 Class B
	UL 365
	UL 636
	UL 864
	UL985
	UL 1023
	UL 1076
	UL 1610
	SIA CP-01:2010 False Alarm Reduction

	California State Fire Marshall (CSFM) - Certified
	Fire Department of New York (FDNY) - Certified
Canada	CAN/ULC S303
	CAN/ULC S304
	ULC S545
	ULC-ORD C1023
	ULC-ORD C1076
	ICES-003 – Digital Apparatus
	Rogers - Certified
North America	PTCRB - Certified
Europe	CE - EN50130-4, EN61000-6-3, EN60950
Australia	A-tick - Certified

Region	Certification	
Europe	CE	2014/30/EU EMC Directive (EMC); 2014/35/EU Low-Voltage Directive (LVD); 2011/65/EU Restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)
USA	CSFM	see our website
	FDNY-CoA	#6173
Brazil	ANATEL	2708-14-1855

Installation/configuration notes

Mounting considerations

Find a location with acceptable signal strength on your wireless network. Mount the B450 Conettix Plug-in Communicator Interface into the interior of a compatible enclosure via the 3-hole mounting pattern using the supplied mounting screws.

Wiring considerations

The B450 connects to a control panel using a data bus connection via the module's terminal strip, or the module's interconnect wiring connectors. For data bus powered installations outside the compatible control panel enclosure, follow the maximum wiring distances in the technical specifications. For further installations power from a compatible auxiliary power supply.

Parts included

Quantity	Component
1	B450 Conettix Plug-in Communicator Interface
1	Hardware pack
1	Interconnect cable wiring

1	Quick Start Guide (hardcopy)
1	Literature (mini-CD)

Technical specifications

Electrical

Current (operating)	Standby: B450 with B440/B441/B442/B443 = 60 mA Alarm: B450 with B440/B441/B442/B443 = 180 mA
Voltage (operating)	(B450 bus operation): 12 VDC nominal

Environmental

Relative humidity	Up to 93% at +32°C (+90°F) non-condensing
Operating temperature	0°C to +50°C (+32°F to +122°F)

Mechanical

Board dimensions	79 mm x 128 mm x 38 mm (3.11 in x 5.03 in x 1.50 in)
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Wiring

Data bus wire gauge	12 AWG to 22 AWG
USB cable	USB cable (Type A to A male-to-male) – not supplied
Data bus wire length	Maximum Distance – wire size: 22 AWG (0.65 mm) --> 12 m (40 ft) 18 AWG (1.0 mm) --> 30 m (100 ft) 16 AWG (1.3 mm) --> 48 m (158 ft) 12 AWG (2.0 mm) --> 122 m (400 ft) Using a separate power supply, such as the B520 Auxiliary Power Supply Module, connected to the B450 within the specification listed above, the wire distance can be extended up to 300 m (1000 ft)

Compatibilities

Control panels	B5512/B4512/B3512 (B5512E/B4512E/B3512E with firmware v2.03 and higher) D9412GV4/D7412GV4/D7212GV4 (v1.00.0xx+) D9412GV3/D7412GV3/D7212GV3 D9412GV2/D7412GV2/7212GV2 (v7.06+) FPD-7024 (v1.03+) AMAX 2000/2100/3000/4000 CMS 6/8 CMS 40 Solution 2000/3000
Cellular communicators	B440 Conettix Plug-in Communicator, Cellular (3G) B441 Conettix Plug-in CDMA Cellular Communicator B442 Conettix Plug-in GPRS Cellular Communicator B443 Conettix Plug-in HSPA+ Cellular Communicator
Enclosures	B10 B11

	D8103 D203
Applications	Tera Term (for USB B450 configuration) Hyper Terminal (for USB B450 configuration) RPS version 5.16 or higher

Function	Installed Bus		Details
	Option/SDI	SDI2	
IP Event Reporting	Y	Y	TCP protocols only supported on SDI2
Remote Program (RPS or A-link)	Y	Y	Requires Bosch Cellular service or other cellular network access
Configure B450 from control panel (RPS, A-link)	N	Y	GV4/B Series v2.03+, AMAX vX.X, Solution vX.X
Personal Notification via SMS or Email	N	Y	Requires compatible control panel and cellular plan
Remote Security Control App	N	Y*	Requires Bosch Cellular service or other cellular network access

Ordering information

B450 Conettix Plug-in Communicator Interface

Supports two-way IP communication over using a plug-in Cellular Communicator for compatible SDI2, SDI or option bus control panels.

Order number **B450**

Accessories

B440 Conettix Plug-in Cellular Communicator

Dual technology 3G EVDO/CDMA cellular communicator for secure two-way IP communication on the Verizon Wireless network.

Order number **B440**

B441 Conettix Plug-in Cellular Communicator

Multi-function CDMA cellular communicator for secure two-way IP communication on the Verizon Wireless network.

Order number **B441**

B442 Conettix Plug-in GPRS Cellular Communicator

Multi-function cellular communicator. For use in Latin America.

Order number **B442**

B443 Conettix Plug-in HSPA+ Cellular Communicator

Multi-function 3G/4G cellular communicator providing IP communication over a GSM/GPRS/EDGE/UMTS/HSPA+ cellular network. For use in Latin America and Canada.

Order number **B443**

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