# ELITEPRO SP COMMUNICATION OPTIONS

rev040413

## OVERVIEW

The purpose of this document is to explain the various ways to communicate with the ELITEpro SP. Each method has its own advantages. A matrix is presented at the end which shows the advantages of each communication method at a glance

### USB

USB is the fastest way to communicate with the ELITEpro SP. It is best used when the ELITEpro SP and a PC running ELOG are located in the same place, such as a desk or bench.
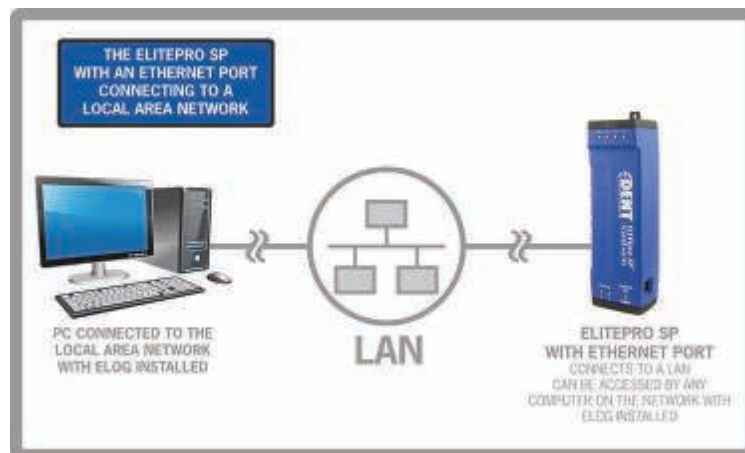
#### KEY POINTS

- The ELITEpro SP must be physically connected to a PC with a USB cable of limited length. This can be difficult during field installations.
- A PC running ELOG must be used.
- Little or no configuration of the PC is necessary; plug-n-play.
- For a large number of ELITEpro SP instruments, a USB hub must be used to connect to them all simultaneously.

### ETHERNET

Ethernet is the next fastest communication method. It uses a PC running ELOG to connect to the ELITEpro SP over a local area network.

#### KEY POINTS

- The use of Ethernet requires a network connection between the PC and the ELITEpro SP.
- Ethernet may be used anywhere a network is used.
- Initial configuration must be done through USB.
- Some networks require the assistance of the network manager to procure a network address and ensure that communications can pass through corporate firewalls.
- Must configure the ELITEpro SP instruments with unique network addresses unless the network allows for DHCP (Dynamic Host Configuration Protocol) and the ELITEpro SP is configured to request an address automatically.

**PERFORMANCE UPDATE**

## BLUETOOTH® WIRELESS TECHNOLOGY

The *Bluetooth®* wireless technology option on the ELITEpro SP uses a PC with a *Bluetooth®* adapter that supports Serial Port Profile (SPP) to connect to the ELITEpro SP.

### KEY POINTS

- *Bluetooth®* technology is wireless with a range of 10 to 100 feet depending on operating environment.*
- Configuration requires a PC with a USB connection and knowledge of Windows *Bluetooth®* device management.
- Requires a PC with a *Bluetooth®* adapter that supports Serial Port Profile (SPP).



## WI-FI

The Wi-Fi option is the next fastest (after Ethernet) and allows for a PC running ELOG to communicate with a Wi-Fi-equipped ELITEpro SP over a wireless network. *See diagram on next page.*

### KEY POINTS

- ELITEpro SP can be equipped with either an internal or external antenna. Range depends on application environment. 75-300 feet typical.**
- Configuration requires a PC with a USB connection running ELOG.
- If the Access Point (AP) or Wi-Fi Hotspot is connected to the local area network, the ELITEpro SP may be accessed by any PC on the network running ELOG.

---

*Example *Bluetooth®* wireless technology internal antenna ranges:
1. Open Air, as specified in manual: <100 ft.
2. One brick/concrete wall: <10 ft.
3. Two sheetrock walls: <20 ft.

**Example *Wi-Fi* **internal** antenna ranges:
1. Open Air, as specified in manual: <300 ft.
2. One brick/concrete wall: <75 ft.
3. Two sheetrock walls: <100 ft.

**Example *Wi-Fi* **external** antenna ranges:
1. Open Air, as specified in manual: <300 ft.
2. One brick/concrete wall: <150 ft.
3. Two sheetrock walls: <150 ft.
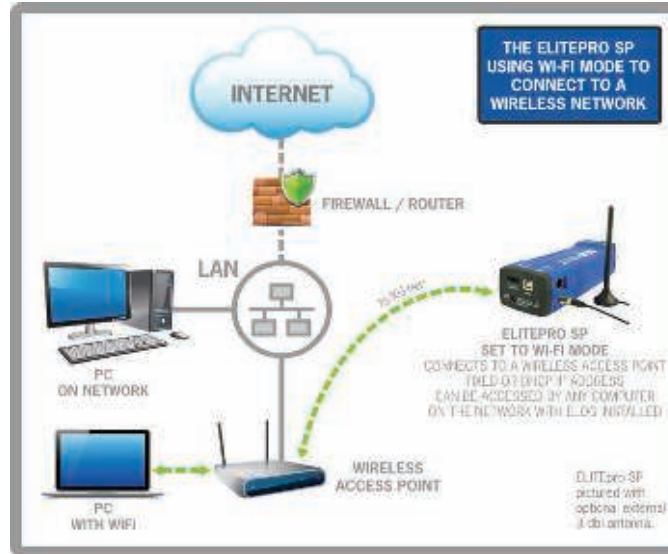
*Wi-Fi Mode*

## ACCESS POINT MODE

In Access Point Mode, the ELITEpro SP is configured as its own hotspot. Connect to the ELITEpro SP using a Wi-Fi-enabled PC running ELOG or use a Wi-Fi-enabled tablet, laptop, or smartphone to access the ELITEpro SP via a web browser. *See diagrams on next page.*

### KEY POINTS

• Requires the use a Wi-Fi-enabled laptop, tablet, or smartphone for access to the logger via a web browser.

• Requires a PC running ELOG to communicate

• Configuration requires a PC with a USB connection running ELOG software.

• ELITEpro SP can be equipped with either an internal or external antenna. Range depends on application environment. 75-300 feet typical.**

• Access of ELITEpro SP via web browser allows limited functionality compared to ELOG software.

**Example *Wi-Fi* **internal** antenna ranges:
1. Open Air, as specified in manual: <300 ft.
2. One brick/concrete wall: <75 ft.
3. Two sheetrock walls: <100 ft.

**Example *Wi-Fi* **external** antenna ranges:
1. Open Air, as specified in manual: <300 ft.
2. One brick/concrete wall: <150 ft.
3. Two sheetrock walls: <150 ft.

**PERFORMANCE UPDATE**

PERFORMANCE UPDATE



*Access Point Mode using a web browser to interface with an ELITEpro SP with Wi-Fi.*



*Access Point Mode using ELOG to interface with an ELITEpro SP with Wi-Fi.*

*Continued...*

**Example *Wi-Fi* **internal** antenna ranges:
1.  Open Air, as specified in manual: <300 ft.
2.  One brick/concrete wall: <75 ft.
3.  Two sheetrock walls: <100 ft.

**Example *Wi-Fi* **external** antenna ranges:
1.  Open Air, as specified in manual: <300 ft.
2.  One brick/concrete wall: <150 ft.
3.  Two sheetrock walls: <150 ft.

**PERFORMANCE UPDATE**

**DENT INSTRUMENTS**

# ELITEPRO SP COMMUNICATIONS USAGE MATRIX

| Feature | USB | Ethernet | *Bluetooth*® | Wi-Fi | Wi-Fi Access Point Mode |
|---|---|---|---|---|---|
| **8MB Download Time (approx.)** | 4 min | 6 min | 22 min | 20 min | Using ELOG: 30 minutes Using Web Browser: N/A |
| **Range** | Length of USB cable | Length of network cable | 10-100 ft* | 75-300 ft** | 75-300 ft** |
| **Access with...** | PC + ELOG | PC + ELOG | *Bluetooth*®-enabled PC + ELOG | Wi-Fi-enabled PC + ELOG | Wi-Fi-enabled PC + ELOG or Wi-Fi-enabled laptop, tablet, or smartphone with web browser. |
| **Internet?** | No | Depends on network firewall | No | Depends on network firewall | No |
| **Functionality** | Full | Full | Full | Full | Partial via web browser. |

*Example *Bluetooth*® wireless technology internal antenna ranges:
1.  Open Air, as specified in manual: <100 ft.
2.  One brick/concrete wall: <10 ft.
3.  Two sheetrock walls: <20 ft.

**Example *Wi-Fi* **internal** antenna ranges:
1.  Open Air, as specified in manual: <300 ft.
2.  One brick/concrete wall: <75 ft.
3.  Two sheetrock walls: <100 ft.

**Example *Wi-Fi* **external** antenna ranges:
1.  Open Air, as specified in manual: <300 ft.
2.  One brick/concrete wall: <150 ft.
3.  Two sheetrock walls: <150 ft.