Overview

The PIM400-485 seamlessly integrates to select access control panels via RS-485, eliminating the need for reader interface modules. Each PIM400-485 supports up to 16 wireless access devices such as AD-400/401 locks.

Reliability

Reliable communications result from several technological advances and incorporated features. 900 MHz spread spectrum technology enables high transmission power in a license-free band. Error detection algorithm maintains data integrity on each transmission, and redundant transmissions ensure communication success. Periodic “heartbeat” signals provide supervision and assure reliable RF communications are maintained. Lastly, dynamic channel switching (DCS) can be enabled to overcome harsh RF environments by automatically changing channels to avoid potential interference.

Security

Used extensively by government and military organizations, spread spectrum technology provides significant security advantages over conventional transmission methods. Wireless access devices utilize spread spectrum transmissions, which are encrypted with AES 128-bit keys, to yield a system that is virtually uncompromisable. In addition, scalability is virtually unlimited as each AD-Series wireless access module has nearly a million addresses to choose from during the linking process.

Centralized lock/unlock command in 10 seconds or less

Patent-pending Wake-Up on Radio (WOR) feature drives communication from the PIM400 to any or all linked wireless devices in 10 seconds or less. This innovative feature works efficiently in parallel with periodic “heartbeat”, to maintain up to 2 year battery life on wireless devices such as the AD-400/401 locks. Response rate can be field configured down to 1 second with consideration of battery life. When Wake-Up on Radio is used in critical applications, dynamic channel switching should also be enabled.

Features and benefits

- 900 MHz spread spectrum RF technology for long range, reliable communications
- Automatic linking to remote wireless access points with 10 channel frequencies to select from enables easy commissioning
- AES-128 bit encrypted spread spectrum transmissions
- 5 visual indicators to quickly pinpoint and display status
- Flash memory for easy firmware upgrades
- Certifications: NEMA 1, 4, 4X, 6; UL 294; FCC Part 15; RoHS; Industry Canada (IC)
- Redesigned with smaller footprint

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**PIM400-485 specifications**

**Frequency range** 902-928 MHz

**Modulation** 900 MHz spread spectrum, direct sequence, 10 channels

**RF interference avoidance** Optional dynamic channel switching

**Transmission/encryption** AES-128 bit key (optional)

**Credential verification time** < 1 second

**Communication range**
- Up to 200 ft (61 m) with obstructions
- Up to 1000 ft (305 m) clear line of sight
- Up to 2000 ft (609 m) line of sight with high gain antenna on PIM400
- Up to 4000 ft (1219 m) line of sight with high gain antennas on PIM400 and WRI400

**Visual/audible communications** 5 LEDs for status indicators

**System interface** RS-485

**Power supply** 12 VDC or 24 VDC

**Voltage range** 9.5 VDC to 26 VDC

**Max current requirement** Up to 250 mA

**Operating temperature** -31°F to 151°F (-35°C to 66°C)

**Operating humidity** 0% to 100% non-condensing

**Dimensions (H x W x D)** 6.3" x 3.2" x 2.2" (16.0 cm x 8.13 cm x 5.59 cm)

**Weight** 1.25 lb (.56 kg)

**Cable specifications**
- DC power input: 18AWG, 2 conductor (Belden 8760 or equivalent) up to 1000 ft (305 m)
- PIM400-485 to ACP: 24AWG, 2 or 4 conductor shielded (Belden 9842, 9841 or equivalent) up to 4000 ft (1219 m)

**Data rate**
- RF: 40 kbps
- RS-485: 9.6 kbps

**Certifications** NEMA 1, 4, 4X, 6; UL 294; FCC Part 15; Industry Canada (IC); RoHS

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### Ordering information

- **PIM400-485** — Panel Interface Module with outdoor enclosure standard. Supports up to 16 access points via RS-485 with select brands of access control panels.

**Optional accessories**

- **ANT400-REM-I/O** — Omni-directional remote indoor/outdoor antenna module. Requires available grounding kit (MGB+MCA5) for outdoor installations
- **ANT400-REM-I/O+6dB** — Directional, flat panel, remote indoor/outdoor antenna with 6dB of gain. Requires available grounding kit (MGB+MCA5) for outdoor installations
- **MGB+MCA5** — Grounding kit for outdoor installations
- **ANT400-REM-CEILING** — Omni-directional ceiling mount indoor remote antenna
- **ANT400-REM-HALL** — Bi-directional indoor hall application remote antenna
- **HHD Kit-USB** — Handheld device with SUS installed and HH-USB cable
- **593PI-12DC** — 12 VDC power supply

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### About Allegion

Allegion (NYSE: ALLE) is a global pioneer in safety and security, with leading brands like CISA®, Interflex®, LCN®, Schlage®, SimonsVoss® and Von Duprin®. Focusing on security around the door and adjacent areas, Allegion produces a range of solutions for homes, businesses, schools and other institutions. Allegion is a $2 billion company, with products sold in almost 130 countries. For more, visit [www.allegion.com](http://www.allegion.com).

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