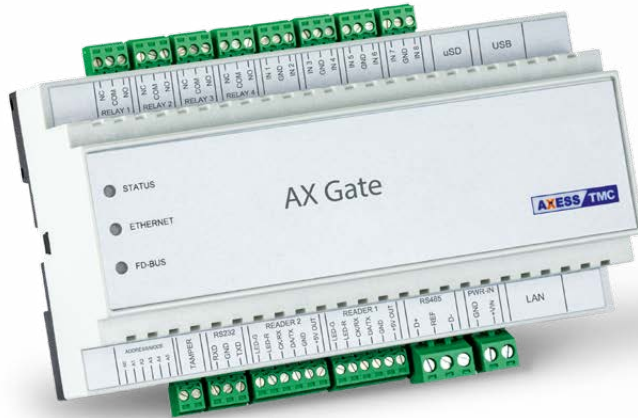# AX GATE – AX DOOR

Web-based controllers for the management of people and gates

Versatile and fully configurable access control that can be managed from an intuitive web browser.

AX GATE and **AX DOOR** are powerful Ethernet controllers equipped with web server and FTP functions (server and client) for the easy and intuitive management of an access control system from a web browser. The basic **AX DOOR** is able to manage one gate and **AX GATE** can manage two gates. The number of gates for both controllers can increase up to eight with the connection of RS485 modules. The criteria of access and physical control can be easily set via web in an independent manner for each gate (door and turnstile).

FEATURES

Both controllers can be managed in real time by a HTTP server. They can receive badge readings and variations detected by eight balanced inputs, as well as send the initial configuration, other data and commands, and respond in real time to any requests for external validation of transits. Tens of thousands of users and transactions can be stored in files on a 2GB microSD.

EXPANDABILITY WITH RS485 BOARD

Up to eight NeoMax (Net92) boards can be connected, each with one reader, two digital inputs and two relays. Alternatively, an SPP protocol allows connecting a combination of eight of the following devices:
- **FD-NeoMax** (1 reader, 2 inputs and 2 relays);
- **AX RF inbuilt reader** with push button;
- **AX BIO or XFinger biometric** readers with built-in RF reader;
- **RFID 4/K RF reader with integrated keypad** for access with PIN.

POE POWER

AX GATE is equipped with an Ethernet POE 802.3af A&B port that powers the controller and two directly connected readers. The POE of the **AX DOOR** controller is instead an internal optional module that offers a more versatile result, allowing to power not only its reader, but also the locking device or RS485 slave modules, also by battery.

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OPERATING MODES

• *Online:* **AX GATE** and **AX DOOR** send all the HTTP access requests to a server, which responds in real time denying or confirming access. In case of loss of connection, the transactions are managed locally, saved in the internal memory and reported periodically by HTTP messages (keep alive).

• *Offline:* the operation of the controllers is based on text files stored on SD and manageable via FTP and HTTP. These files contain tables that determine the access rights for each gate. Time slots, authorisation groups and user names can also be defined. The transactions, recorded on a configurable text file, can be copied automatically into a FTP server at prefixed times, thus eliminating the need for dedicated software.

• *Online as a component of the XAtlas system:* the I/Os of AX GATE and AX DOOR can be assigned to sensors or gates and are controlled directly by the XAtlas Server.

ADDITIONAL FUNCTIONS

• **Gate management via web:** the status of the gates controlled is displayed in real time and can be changed (open, blocked...) by sending a simple command.

• **On-board diagnostics:** all the events are recorded in a text file. The level of details of the information recorded can be configured.

• **Users, tables and web transactions:** Users and their authorisations can be added, changed and removed easily from the web; all the transactions can be displayed or downloaded from a browser with a simple click.

• **Biometrics:** Up to eight 485 biometric readers with RF reader. Fingerprints are registered by users on terminals with display (X1, X2 and SuperTRAX Light) and then transferred to the controller which in turn sends them to connected biometric readers.

TECHNICAL**SPECIFICATIONS**

HARDWARE	ARM Cortex-M3, 32-bit, 100MHz, memory: 2GB Flash on removable SD card for transactions and configurations
USER INTERFACE	Programmable multi-tone buzzer, 3 bi-colour LED indicating STATE (State, Ethernet and RS485)
READERS	• Removable screw connectors with 2 control LEDS for each badge reader and selectable interface: Clock&Data / TTL serial / Wiegand / Barcode (with possibility to choose the readers from various technologies). AX GATE: 2 readers – AX DOOR: 1 reader (but with possibility of real RS232); • Another 8 Clock&Data or Wiegand readers can be added on RS485 (NeoMAX or FD-NeoMax). • Up to 8 AX BIO and XFinger biometric readers on RS485 (8 in total, including the previous)
COMMUNICATION PORTS	• Ethernet 10/100 - TCP/IP, HTTP (Port 80), FTP (Port 21) IP static or DHCP; • 1 opto-isolated RS485 port to pilot up to 8 slave devices (RF readers, keypad, biometrics, I/O): NeoMAX (only NET92 mode), FD-NeoMAX (1 reader, 2 in, 2 relays), AX RF (RF reader with push button), AX BIO (biometric and RF reader), XFinger (biometric and RF reader) and RFID4K (RF reader with 12-key integrated keypad)
RELAY OUTPUTS AND DIGITAL INPUTS	• Optical and contact anti-tamper. • N.A or N.C. relay, max 2A @ 30Vdc: AX GATE: 4 AX DOOR: 2 • Digital inputs: AX GATE: 8 AX DOOR: 2 • Connectors for readers: AX GATE: 2 AX DOOR: 1 • up to 8 RS485 NeoMAX modules, each with 2 relays and 2 inputs (in addition to the reader)
MAXIMUM CONFIGURATION (WITHOUT XATLAS)	AX GATE: 10 readers, 20 relays, 24 digital inputs, 8 independent gates AX DOOR: 9 readers, 18 relays, 18 digital inputs, 8 independent gates
POWER SUPPLY	• 10..48Vdc – maximum consumption with 2 readers: 400mA@12Vdc • Standard power-over Ethernet PoE 802.3af A&B in AX GATE (max 5Vdc output). Optional in AX DOOR. • AX DOOR with POE supplies 12Vdc output (max 600mA) to power a lock of RS485 board
BATTERY	Only inside AXGATE: 4.8V 600mAh NiMh with PTC protection for operating autonomy: • up to 2 hours without readers; • up to 1.5 hours with 125KHz reader; • up to 1 hour and 15 minutes with two Legic readers; Button lithium battery for clock backup: 3V 225mAh
DIMENSIONS	AX GATE - Casing: ABS Dimensions: 156 x 98 x 57 mm (W x H x D) Weight: 275 g AX DOOR - Casing: ABS Dimensions: 69 x 98 x 57 mm (W x H x D) Weight: 225 g