ORVESTRA SYSTEM BLOCK DIAGRAM

Server • local venue • parking | 6 November 2026

SERVER AND PUBLIC SERVICES

Portal: companies, venues, users and permissions • Hotel: reservations, reception, rooms, services, accounts
POS and inventory: catalogues, prices, recipes and reports • Fiscalization: country-specific plugin
Licensing / Stripe • media and playlists • advertising • Remote relay / support • web, wiki and signed OTA packages
IoT: configuration, schedules and central Mosquitto • Parking: site setup, tariffs, permissions and record synchronization

HTTPS / WSS

HTTPS

MQTT / TLS

CORE · macOS / Windows / Linux

GUI / Remote / Zone Controll
Player, App, Live In → input DSP
AGC, EQ, Loudness, dynamics and TTS
Zones: independent volume, mute, output DSP
Audio outputs → amplifiers and speakers
Browser re-stream / advertising → TVs
POS: orders, kitchen, payment and printing
Hotel room transfer • IoT controls
Recovery agent and remote support
Hotel and Parking: separate operations

PARKING · LOCAL SYSTEM

One local authority for the whole site
Durable database + confirmed configuration
Multiple entrances, exits and pay stations
QR ticket → price → payment → exit
LAN operation during internet outages
Durable event outbox → synchronization
Duplicate payment / retry protection
Camera → vehicle / plate / virtual loop
Hotel reservations and access permissions
Standalone or with other modules

IoT · DEVICES AND CONTROL

ESP8266 / ESP32 • Orvestra Relay
Board profile and output mapping
Server-managed names and venue assignment
Pulse or maintained ON/OFF state
Device acknowledgement → GUI and portal
Lighting, gates and remote-control power
Schedules execute on the server
Connection loss retains maintained output
Pulse ends locally on the board
Managed firmware updates

USERS AND VENUE EQUIPMENT

Waiters / reception / administrators / guests
Touch POS, phones and web browsers
Kitchen display and thermal printers
Audio interfaces, TVs, LAN / WLAN

PARKING PERIPHERALS

Entry Pi: button, QR printer, display, loop
Payment: reader, terminal, cash and printer
IP camera + local analyzer
Passage confirmation: camera or physical loop

ACTUATORS

Relay → gate input / remote control
Lighting via an appropriate contactor
Sensor feedback is distinct from a command
Closing safety remains with the barrier

Parking shows the architecture under development; actual terminals, cameras and fiscal connections depend on installation.