

The background is a grayscale collage of business-related sketches. It includes a network diagram with nodes and lines, a balance scale, a bar chart with an upward arrow, and a hand holding a pen. The text is overlaid on this collage.

**ituma**

**aduno**

*Managed Access +  
Business Analytics Premium*



## Controllable Guest Wi-Fi for customers and visitors – high-quality, secure and fast

Today's need for a freely available Wi-Fi is ubiquitous - since we are already spending an average of 128 minutes per day (source: statista.com) online.

**aduno Managed Access** allows end-users to connect themselves independently to the provided Wi-Fi network and to use the free internet controllable (whitelisting of approved sites or blacklisting of non-approved sites).

Additionally included features provide information about most visited websites, used traffic and clicks. In addition, the guest Wi-Fi provided can be individually adjusted, for example by setting up a nighttime shutdown or limiting the traffic provided per user.

All features and reports are clearly visualized and summarized in the management console of aduno Managed Access. In addition, all aduno software players provide a multi-client capability that allows a differentiated rights and roles distribution with different permissions for different sites.

### Liability for interferences ("Störerhaftung")

By successfully registering with the Federal Network Agency, ituma assumes the role of the certified provider for its customers. This avoids vexing questions on responsibilities and liabilities and reduces doubts and uncertainties.

### Data protection

As a German company the ituma is familiar with the strict German data protection law. An absolute anonymization can be guaranteed by means of proven encryption methods. For large installations, ituma also actively supports the requirements of §110 TKG for Wi-Fi installations of more than 10,000 unknown users without registration, which are binding in Europe as of July 1, 2017 (Lawful Interception).

### Hardware

The aduno product suite is tuned to a wide range and is compatible with all well-known hardware vendors. Thus, each individual solution can work with the hardware that is most suitable. An integration of the solution into an existing hardware infrastructure is also possible without any problems.



- Guest Wi-Fi
- Splash page
- Authentication
- Reportings

# Access MODULES

*Managed Access Modulpakete – individuell kombinable, expandable at any time*

## MANAGED ACCESS BASIC

### LANDING PAGE / ONE PAGER

The basic package implies a default landing page (responsive one pager) in the aduno basic design. This landing page serves as an information channel and offers the user the possibility of an autonomous authentication.

### CAPTIVE PORTAL

After successful authentication, a device-specific captive portal (temporary browser window) appears automatically. The landing page is broadcasted via the captive portal.

### CLICK-THROUGH AUTHENTICATION

The user-friendly one-click-through authentication method allows the user to gain access to the free Internet by simply clicking on the checkbox for accepting the terms and conditions.

### LANGUAGES

The default landing page includes a language switcher, which allows to easily switch between the two basic languages German and English.

### PERMANENT, STATIC AUTHENTICATION LOGIC

The users' authentication process can be permanently set via the basic configuration. Meaning that the authentication process is no longer required once the user (MAC address / terminal) is registered. A repeating authentication, e.g. during a new visit, is not required.

### OPT-OUT

Within the terms and conditions, an exclusion link is provided for any user who wants to exclude his device. This allows the autonomous exclusion of user device from data collecting and processing by aduno Managed Access.

### DASHBOARD

Comprehensively summarized statistics and graphics about the use of the service. Adjustable evaluations of total visitors, bandwidth usage, top visited URLs and consumed traffic, top users (MAC hash) and distribution of customer devices.

### LANDING PAGE DESIGN

Easy setting and individualization of the landing page. Adaptation and definition of the primary colors, exchange of logos, text blocks and mood pictures.

### NIGHTTIME SHUTDOWN

The Wi-Fi nighttime shutdown enables a manually adjustable (recurring) limitation of the available Wi-Fi service on non-opening times. In addition, an information text, which is displayed to the customer during the time of the shutdown, can be created and published.

# Access MANAGED ACCESS EXPANSION PACKAGES

*Managed Access Modulpakete – individuell kombinable, expandable at any time*

## + MULTI-LOCATION MANAGEMENT PACKAGE

### GATEWAY ADMINISTRATION

The gateway administration enables the management of existing gateways and provides information about JobQues, user names and gateway clients.

In addition, the gateway grouping allows a classification by country, location and other parameters.

### LANDING PAGE PREVIEW PER LOCATION

In the area “landing page preview”, an output-true preview of the landing page is available as it is displayed to the end user. This preview can be displayed per location of the assigned landing page.

## + PRIVACY PROTECTION PACKAGE

### BLACKLISTING

An ingenious blacklisting logic allows the targeted exclusion of unwanted content. In this way, the free Internet usage can be individually adjusted by excluding unwanted websites. In addition, the use of filters (e.g., porn filters) is possible to generally block objectionable content.

## + CUSTOMIZED ACCESS PACKAGE

### LIMITATION AND BANDWIDTH

Definition and easy management of the permitted Internet time. Doing so, a time-limited and once free selectable authentication is setted across the gateways - thus, equal for all locations and any user. The authentication process starts again after expiration of the time limit per MAC address.

Optional: time X is enabled per day and device.

### DEVICE-SPECIFIC AUTHENTICATION

Whitelisting: This extension of the basic configuration for the authentication allows the targeted, permanent connection of individual devices (MAC addresses) within the own Wi-Fi infrastructure. The devices are defined by uploading a respective CSV file and can be extended or edited at any time.

# Access MANAGED ACCESS EXPANSION PACKAGES

*Managed Access Modulpakete – individuell kombinierbar, erweiterbar zu jedem Zeitpunkt*

## + SOCIAL MEDIA AUTHENTICATION PACKAGE

### GENERAL

Multi-level authentication process via existing social media networks. Either direct routing to the free guest Wi-Fi or the Walled Garden (if the user is already connected to one of the social networks on his device) or authentication by entering the personal user data.

When entering the user data, some data parameters (gender, age, ...) can be made available.



## + +LANGUAGE PACKAGE

### IMPLEMENTATION OF AN ADDITIONAL LANGUAGE

Extension of the language switcher and implementation of all automatically generated messages in a desired additional language.

## + SMS AUTHENTICATION PACKAGE

### SMS AUTHENTICATION

Two-step authentication method based on SMS: The activation is carried out by the user entering a mobile phone number and a resulting sent-out of a personalized token via SMS. Confirmation of the sent SMS link will enable the user to connect and redirect to the desired landing page.

### SMS OPT-OUT

When using the SMS authentication, it is possible to send location-based information to connected devices within the Wi-Fi infrastructure. The use of this service requires the possibility of an unsubscribe function. A dynamically generated link allows the user to simply disconnect the connection via a click.



## Analytical location examination and relevant insights on user behavior

**aduno Business Analytics** captures all Wi-Fi-capable, switched on devices (existing and logged in) within a location. The collected data is graphically processed and put into context. Real-time and historical movement profiles allow conclusions to be drawn about user / customer loyalty, walking paths and fluctuation.

The definition of zones and individual rooms provides measurable values about strong and weak sales areas and allows marketing actions tailored to different user groups.

The user or mobile devices are recorded anonymously and in absolute conformity with the German Data Protection Laws. No personal data are communicated or stored in databases.

- Heat maps
- Real-time data
- Statistics
- Location comparison
- Zone analysis
- Developments and trends

### Analytics

Meaningful statistics and (animated) motion analysis allow in-depth insights into the behavior, interests and needs of end users and customers. Evaluating the collected data, derivations can be made which contribute to the optimization of the location - for example, by analyzing and recognizing low-frequented areas, and by therefore adapting route guidance and arrangements.

### Real-time data

Powerful features, such as heat maps or real-time analysis, enable a timely response to events within a location. At a glance, e.g. in the event of a sudden increase in the number of people, corresponding measures can be taken (for example, by increasing service or security personnel).

### Location comparison

Different locations (multi-client capability) can be compared efficiently, so that success parameters of variable locations can be measured easily - e.g. the effectiveness of marketing campaigns or place of locations. Relevant evaluations are graphically visualized and directly compared. Factors of influence become more visible.

# Analytics MODULES

*Business Analytics Basic – understand more by comprehensible evaluations*

## ANALYTICS BASIC PACKAGE

### WLAN POSITION DATA API

The aduno WLAN Position Data API is the included, generic interface for querying and translating position data from connected “WLAN Location Engines”. Engines from all known vendors are supported.

### LOCATION DATA PROCESSING ENGINE

The aduno Location Data Processing Engine processes the user and position data collected via the Wi-Fi Infrastructure and prepares them in the system.



### LOCATION ANALYTICS DASHBOARD

The “Location Analytics Dashboard” is located in the start page of the aduno Management Console. It visualizes the data, key figures and information from aduno Business Analytics in different widgets. Selected analysis graphs from the included modules are integrated in order to provide an up-to-date overview of current events. Periods of the data analysis can be defined centrally and detailed information can be viewed and controlled per widget.

### VISITOR OVERVIEW

Visual presentation of first-time visitors (new visitors) and returning visitors in a selected period and relative distribution.

### VISITORS

The widget “Visitors” displays the number of visitors and passers-by in the selected period and prepares the information visually.

### VISITORS TOTAL

A line graph represents the total number of visitors within the location and a selected period.

### VISITOR DEVELOPMENT BY TIME

A bar chart visualizes the chronological development (hourly) of the absolute number of visitors as well as the percentage distribution of visiting groups (first-time visitors, returning visitors) within the location.

### DWELL TIME DISTRIBUTION

A bar graph groups all visitors to the location, based on their length of stay, and shows how many visitors were present in the defined dwell time groups.



### DWELL TIME

The dwell times of the visitors (from a stay of three minutes) are displayed on a daily basis in a line diagram. All the visitor’s daily dwell times are subdivided into the defined dwell time groups and can be broken down to zones.

# Analytics EXTENSION MODULE PACKAGES

*Business Analytics module packages – individually combinable, expandable at any time*

## + ANALYTICS PREMIUM PACKAGE

### REAL-TIME DATA

Within the portal module “live data”, the positions of all currently detected, Wi-Fi capable devices (users) are projected onto the stored map of the location in real time. This visualized devices are dyed differently based on the number of visits to the location.

### HEAT MAP

The heat map, a visualized frequency distribution, is created using the location map and displays the most and least visited areas of the location. The distribution in the location is displayed graphically by means of the color gradient marking.

### CUSTOMER FLOW ANALYSIS

Presentation of the visitor flows of individual rooms of a location. The visualization takes place from room to room and thus primarily serves the temporal documentation of visitor flows (room to room) without placing the focus on the accuracy of the individual detected devices within a room. A time-retroactive visualization is possible as well based on historical data.

## + PRIVACY PROTECTION PACKAGE

### BLACKLISTING

A sophisticated blacklisting logic allows for a controlled restriction of users by denying access to selected MAC addresses - for example, employees can be excluded from the data collection, since an employee tracking could distort the analytical evaluations.

# SOLUTION

*Application solution in the retail sector*

## COMBINED SOLUTION

### ADUNO MANAGED ACCESS

- 1-Click-Through authentication
- Controllable Guest Wi-Fi
- Multi language (german and english)
- MAC whitelisting
- Wi-Fi nighttime shutdown
- Gateway administration
- Access Point overview
- Traffic reports and statistics on the service usage

### ADUNO BUSINESS ANALYTICS PREMIUM

- Real-time data
- Animated heat maps (frequency distributions)
- Customer flow analysis
- Frequency analysis
- Visitor analysis and visitor groups
- Composition of the visitor base
- Dwell time distribution and groups
- Dwell times / length of stay
- Zone dwell times
- Temporal development of returning and new visitors
- Time-retroactive, historical data processing
- Location comparison for a direct comparison of relevant parameters from different branches





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