

Technical Catalog



WELCOME TO THE HOTEL OF THE FUTURE

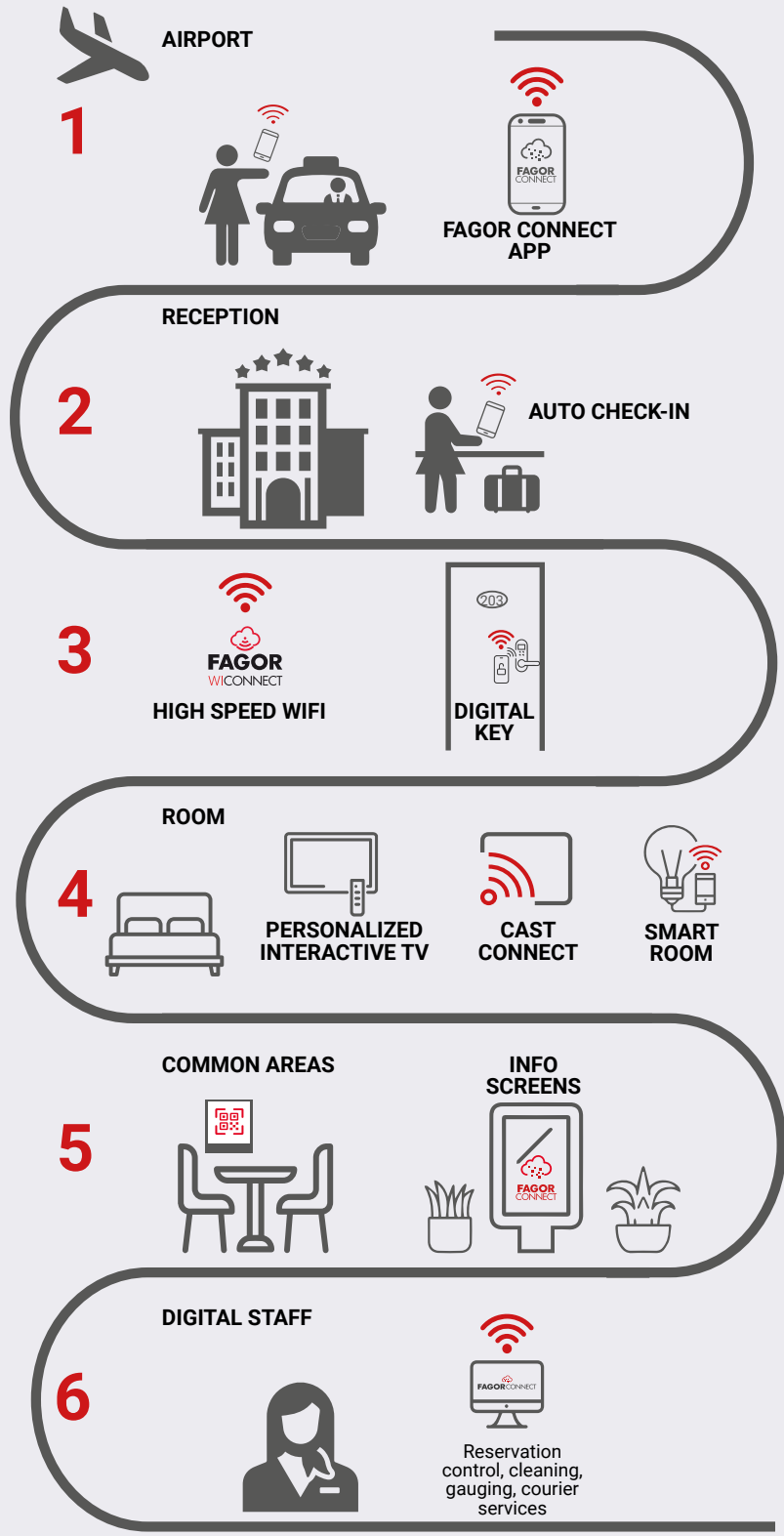
The digital guest journey

Fagor Connect is a multimedia services platform compatible with your hotel management system.

In Fagor Electrónica, we are experts in the development and implementation of services specially designed for the Hospitality sector.

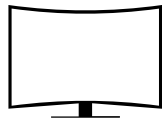
We provide the best guest experience, thanks to efficient high-capacity fiber networks (GPON) combined with interactive entertainment in guest rooms (IPTV services, casting...).

Our extensive experience in the development of integral communications infrastructures allows the hotel establishment to offer all the services currently demanded by customers, and those that will be implemented in the future, obtaining additional advantages and a total user experience.



How do we do it?

From Fagor Electrónica, we accompany the customer throughout the entire life cycle of Fagor Connect



Design

It is the most important phase to ensure the success of the solution in hotels, residences, clinics, hospitals... for this:

- We study your business model, to define what is the added value that most differentiates you.
- We advise you on the management and design of content from the vision of experts.
- We co-create with you to create a tailor-made and fully customized solution.

And we focus the solution with the objective of growing and making Fagor Electrónica your successful partner.



Growth

As important is the design phase as the project phase, Fagor Connect is a living solution that adapts to the needs of the business as it grows.

- It is a scalable solution, both in terms of upgrades and integration of new modules.necesidades.



Implementation

Each project, each building has its corners and for each one there is a way to implement the solution. Together we will find the most appropriate way to implement the platform.

- Project management, to carry out an efficient and coordinated installation.
- Integration of guest service providers.
- Technical equipment to support any unforeseen event.
- Staff training and empowerment.
- Remote support.
- Certification and tuning.

- It has a specialized technical service to support the staff, onsite or remotely.
- And maintenance service, according to needs.

We take care of every detail of your project, as if the business were our own, because our customers' success is Fagor Connect's success.

FAGOR CONNECT SOLUTION Description

The servers and software allow us to act in a centralized way with cloud solution on the system configuration, to keep the services up to date, as well as not having to apply the changes on each of the TVs.

The configuration and maintenance is done on the server and the changes will automatically be reflected on the TVs.

Features of FAGOR CONNECT:

- Configuration from the web server (cloud) of all televisions in the hotel.
- Possibility of sorting the list of channels by language according to guest profile by nationality, or preferred language, obtaining the information thanks to the integration with the PMS.
- Personalization of the welcome message with the guest's name automatically, thanks to integration with PMS.
- Inclusion of the brand's corporate channel.
- Casting service.
- Services offered by the hotel in different formats.
- Possibility to book hotel services (SPA, restaurant, Gym, etc).
- Create room orders.
- Chat with concierge.
- Messaging.
- Promotions and announcements of new openings.
- Points of interest in the area surrounding the Hotel.
- Room automation integration (with KNX).
- Invoicing consultation (electronic invoicing).
- Loyalty system.
- Satisfaction questionnaires.
- Captive portal for Wifi (WiConnect).
- Weather information.
- Digital signage management, in touch totems or TV.
- Mobile application for Android and iOS.

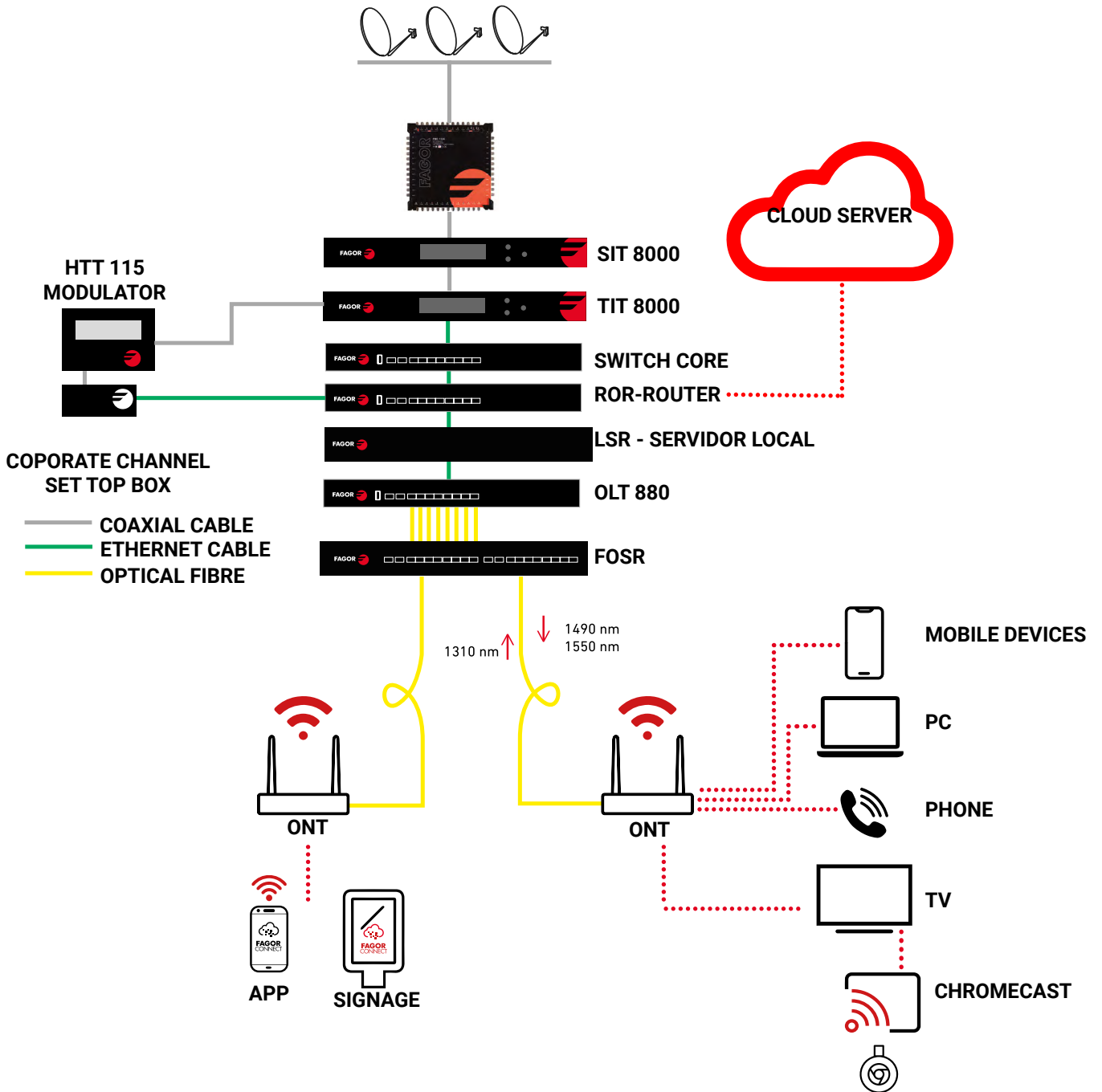


The installation consists of:

- IPTV headend for TV and Radio services.
- A server in the cloud.
- Receiving system consisting of 1 terrestrial antenna for receiving terrestrial services, satellite dishes for satellite services and a multiswitch that will allow us to change the configuration at any time without having to modify the input connections.
- Modulator to upload information and/or videos from the Hotel's corporate channel.
- Local server where the information is downloaded from the system and from the cloud server to have fast response times when loading information and channels.
- Network electronics consisting of a 26-port switch to centralize all the outputs of the IPTV equipment and a router for remote management of the entire system.
- Dongle Chromecast devices with their brackets behind the TV to be hidden from the guest's view and prevent possible theft.
- The licenses of use and configuration of the services.

The whole system is scalable for future changes or expansions, both in number of devices and in services or TV/Radio channels.

FAGOR CONNECT SOLUTION Complete scheme

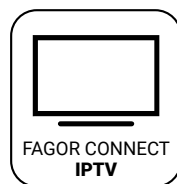


MULTIMEDIA PLATFORM

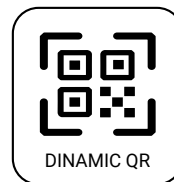
Fagor Connect Elements

Fagor Connect is a multimedia platform for the hospitality industry, hosted on a Cloud server, that manages the contents of the different devices towards the guest and the additional services for the best use of the hotel operation.

GUEST
DEVICES

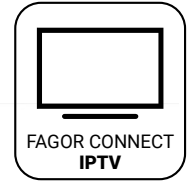


Addons SERVICES



SOLUCIÓN IPTV

Fagor Connect: IPTV



Fagor Connect consta de unos **servicios básicos** y un menú de **modulos adicionales** basado en licencias que se piden bajo demanda.

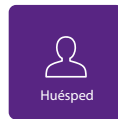
Todo esto se gestiona desde el Cloud Fagor Connect. Para televisores no hospitality es necesario un Set-top-Box con su licencia. Para otros casos se buscarán alternativas híbridas.



- TV
- Radio



- Directorio de servicios
- Tema diario
- Actividades
- Anuncios
- Instalaciones
- Oferta
- Contactos



- Mensaje
- Perfil
- Despertador
- Preferencias
- Factura

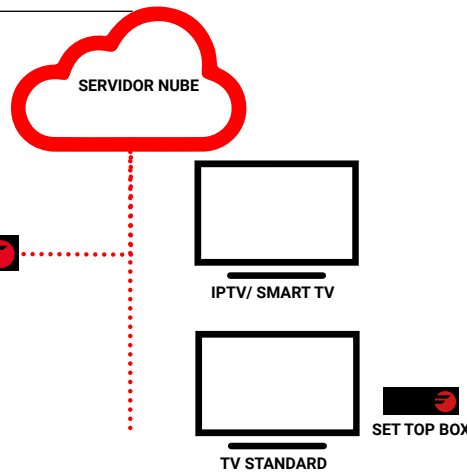


- Información de vuelos
- Información del bus
- Información Meteorológica



- Idioma
- Orientación parental
- Erase My Data
- Reinicio
- Información de red

REF.	MOD.	DESCRIPCIÓN
LICENCIA		
10101	FC ILR	Licencia Fagor Connect Basic STB
10121	FC SLR	Licencia Fagor Connect Basic SmartTV
10210	CSU 001	Servidor Cloud Connect (en la nube)
HARDWARE		
10001	ICONN 200	STB room
10041	LSR HP V1	Servidor Local V1



TVs compatibles



IPTV SOLUTION

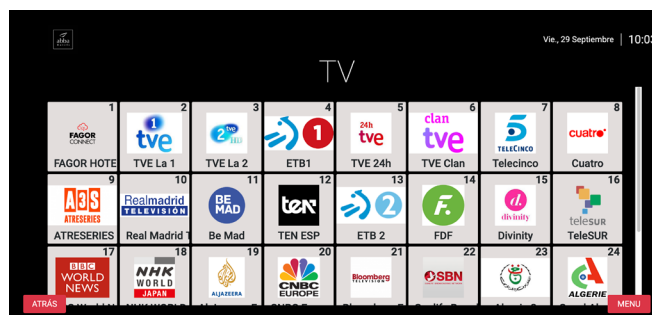
Fagor Connect: IPTV

TV & ENTERTAINMENT

- **TV Channels:** terrestrial and satellite on request of the hotel.
- **Radio Channels:** all streaming radio channels can be played on TV.



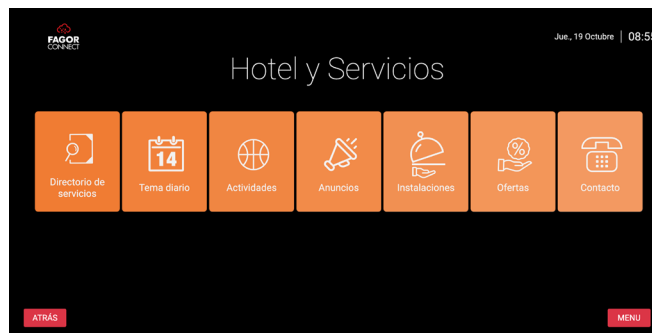
TV & ENTERTAINMENT



TV

Hotel & Services

- **Services directory:** description of the services offered by the hotel, opening hours, wifi, check in, check out, housekeeping, room service, etc.
- **Daily program:** in the case of having different activities, to have each day what activities there are.
- **Activities:** information on programmed activities.
- **Advertisements:** own advertisements and personalized to the guest according to the season.
- **Facilities:** information on facilities and opening hours.
- **Offers:** you can program offers throughout the year that the hotel may have, for example restaurant offers, breakfasts...
- **Contacts:** information on all hotel contacts, from reception, restaurant, gym, to emergencies, etc...



HOTEL & SERVICES



SERVICE DIRECTORY

IPTV SOLUTION

Fagor Connect: IPTV

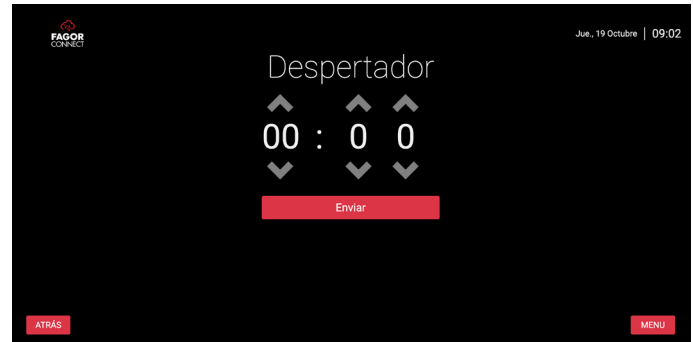


GUEST

- **Message:** general or personalized messages can be sent from the hotel to guests, logistics messages, popup offers or inquiries at the front desk. A welcome message can be configured with the guest's name and surname.
- **Profile:** a profile can be set up for regular guests.
- **Alarm clock:** a digital clock to be awakened from reception.
- **Preferences:** for regular customers, their preferences can be identified.
- **Invoice**



MESSAGE



AWAKENER



Information

- **Flight information:** flight information for airports in the area.
- **Bus information:** bus information for to be able to move in the destination.
- **Meteorological information:** from the place where you are located.



METEOROLOGICAL INFORMATION

APPLICATION Fagor Connect App



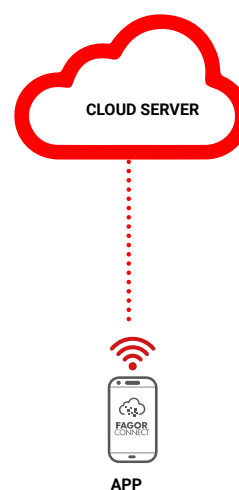
Messages with reception, notifications, booking a yoga class or a guide to the most interesting places to visit, these are some of the services that can be made available to the guest thanks to the hotel's mobile app.

The Fagor Connect App allows guests to easily connect their devices to their in-room TV through the hotel's WiFi network. This advanced application uniquely integrates all system services into a centralized IPTV platform.

Compatible with android and IOS.



REF.	MOD.	DESCRIPTION
LICENSE		
10210	CSU 001	Cloud Connect Server (in the cloud)
10301	FMO-011	Mobile App



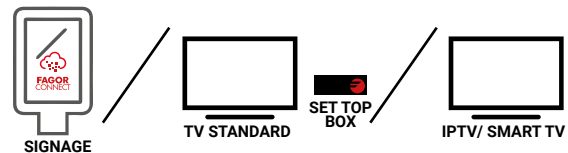
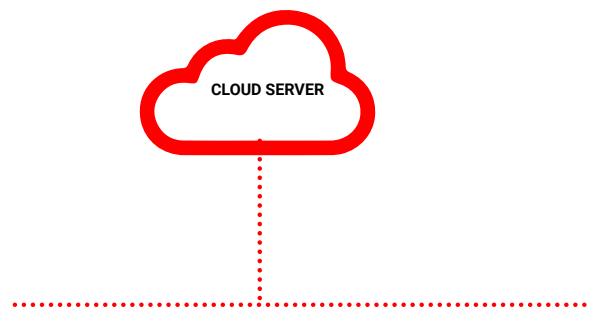
DIGITAL SIGNAGE Fagor Connect Signage



Can you imagine being able to centrally manage all the hotel's information screens? With our touch totem solution, timeline, personalized signage and promotions, each screen becomes a strategic point of information and advertising.

From our server, the process of designing and creating content for guests becomes easier and more intuitive than ever. You can control external advertising, promote activities, showcase internal offers, broadcast the corporate channel, and much more! Centralized management gives you full control over the information and advertising experience in every corner of the hotel.

REF.	MOD.	DESCRIPTION
LICENSE		
10141	FC ILS	Fagor Connect Digital Signage License
10210	CSU 001	Cloud Connect Server (in the cloud)
10142	FMO-0443	Info kiosk (totems) app
HARDWARE		
10002	ICONN 200S	Fagor Connect STB for digital signage




































TAILOR-MADE SERVICES

Fagor Connect Addons Modules

Additional modules based on licenses with an **annual fee**, which customizes the solution for each hotel. Add-on modules are additional services for the IPTV solution, the Fagor Connect App and/or digital signage.

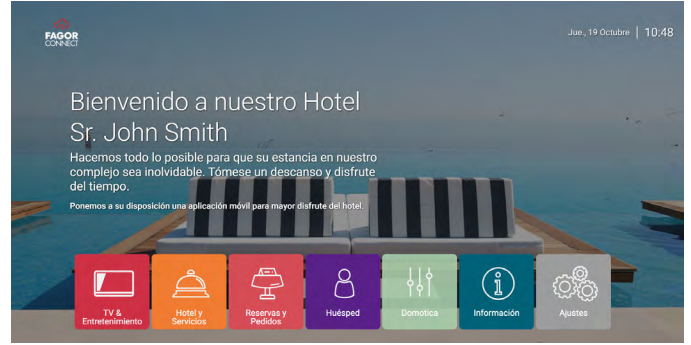
These modules can be integrated into the solution as needed flexible, in order to expand services according to the hotel's needs.

Ref.	Mod.	Product	Description	Support
10300	FMO-010	PMS integration	Integration of the PMS in the Fagor Connect solution.	 
10319	FMO-029	Cast Connect	TV casting service.	 
10141	FC ILS	Coporate channel license	1 HD TV channel with unidirectional informative content.	 
10305	FMO-015	Room service/ordering	Ordering system.	   
10303	FMO-013	Reservations	Reservation system for available services.	   
10302	FMO-012	Questionnaires	Digital questionnaires for business evaluation of hotel services.	   
10307	FMO-017	Janitor	Chat service between customers and hotel employees.	 
10306	FMO-016	Loyalty system	Customer loyalty system based on points and rewards.	 
10308	FMO-018	POI- Points of interest	Visualization of points of interest in the environment.	   
10324	FMO-034	Home automation integration	Intelligent room control for automation.	 
10309	FMO-019	Conference calendar (Timeline)	Display of the conference calendar (Timeline) and activities.	
10311	FMO-021	Self-check-in form	Online check-in form prior to arrival.	   

FMO-010
PMS integration

Ref: 10300

Integration of the PMS in the Fagor Connect solution.

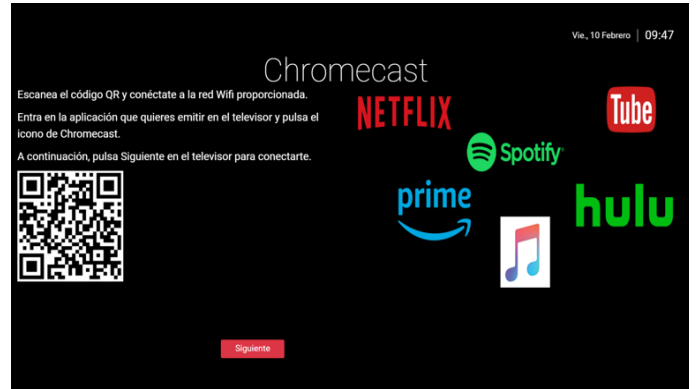


FMO-029
Cast Connect

Ref: 10319

Professional casting system to easily share your favorite series, movies, music, news and sports from your personal device to your bedroom TV.

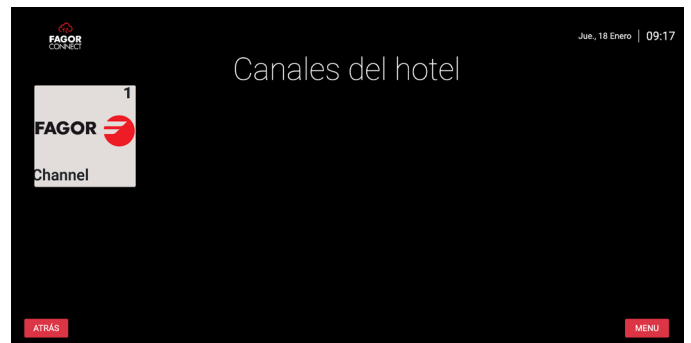
Integration into the hotel's existing WiFi network makes it easy to connect your mobile device to the TV through a simple QR code scan.



FC ILS
Corporate channel

Ref: 10141

This is a promotional channel only for the Hotel or corporation. You will be able to play a video where promotes the hotel's stays, with images from different periods as well as other establishments it may have in other places.



FMO-015
Room service/ ordering

Ref: 10305

This module allows you to order services from the hotel staff, integrating your POS ordering systems.



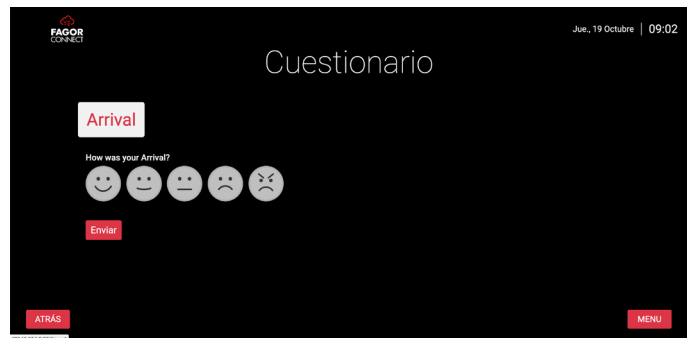
FMO-013
Reservations
 Ref: 10303

Reservation of hotel facilities, such as tennis court, spa, swimming pool. also with the possibility of integrating your own reservation system.



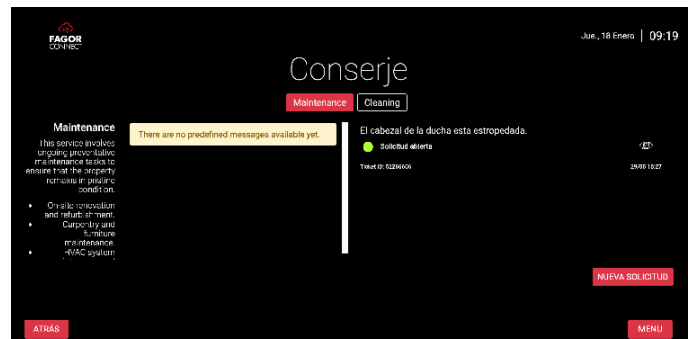
FMO-012
Questionnaire
 Ref: 10302

After the activities or the stay in the hotel, receive a satisfaction questionnaire to collect feedback of the experience. This gives extra information to the hotel to improve the offer, more adapted to the target audience.



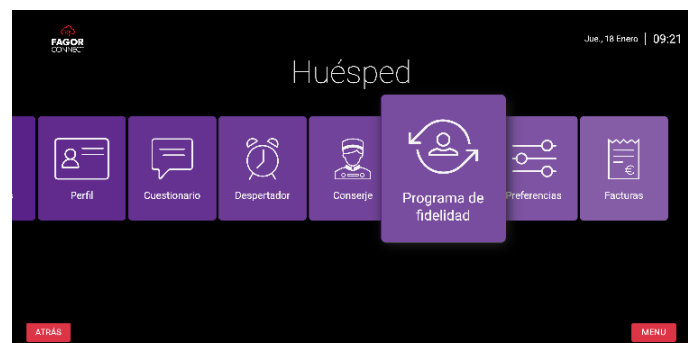
FMO-012
Janitor
 Ref: 10307

Instant communication with the guest from anywhere in the Hotel. Efficient and effective coordination, with direct chats between the Hotel staff so that the guest lacks nothing.



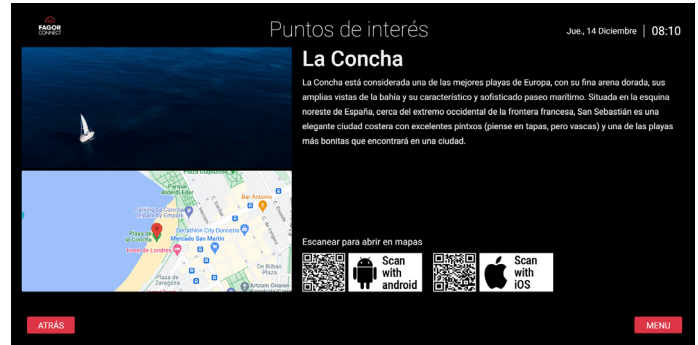
FMO-016
Loyalty system
 Ref: 10306

Loyalty program for the chain's most frequent and loyal guests.



FMO-018
Points of interest
 Ref: 10308

The hotel can choose which points of interest in the area it wants to promote and/or adapt the points of interest to the type of guest. A showcase for crossselling and promoting surrounding businesses.



FMO-034
KNX interface
 Ref: 10324

The user can control lights, curtains, room temperature... via cell phone or app

- Light: OFF/ON
- Air conditioning: degrees up and down
- Access doors: codes, pin depending on the system.



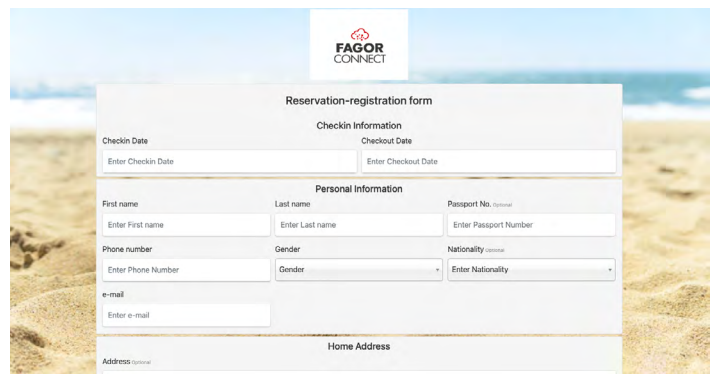
FMO-019
Conference Calendar (Timeline)
 Ref: 10309

It visually indicates where, at what time and the name of the event in each event or meeting room of the Hotel.



FMO-021
Self-checking form
 Ref: 10311

In order to avoid wasting guests' time upon arrival, they can be informed of the possibility of self-checking in and making their arrival at their destination easier.



ADDONS SERVICES

WiConnect: Wifi service

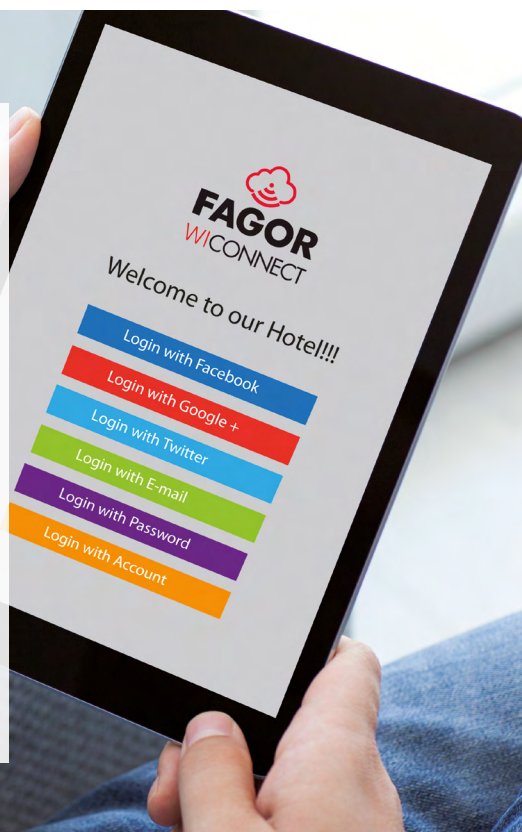


HIGH CONNECTIVITY AND ASSURED COVERAGE
Fagor presents a set of solutions designed to achieve efficient, secure Internet access and responsible for a high-capacity, multiservice, network infrastructure, using coaxial cable, Ethernet cable and fiber optics.

Through the device, the guest accesses the wifi network via the WICONNECT connection, without contacting the reception desk.

Professional management of customer wifi access, including:

- Customizable captive portal.
- Disclaimer with terms of use of the service.
- Definition of different profiles and assignments of bandwidth, user/password, RRSS, email...

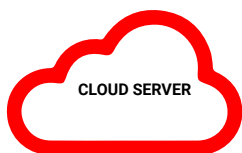
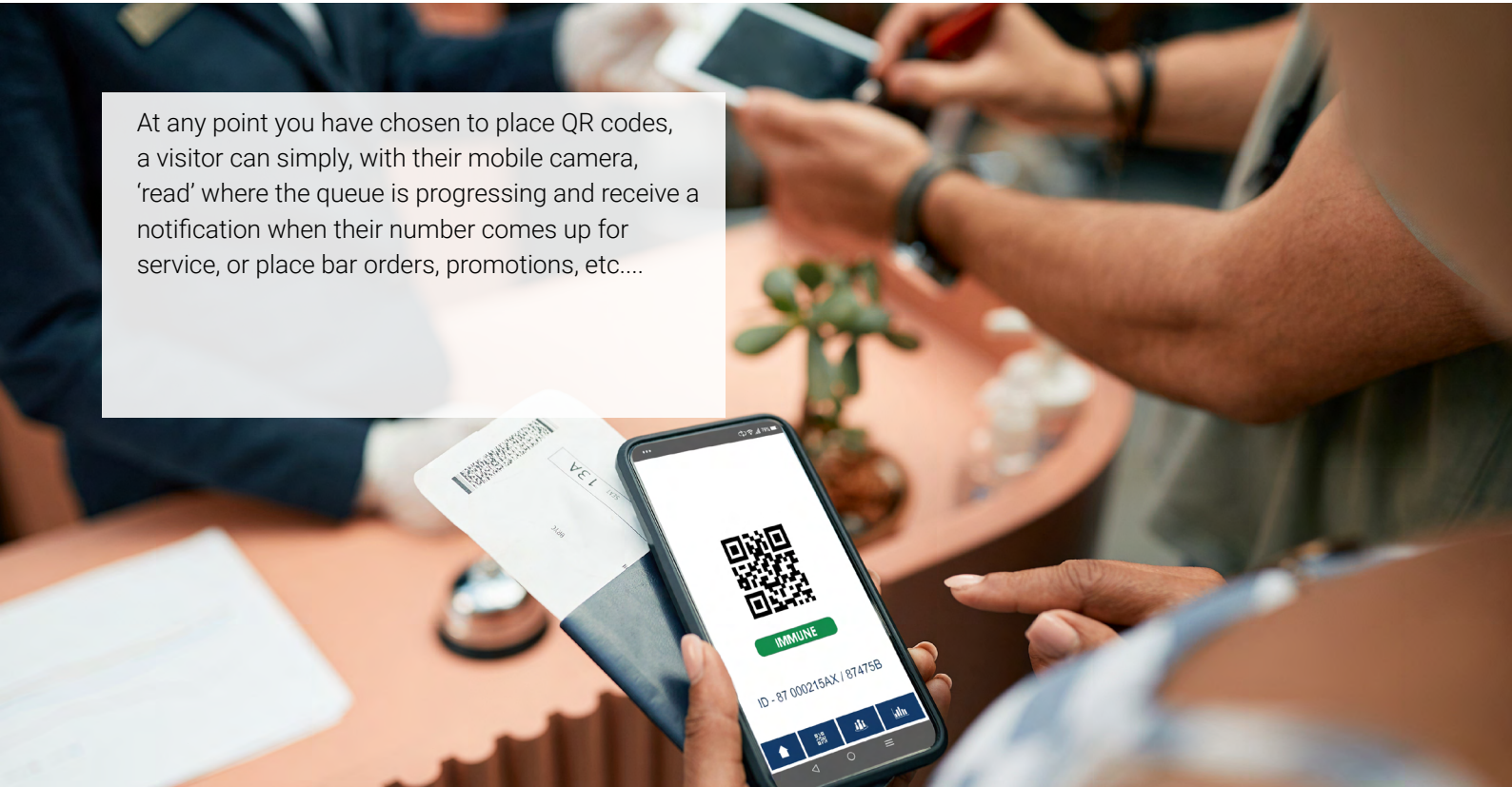


REF.	MOD.	DESCRIPTION
LICENSE		
10210	CSU 001	Cloud Connect Server (in the cloud)
10350	FMO-050	WiConnect (hotspot)
HARDWARE		
10511	ROR 301 -UI	ROUTER

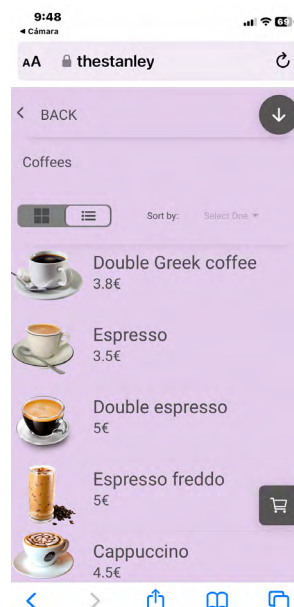
ADDONS SERVICES
Dynamic QR



At any point you have chosen to place QR codes, a visitor can simply, with their mobile camera, 'read' where the queue is progressing and receive a notification when their number comes up for service, or place bar orders, promotions, etc....



REF.	MOD.	DESCRIPTION
LICENCIA		
10210	CSU 001	Cloud Connect server (in the cloud)
10310	FMO-020	Dynamic QR code



ADDONS SERVICES

Intelligent queue management

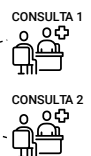
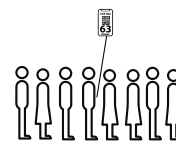
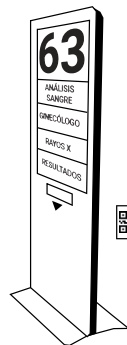
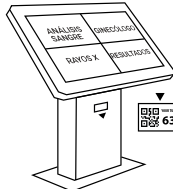
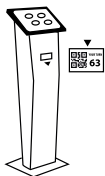
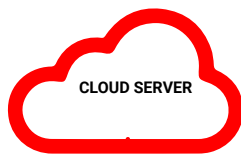
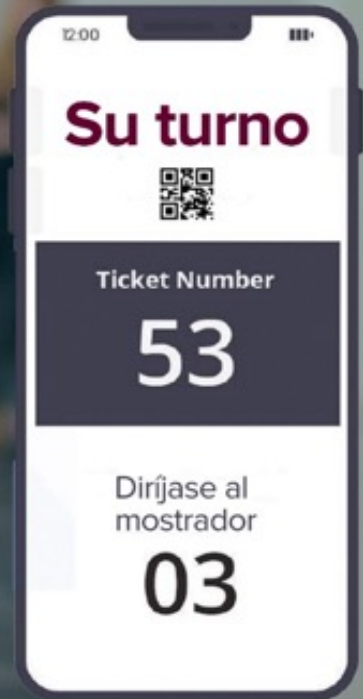


INTELLIGENT QUEUE MANAGEMENT

The user scans the code to avoid queuing, which has several advantages

- Controlled access
- Visual notification by traffic light
- Contactless or printed banknotes
- Constant updating throughout the area
- Multiple use of monitors/totems for informational or advertising purposes

Compatible with any TV, without the need to change the existing equipment. Possibility of special installations for kiosks, stands, videowalls...



REF.	MOD.	DESCRIPTION
LICENSE		
10210	CSU 001	Cloud Connect Server (in the cloud)
10321	FMO-31	Intelligent queue management
10322	FMO-32	Additional queue
10323	FMO-33	Additional user
HARDWARE		
10002	ICONN 200S	Set-top-box Connet for digital signage

CASTING SOLUTION

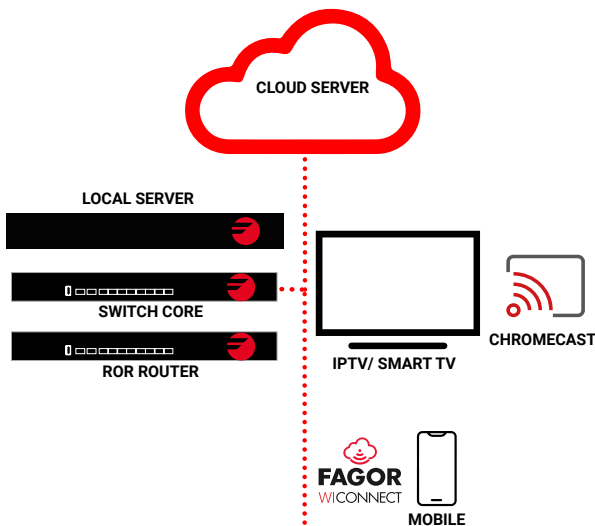
Cast Connect: Streaming services



Discover CastConnect, the ultimate solution to enjoy streaming like at home, directly on your hotel room screen!

Our advanced professional casting system, CAST CONNECT, from Fagor, is designed specifically for hotel environments, where guest privacy is a top priority. With this service, favorite series, movies, music, news and sports can be easily shared from a personal device to the in-room TV.

Integration into the hotel's existing WiFi network makes it easy to connect the mobile device to the TV via a simple QR code scan.



REF.	MOD.	DESCRIPTION
LICENSE		
10320	FMO-030	SW CastConnect server license for 150 devices
10210	CSU 001	Cloud Connect server (in the cloud)* optional
10032	GCD CAST V4	Dongle Chromecast V4 HD and device configuration
HARDWARE		
10511	ROR 301 R	Router
10041	LSR HP PRO	PRO Local server
10042	LSR LITE	Local server up to 80 users
10032	GCD CAST V4	Dongle Chromecast V4 HD and device configuration
10024	GCP COVER V4	Google Chromecast 4 Protection Cover



STREAMING SOLUTION

Cast Connect: Streaming services



- One-step authentication via QR code.
- Based on Google Chromecast (*).
- Compatible with IOS and Android.
- Carousel of background images.
- Secure guest authentication.
- Isolation of communications between rooms.
- Web interface for management (**).
- Personalization of the hotel brand.
- Multi-language support.
- Casting device monitoring(**).
- Analysis of the use of Casting services.
- Anti-theft cable option.
- Only HDMI input requirement for hotel televisions.
- Integration with PMS for Chromecast sessions Restart after checkout or guest language customization (**).
- Possibility of including video of the establishment.

(*). Chromecast is a trademark of Google LLC.

(**) Coming soon

The two main components of the solution are:

- Cast Connect Server.
- Casting device: Chromecast dongle

LOCAL SERVER V1

LSR HP V1



Local server for internal management of IPTV, chromecast and PMS devices

- 19" rack installation
- Allows management of IPTV, Chromecast and PMS devices over the LAN.
- Enables license control and remote device upgrades.

MODEL	LSR HP V1
Reference	10041
CPU	Intel Xeon E5-2430 Lv2 (6 Core 2.0GHz) or superior
RAM	16GB DDR4 RDIMM 2133MHz
Hard disk	2X SSD 480GB SATA 2.5" + RAID tray
Power supply	2X Power supply HP 460w redundant
LAN adapter	4 ports 1Gb
Rieles para rack	19" rack mounting
Operating temp.	10°C to 35°C
Dimensions	4.32 x 43.46 x 75
Weight	14 Kg approx.

10024 GCP COVER V4 Google Chromecast 4 Protection Cover
 10032 GCD CAST V4 Dongle Chromecast V4 HD and device configuration

CHROMECAST WITH GOOGLE TV

Serie HD



- Streaming entertainment on your TV
- Voice search
- Enjoy movies, series and Netflix in 4K with HDR

MODEL	CHROMECAST GOOGLE TV
Resolution	Up to 1080p with HDR at 60 FPS
Video formats	HDR10, HDR10+, HLG2
Audio formats	Dolby Digital, Dolby Digital Plus y Dolby Atmos via HDMI pass-through
Conectivity	Wi-Fi 802.11ac (2,4 GHz / 5 GHz) Bluetooth®
Ports	HDMI to connect directly to the USB Type-C socket of the TV set
Operating system	SO Android TV
Dimensions	162.5 x 61 x 12.5
Weight	55 gr.

HARDWARE



GPON TECHNOLOGY

Network infrastructure

We provide solutions for high-speed local area networks based on the latest optical technologies such as GPON.

Why GPON?

- Optical technology immune to electro-magnetic interference.
- Encrypted information to ensure the highest security.
- Integrates all IP services through a single network: IPTV, VoIP, WIFI, access control...
- It is a passive network with practically no losses, thus reducing the use of electrical energy (up to 84% compared to a copper network).
- LEED (Leadership in Energy and Environmental Design) certification according to ITU-T.

What are the elements of our solution?

- Multiprocessing and IPTV headend equipment.
- LAN network equipment in ethernet or GPON technology.
- Management of wifi access profiles for customers and employees.
- Remote management software via WEB.
- Maintenance and incident services.

At Fagor Connect we offer:



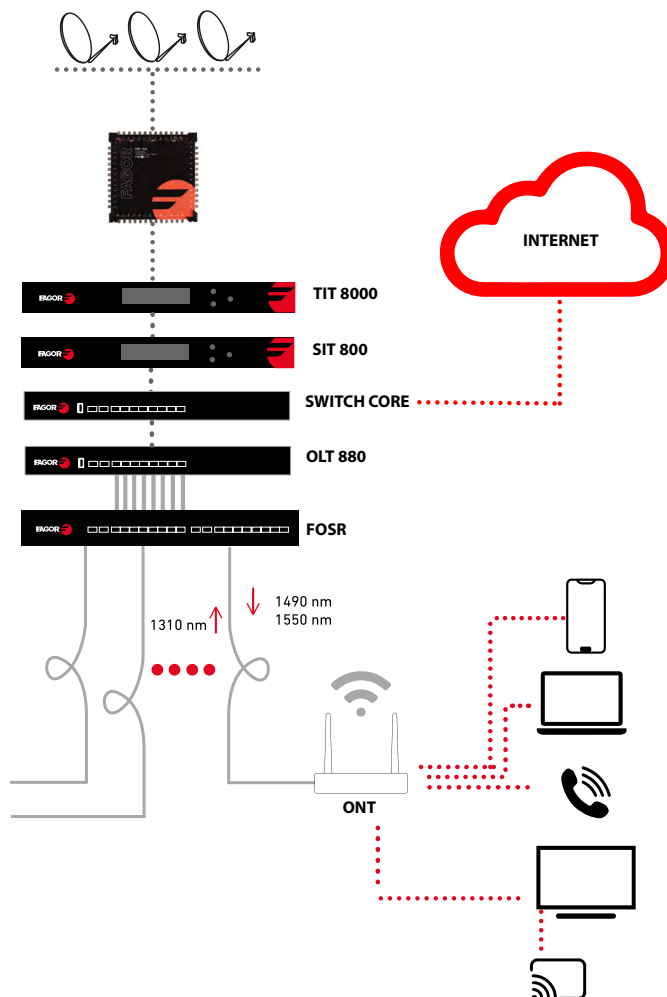
Project management



Integration and interoperability with the rest of the hotel software systems



Set-up and certification



TERRESTRIAL ANTENNAS

RHOMBUS series

OPTIMISED DIGITAL TV HDTV ANTENNA with high gain and excellent mechanical resistance.

FEATURES

- Modern, optimised design to achieve optimum gain/size ratio.
- Self-adapting: provides a constant, balanced signal, minimizing loss and maximizing adaptation.
- Light weight and robust, designed with state-of-the-art technology to guarantee an excellent response and a long lifetime.
- Active/passive dipole.
- Easy installation, in just 3 clicks, no tools needed.
- Compact, small-sized single-unit packing.
- Simple, ergonomic mast fixing system to guarantee secure mounting.



MODEL		RHOMBUS A/P 48	RHOMBUS 5 A/P 48	RHOMBUS P 48	RHOMBUS 5 P 48
Reference		84410	84412	84411	84413
Channels		21 ÷ 48			
Gain	dB	17 (34 active)			17
Power supply	V	12-24			-
Current drawn	mA	45			-
Impedance	Ω	75			
Return losses	dB	>10			
Back-to-front ratio	dB	24			
Horizontal opening angle	°	25			
Noise figure	dB	2			
Windload	130 km/h	65			
	160 km/h	92			
Packing dimensions (1 u.)	mm	600 x 375 x 170	600 x 400 x 690	600 x 375 x 170	600 x 400 x 690
Weight	Kg	2,15	10	2,15	10



LIGHTWEIGHT, BUT ROBUST



SELF-ADAPTING



LTE MAXIMUM PROTECTION



HIGH RESISTANCE



EASY INSTALLATION



COMPACT SINGLE-UNIT PACKAGING

SATELLITE DISHES

Dishes

Satellite dishes manufactured of electro zinc-coated steel with a polyester coating ensuring high level of resistance to weather conditions.

APPLICATION

Suitable for community and individual Satellite TV installations. Available a wide range of diameters according to the size of the installation.

FEATURES

- The parabolic reflectors are designed to achieve high gain.
- Pole or wall mounting.



MODEL		PO 064	PO 081	DPO 105
Reference		86064	86081	86105
Diameter	cm	51 x 57	73 x 80	91 x 100
Focal distance	cm	32,7	46,8	58,3
Type of reflector		Offset		
Material		Electro zinc-coated steel		
Coating		Polyester		
Type of fixing		Floor/wall/mast		Mast
Mast diameter	mm	30 ÷ 60		
Elevation	°	17 ÷ 55		-5 ÷ 82
Offset angle	°	19		
Azimuth	°	180		
LNB fixing Ø	mm	25 ÷ 40		
Frequency range	GHz	10 ÷ 12,75		
Gain (11,7 GHz)	dB	35	38	39,2
Efficiency	%	>60		
Beam width (-3 dB)	°	2,8	2,4	2,1
F/D relation		0,64		
Wind speed		Operating: up to 130 km/h Maximum: up to 150 km/h		
Packing dimensions	mm	610 x 610 x 110	830 x 840 x 120	1020 x 1000 x 120
Weight	Kg	5	9	10

MECHANICAL ACCESSORIES

Supports for Antennas

FLOOR MOUNT

Floor mount support 200 x 200 mm.

MODEL		PPA 200
Reference		86104
Distance between holes	mm	200 x 200
Hole diameter	mm	20
Height	mm	820
Tube diameter	mm	60
Units per package		1
Packing dimensions	mm	920 x 280 x 270
Weight	Kg	6,7



SATELLITE DISHES

Satellite dish + LNB Kits

Kits composed of Offset satellite dishes manufactured of eletro-zinc coated steel with a polyester coating and LNB converters.

APPLICATION

Suitable for community and individual satellite TV installations.

FEATURES

- The parabolic reflectors are designed to achieve high gain, guaranteeing great strength and mechanical resistance.
- Easy fitting system.
- Universal LNB: low noise figure and high gain.



MODEL		KIT PO 064	KIT PO 081
Reference		86164	86181
Packing dimensions (4 u.)	mm	630 x 605x 113	850 x 844 x 125
Weight (4 u.)	Kg	14.7	17
SATELLITE DISH			
Diameter	cm	51 x 57	73 x 79
Focal distance	cm	32.7	53
Type of reflector		Offset	
Material		Electro zinc-coated steel	
Coating		Polyester	
Mast diameter	mm	30 ÷ 60	
Elevation		10° ÷ 90°	
Offset angle		28°	26°
Azimut		360°	
Frequency range	GHz	10,7 ÷ 12,75	
Gain (10.7 GHz)	dBi	33.5	35.9
Gain (11.7 GHz)	dBi	34.8	37.4
Gain (12.7 GHz)	dBi	35.4	38.0
Efficiency	%	> 70	
F/D relation		0.64	
Wind speed		Operating: up to 130 km/h Maximum: up to 150 km/h	
UNIVERSAL LNB			
Number of inputs		1	
Polarity		VL, HL, VH, HH	
Input frequency	GHz	Low Band 10.7 ÷ 11.7 High Band 11.7 ÷ 12.75	
Oscillator frequency	GHz	Low Band 9.75 High Band 10.60	
Output frequency range	MHz	Low Band 950 ÷ 1950 High Band 1100 ÷ 2150	
Noise figure at 20° C	dB	0.2	
Conversion gain	dB	50 ÷ 65 (typical 55)	
Output level (1 dB of compression)	dB	> 0 (typical 5)	
Power supply	V	11.5 ÷ 14 (V); 16 ÷ 19 (H);	
22 KHz tone		0.6 Vpp ± 0,2 for High band	
Consumption	mA	< 150	
Output connectors		F (f)	
Operating temperature range	°C	- 25 ÷ + 60	

CASCADABLE MULTISWITCHES

FMC series

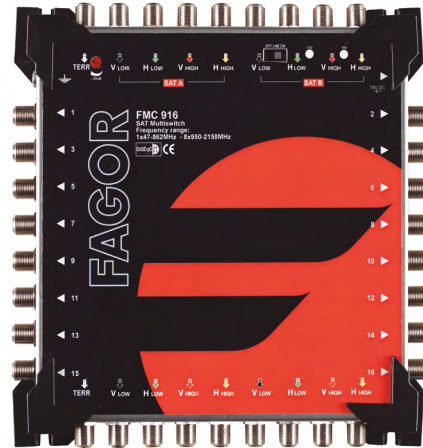
SAT-IF cascade multiswitches 4 SAT inputs + 1 Terrestrial input.

APPLICATION

For the distribution of satellite TV signal up to 5 polarities. Each user receives both satellite and terrestrial signal by only one coaxial cable.

FEATURES

- FMC series, cascade models, FMF series final models.
- Input for terrestrial signal, compatible with terrestrial digital broadcast (DVB-T).
- Control by voltage/tone from the user’s receiver. Satellite selection through DiSEqC 2.0.-2.1.
- FMF models include power supply SPS 1825.



MODEL		FMC 508	FMC 512	FMC 516	FMC 524	FMC 532	FMF 508	FMF 512	FMF 516	FMF 524	FMF 532	
Reference		86432	86433	86434	86445	86446	86460	86461	86462	86463	86464	
Inputs		4 SAT + 1 TERR										
Subscriber outputs		8	12	16	24	32	8	12	16	24	32	
Frequency range	TERR	70÷862										
	SAT	950÷2150										
Tap gain / loss	TERR	-2 ± 2	-2 ± 2	-3 ± 2	-7 ± 2	-8 ± 2	2 ± 2	2 ± 2	-0 ± 2	-2 ± 2	-3 ± 2	
	SAT	-2±2 (±2)	-2±2 (±2)	-2±2 (±2)	-2±2 (±2)	-2±2 (±2)	-2±2 (±2)	-2±2 (±2)	-2±2 (±2)	-2±2 (±2)	-2±2 (±2)	
Passage loss	TERR	-4	-4	-4,5	-5	-6						
	SAT	-1,5	-2	-2,5	-3	-4						
Isolation	SAT-SAT	>40										
	SAT-TERR	>35										
	OUT-OUT	>35										
Max. Output level (SAT-35dB IM3)	SAT	102										
Satellite and polarity selection		13 Vdc / 18 Vdc - 0 / 22 KHz DiSEqC 2.0-2.1										
Max. current consumption (without LNB)	mA	180			300			180			300	
Supply voltage	Vac	-					195-265 Vac / 18Vdc / 2.5 A					
Operating temperature range	°C	-10 to 40										
Packing dimensions	mm	220 x 245 x 50			233 x 315 x 50		233 x 350 x 50		220 x 245 x 50		233 x 315 x 50	233 x 350 x 50
Weight	Kg	0.55	0.6	0.75	1.15	1.3	0.6	0.65	0.8	1.2	1.35	

TERRESTRIAL TV TO IP STREAMER

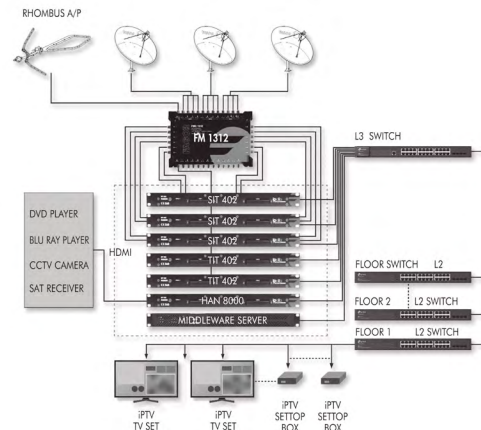
TIT Series



These transmodulators take services from digital Terrestrial TV channels and, after selecting the desired services, convert them for IPTV distribution into an Ethernet network. Common Interface models allow you to decode encrypted services using CAM modules and subscriber cards.



Example



FEATURES

- The metal case is ready for the 19" rack mounting and has the possibility of adding ventilation fans.
- Each module has two independent streaming outputs with a capacity of more than 12 services each one.
- The modules are programmable through its web server locally or in remote mode.
- PID filtering.
- Possibility of creating services mixing Audio PID's with Video PID's. For instance, two services with the same video but with audio in two different languages.

MODEL	TIT 402	TIT 422
Reference	08245	08246
INPUT		
Inputs	4 (2 + 2)	
Standard	DVB-T (EN 300 744, EN 302 755)	
Frequency range	MHz	174 ÷ 862
Input level	dBµV	47 ÷ 90
FEC mode	LDPC+BCH/ Convolutional Coding+Reed Solomon	
Code rate	1/2,3/5, 2/3, 3/4,4/5, 5/6, 7/8	
Guard interval	1/4, 1/8, 1/16, 1/32; (19/128, 19/256, 1/128)	
FFT	2K, 8K / 1K, 2K, 4K, 8K, 16K, 32K	
DC pass	Switchable 12Vdc 100mA	
DVB-SI & TS PROCESSING		
Conditional access	NO	EN 50221
Table processing	PAT, PMT, SDT, PID filtering, Service creation and edition	
Output format	SPTS/MPTS	
OUTPUT		
Number	2 independents	
Number of services	32 (2x16)	
Physical interface	Ethernet 100-BaseT over RJ-45 (IEEE 802.3u)	
TCP/IP Streaming protocol	IP multicast (RTP or UDP)	
Signalling protocols	SAP	
CONTROL INTERFACE		
Number	2 independents	
Physical Standard	Ethernet 1000-BaseT over RJ-45	
Protocol	Web Server	

SAT TO IP STREAMER

SIT series

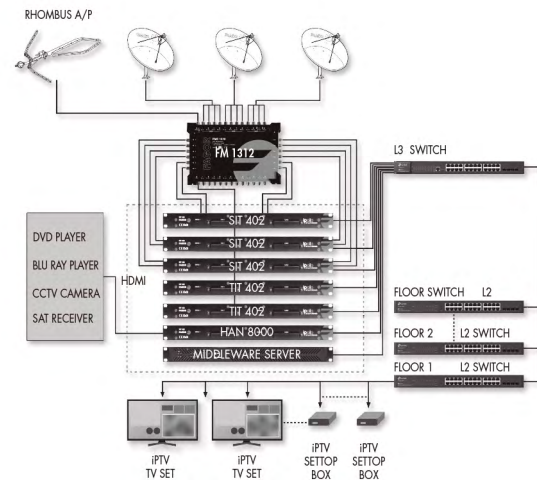
These devices take services from satellite transponders and after selecting them, transmit them in IP packages for their distribution in an Ethernet network. The Common Interface models allow to decrypt scrambled services using CAM's and cards with rights.



FEATURES

- The metal case is ready for the 19" rack mounting and has the possibility of adding ventilation fans.
- Each module has two independent streaming outputs with a capacity of more than 12 services each one.
- The modules are programmable through its web server locally or in remote mode.
- PID filtering.
- Possibility of creating services mixing Audio PID's with Video PID's. For instance, two services with the same video but with audio in two different languages.

Example



MODEL	SIT 402	SIT 422
Reference	08240	08241
INPUT		
Inputs	4 (2 + 2, Loop or independent)	
Modulation type	QPSK, 8-PSK	
Frequency range	950 ÷ 2150	
Input level	47 ÷ 86	
Symbol Rate	1 ÷ 62 / 1 ÷ 45	
Code rate	1/2, 2/3, 3/5, 3/4, 4/5, 5/6, 7/8, 8/9, 9/10	
Roll-Off	0.15, 0.20, 0.25, 0.35	
LNB control	22 KHz 13/17 V or DiSEqC 1.0	
DVB-SI AND TS PROCESSING		
Conditional access	NO	EN 50221
Table processing	PAT, PMT, SDT, PID filtering, Service creation and edition	
Output format	SPTS/MPTS	
OUTPUT		
Number	2 independent	
Number of services	32 (2x16)	
Physical interface	Ethernet 100-BaseT over RJ-45 (IEEE 802.3u)	
TCP/IP Streaming protocol	IP multicast (RTP or UDP)	
Signalling protocols	SAP	
CONTROL INTERFACE		
Number	2 independent	
Physical Standard	Ethernet 100/1000-BaseT over RJ-45	
Protocol	Web Server	

HDMI TO IP STREAMER

HAN series

The HAN 8000 encoder modulates the content of 4 HDMI input (MPEG-4 AVC/H.264 HD) signals to a DVB-ASI or IP output.

APPLICATION

It is used to watch the content of several HD digital sources, such as satellite receivers, DVD or Blue-ray players, etc, on a TV equipped with a DTT receiver

FEATURES

- Multiplexer function for 4 HDMI inputs (MPEG-4 AVC/H.264 HD).
- Supports HDCP
- HD resolution up to 1920*1080_60p.
- MPEG-1 Layer 1, Layer 2 audio encoding.
- Programming via front panel (keyboard + LCD display) or PC (local or remote).
- Mountable in 19" rack.
- Includes:
 - 1 x BNC-F(m) cable for one COFDM output.
 - 1 x user's manual.
 - 1 x 230Vac cable.
- Incluye:
 - 1 x Cable BNC-F(m), para una de las salidas COFDM.
 - 1 x Manual de usuario.
 - 1 x Cable de alimentación 230 Vac.



Supply voltage	V	90 ÷ 250
Consumption	W	25
Operating temperature range	°C	0 ÷ 45

MODEL	HAN 8000	
Reference	08205	
VIDEO ENCODING	H.264/AVC High Profile Level 4.0 (HD)	
Input	HDMI x 4 + ASI	
Resolution	1920*1080_60p, 1920*1080_50p; 1920*1080_60i, 1920*1080_50i; 1280*720_60p, 1280*720_50p	
AUDIO ENCODING	MPEG1 Layer II	
Sample rate	KHz	34/44,1/48
Bit rate	Kbps	128, 160, 192, 224, 256, 320, 384
ASI OUTPUT	DVB-ASI	
Connector type	2 x BNC, 75 Ohm	
IP OUTPUT	IP/UDP (TS over IP); MOTPS/SPTS/Unicast/Multicast	
Connector Type	RJ-45	
Output bit rate	Mbps	80 (4:2:0)
Programming	Keyboard + LCD / NMS (Ethernet RJ-45)	
Packing dimensions	mm	580 x 580 x 135
Weight	Kg	6.2

SET-TOP-BOX for IPTV HD

ICONN series

Device enabling reception of digital interactive TV, IPTV and digital signage media



Supply voltage	V	90 ÷ 250
Consumption	W	25
Operating temperature range	°C	0 ÷ 45

MODEL	iconn 200
Reference	10001
Processor	Amlogic S912 octa core ARM-A53 CPU up to 2GHz (DVFS)
GPU	ARM Mali-T820MP3 GPU up to 750MHz (DVFS)
Internal flash storage	16GB eMMC
RAM memory	2GB DDR3
RJ45 connector	1000M Ethernet
Wi-Fi	Support 802.11 a/b/g/n/ac Dual Band AC Wi-Fi
Wifi antenna connector	SMA connector + external 3dBi antenna included
USB	3 High Speed 2.0
Video output	1 x HDMI 2.0 up to 4K 1 x RCA
Video decoder	H.264 AVC HP@L5.1 up to 4Kx2K@30fps H.264 MVC up to 1080p@30fps MPEG-4 ASP@L5 up to 1080p@30fps WMV/VC-1 SP/MP/AP up to 1080p@30fps AVS-P16(AVS+) /AVS-P2 JiZhun Profile up to 1080p@30fps MPEG-2 MP/HL up to 1080p@30fps MPEG-1 MP/HL up to 1080p@30fps RealVideo 8/9/10 up to 1080P WebM up to VGA MJPEG up to 1080p@30fps
Protocols	IPTV Multicast (IGMP v2/v3) Video over UDP, RTP and HTTP HTML5 audio and video tags HLS (HTTP Live Streaming) MPEG DASH Video Streaming
Operating system	Android 7.1 Nougat
Operating temperature	0°C-40°C
Feeding	5 VDC
Consumption	< 2 A
Network adapter	100-240 VAC 50/60 Hz – 5VDC 2A
External dimensions	166x112x26 mm
Gross Weight	328gr

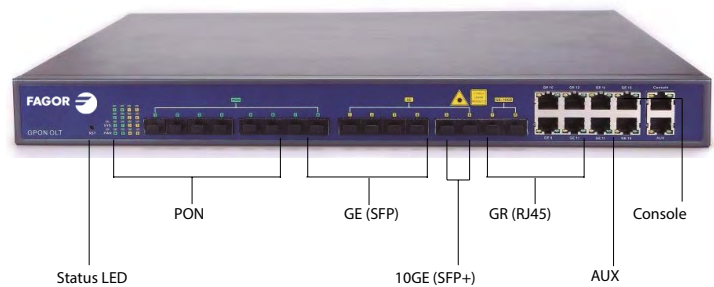
OPTICAL LINE TERMINATION FOR GPON NETWORKS

OLT series

Headend equipment for GPON networks. Intuitive Web-based configuration without the need for external systems. 8 GPON downlink ports.

FEATURES

- 6 GE SFP ports. 2 10GE SFP+ ports. 8 GE RJ45 uplink ports.
- ITU-T G.984.x and G.988 compliant.
- Remote management via SNMP/WEB/EMS.
- Speed per PON port: downstream 2.5Gbps. upstream 1.25 Gbps.
- Supports ONT auto-discovery and remote software upgrade via OMCI.
- Dual hot-swappable power supply.
- 1U 19" rack.



MODEL	OLT 880	
Reference	10421	
INPUT		
Uplink Interfaces	2 puertos 10GE (SFP+) 6 puertos 1GE SFP 8 puertos 1GE RJ45	
Management Interfaces	1 RJ45 FE AUX 1RJ45 consola	
CATV input power	dBm	-5 a 10
OUTPUT		
No. of GPON ports	8 puertos SFP	
No. of splitting per port	1:128	
Downstream bitrate per PON	Gbps	2,488
Upstream bitrate per PON	Gbps	1,244
GPON standard	ITU-T G.984.X/G-988	
Transmission distance	km	20
Wavelengths	nm	TX 1490 / RX 1310
SFP connectors	SC/UPC	
Fiber type	9/125um SM	
No. of VLANs	4096	
VLAN management	port VLAN, tag/untag, transparent transmission, VLAN translation, QinQ	
Multicast	256 grupos IP, IGMP snooping	
DHCP	server, relay, snooping	
QoS	por puerto, VID, TOS y MAC	
Management interface	Web/Telnet/CLI/EMS	
Management port	Ethernet RJ45	
Status LED	IN/OUT/POWER	
Mounting	19" rack 1U	
Power supply (redundant)	Vac	100 ÷ 240, 50-60Hz
Consumption	W	45
Operating temperature	°C	0 ÷ 50
Storage temperature	°C	-40 ÷ 85
Storage humidity	%	5 ÷ 90
Dimensions	mm	422 × 200 × 44

OPTICAL NETWORK UNIT FOR GPON NETWORKS

ONT series

GPON optical network terminal.

FEATURES

- Several 10/100/1000BASE-T Ethernet ports.
- 1- and 2-band Wi-Fi with transfer rates from 300 to 1200 Mbps.
- POTS port for telephony.
- Compatible with ITU-T G.984.x standard.
- Compatible with Triple play services: Internet, VoIP and IPTV.
- Maximum speed: downstream 2.5Gbps, upstream 1.25 Gbps.
- Management via OMCI, Web, SSH, TR069.



MODEL	ONT 115	ONT 412 C	ONT 425
Reference	10433	10431	10434
GPON Standard	ITU-T G.984.X (G.984.5 WBF)		
Class	B+		
Wavelengths	nm	Downlink 1490 / Uplink 1310	
SFP Connectors	SC/UPC	SC/APC	SC/UPC
Authentication	SN o contraseña según G.984.3		
Other	Mapeo flexible entre GEM port y TCONT		
Ethernet ports	4GE RJ45		
Router functionality	Bridging & Switching (802.1d / 802.1q) 8 prioridades de tráfico (802.1p). Filtrado de VLANs. IGMP multicast para IPTV		
CATV			
Bandwidth	---	47-1000MHz	---
Impedance	---	75	---
TELEPHONY POTS	82dBµV con CAG (+2~ -10dBm)		
REN			
Connectors	2 RJ11	1 RJ11	
Ring tones	DTMF		
Protocols	G.711A/µ, G.729a/b, and G.722, T.30/T.38/G.711 fax mode, SIP		
WIFI SPECIFICATION			
Standard	IEEE 802.11 /b/g/n (2.4) 2x2 MIMO	IEEE 802.11 b/g/n/ac (2.4/5G) 2x2 MIMO	IEEE 802.11 a/b/g/n/ac/ax (2.4/5G/WIFI6) MU-MIMO
Bandwidth	300Mbps	300Mbps (2.4G), 867Mbps (5G)	300Mbps (2.4G), 867Mbps (5G), 574+1201Mbps (WIFI6)
Antenna	2x5dBi	4x5dBi	4x5dBi
Others	4 SSID	4-4 SSID	4+4 SSID
Management interface	Web/OMCI/TR069		
Status LED	POWER/PON/LOS/LAN/TEL/USB/WLAN/WPS		
Mounting	Pared y sobremesa		
Power supply (redundant)	V	12Vdc, 1.5A (adaptador AC incluido)	
Consumption	W	<10	<12
Operating temperature	°C	0 ÷ 50	
Storage temperature	°C	-30 ÷ 70	
Storage humidity	%	5 ÷ 95	
Dimensions	mm	205 x 140 x 37	173 x 120 x 30
Weight	Kg	0,34	0,42

OPTICAL NETWORK UNIT FOR GPON NETWORKS

ONT series

GPON optical network terminal

FEATURES

- 8 10/100/1000BASE-T Ethernet ports with 48 V PoE.
- 1- and 2-band Wi-Fi with transfer rates from 300 to 1200 Mbps
- ITU-T G.984.x standard compliant
- Compatible with Triple play services: Internet, VoIP and IPTV
- Maximum speed: downstream 2.5Gbps, upstream 1.25 Gbps
- Management via OMCI, Web, SSH, TR069.



MODEL	ONT 825 PoE
Reference	10435
GPON standard	ITU-T G.984.X (G.984.5 WBF)
Class	B+
Wavelengths	nm
SFP connectors	Downlink 1490 / Uplink 1310
Authentication	SC/UPC
Other	SN or password according to G.984.3
Ethernet ports	Flexible mapping between GEM port and TCONT
Router functionality	8GE RJ45 RJ45 POE (Max 30W/port) IEEE802.3at/af
	Bridging & Switching (802.1d / 802.1q). 8 traffic priorities (802.1p). VLAN filtering. IGMP multicast for IPTV

WIFI SPECIFICATION

Standard		IEEE 802.11 b/g/n/ac
(2.4/5G) 2X2 MIMO		300Mbps (2.4G), 867Mbps (5G)
Bandwidth		300Mbps (2.4G), 867Mbps (5G)
Antenna		4x2dBi
Other		4+4 SSID
Management interface		Web/OMCI/TR069
Status LEDs		POWER/PON/LOS/WLAN
Assembly		Wall-mounted and table-top (weatherproof enclosure optional)
Power supply (redundant)	V	48Vdc, 2.5A
Consumption	W	<120W
Operating temperature	°C	-30 ÷ 55
Storage temperature	°C	-30 ÷ 60
Storage humidity	%	10 ÷ 90
Dimensions	mm	196 x 160 x 32
Weight	Kg	0,32

OPTICAL TRANSMITTER

ROT series

1550 nm optical transmitter for use in FTTH. FTTx PON. Triple-play and RF Overlay.

APPLICATION

- Conversion of RF signals into amplitude-modulated optical signals for CATV HFC networks.

FEATURES

- Equipped with DFB laser. for very good linearity and high optical output power.
- Advanced multi-frequency RF predistortion technology ensures perfect CTB and CSO performance at high standard CNR value.
- Automatic gain control (AGC) enables stable output at different RF input levels.
- Different networks can be optimized by OMI adjustment.
- Automatic temperature control, which



- ensures a long service life of the device.
- Built-in dual backup power supply.
- Configuration of system parameters controlled by the front panel keypad or by the user-friendly web interface.
- A standard RJ45 interface is provided. which supports SNMP and WEB remote network management.

MODEL		ROT 506
Reference		10400
OPTICAL PARAMETERS		
Output power	dBm	6
Output wavelength	nm	1550
Laser linewidth		0,65
SMSR	dB	≥45
XP	dB	≥20
RIN	dB/Hz	≤-160
Optical return loss	dB	≥50
Fiber connector		SC/APC
RF PARAMETER		
Frequency Range	MHz	47-862
Input level	dBμV	70...100
Flatness	dB	±0,75
CNR	dB	≥51
CTB	dB	≥65
CSO	dB	≥60
Return loss	dB	≥16
Input impedance	Ω	75
RF connector		F-hembra
OTHER PARAMETERS		
Network management interface		SNMP y WEB
Power supply	V	90 ÷ 265
Power consumption	W	≤30
Operating temperature	°C	-5 ÷ 55
Storage temperature	°C	-40 ÷ 85
Operating relative humidity	%	5 ÷ 95
Dimension	mm	370 × 483 × 44

OPTICAL WEDFA AMPLIFIER

OYA series

Optical amplifier in rack format, compatible with EPON/GPON systems.

APPLICATION

- Suitable for fiber optic signal distribution.

FEATURES

- 8 WDM (RF Overlay+GPON) output ports.
- Output power 8*19dBm.
- Adjustable output power from -3 to 0 dB.
- Wide input range from -5 to 10 dBm.
- Very low noise figure.
- Input/output/status/power status indicator LEDs.
- Laser Bias input level and current monitoring and alarms.
- Dual hot-swappable power supply.
- Control and monitoring via WEB/SNMP.
- 1U 19" rack.



MODEL	OYA 819	
Part number	10412	
No. of ports OLT	8	
INPUT		
CATV Wavelength	nm	1540-1560
OLT Wavelength	nm	1310/1490
CATV input power	dBm	-5 a 10
OUTPUT		
Output power	dBm	8*19
Output power regulation	dB	-3 a 0
Power stability per port	dB	0,1
Noise figure (@6dBm Input)	dB	4 (max. 5,8)
INPUT-OUTPUT		
Return loss	dB	55
IN-OUT isolation	dB	30
OLT optical connectors	SC/UPC	
CATV+OUT optical connectors	SC/APC	
OTHER PARAMETERS		
Management interface	SNMP/WEB	
Management port	Ethernet RJ45	
Display and buttons	LCD/4	
Status LED	IN/OUT/POWER	
Mounting	19" rack 1U	
Power supply (redundant)	V	90 ÷ 265
Consumption	W	≤50
Operating temperature	°C	-5 ÷ 50
Storage temperature	°C	-20 ÷ 85
Storage humidity	%	5 ÷ 95
Dimension	mm	483 × 422 × 44
Weight	Kg	11,5

SWITCH ETHERNET 26 PUERTOS

ECS 226

Intelligent switch with 24 Fast Ethernet ports plus 2 Gigabit Ethernet (GbE) uplinks.

APPLICATION

Suitable for IPTV signal distribution.



FEATURES

- Web-based user interface
- Download and copy configuration between switches
- Multicast IGMP Querier, snooping
- Reset button

MODEL	ECS 226	
Reference	10501	
Interfaces	"24xGbE+ 2xGbE/SFP Combo Uplink"	
Capacity Switching	Gpbs	52
Baud rate	Mpps	38,69
MAC Addresses		8192
Concurrent VLANs		256
Power Supply	V~,Hz	100-240, 50-60
	W	18
Operating temperature	°C	0-50
Dimensions	mm	440x201x44
Weight	Kg	2.81

ROUTER ROR 3011UI

State-of-the-art industrial router especially suitable for GPON projects, capable of handling up to 4Gbps of traffic.



APPLICATION

- Designed for medium sized GPON deployments.

FEATURES

- Incorporates 10 GbE ports and a 1.2GHz 2-core CPU and 1GB of RAM.
- LCD colour touch screen 1 SFP port and 1 PoE port
- 1U 19" rackmount

MODEL		ROR 301 1UI
Reference		10511
Number of CPU cores		2
Speed per core	GHz	1,2
RAM	GB	1
Input voltage	Vac	100 ... 240
Network frequency		50 Hz / 60 Hz
Max power	W	10
Number of Gigabit Ethernet ports (10/100/1000BaseT)		10
Number of USB ports		1
OS		RouterOS
Operating temperature	°C	-20 ... 60

CHROMECAST WITH GOOGLE TV HD series

APPLICATION

- Streaming entertainment, on your TV

FEATURES

- Voice search
- Enjoy movies, series and Netflix in 4K with HDR
- Easy to install



MODEL	CHROMECAST GOOGLE TV
Resolution	Up to 1080p with HDR at 60 FPS
Video formats	HDR10, HDR10+, HLG2
Audio formats	Dolby Digital, Dolby Digital Plus and Dolby Atmos via HDMI pass-through
Connectivity	Wi-Fi 802.11ac (2.4 GHz / 5 GHz) Bluetooth®
Ports	HDMI to connect directly to the TV's USB Type-C socket
Operating system	Android TV OS
Dimensions	162,5 x 61 x 12,5
Weight	55 gr.

10024	GCP COVER V4Google	Chromecast 4 Protection Cover
10032	GCD CAST V4Dongle	Chromecast V4 HD and device configuration

LOCAL SERVER V1

LSR HP V1

APPLICATION

Local server for internal management of IPTV, Chromecast and PMS devices.

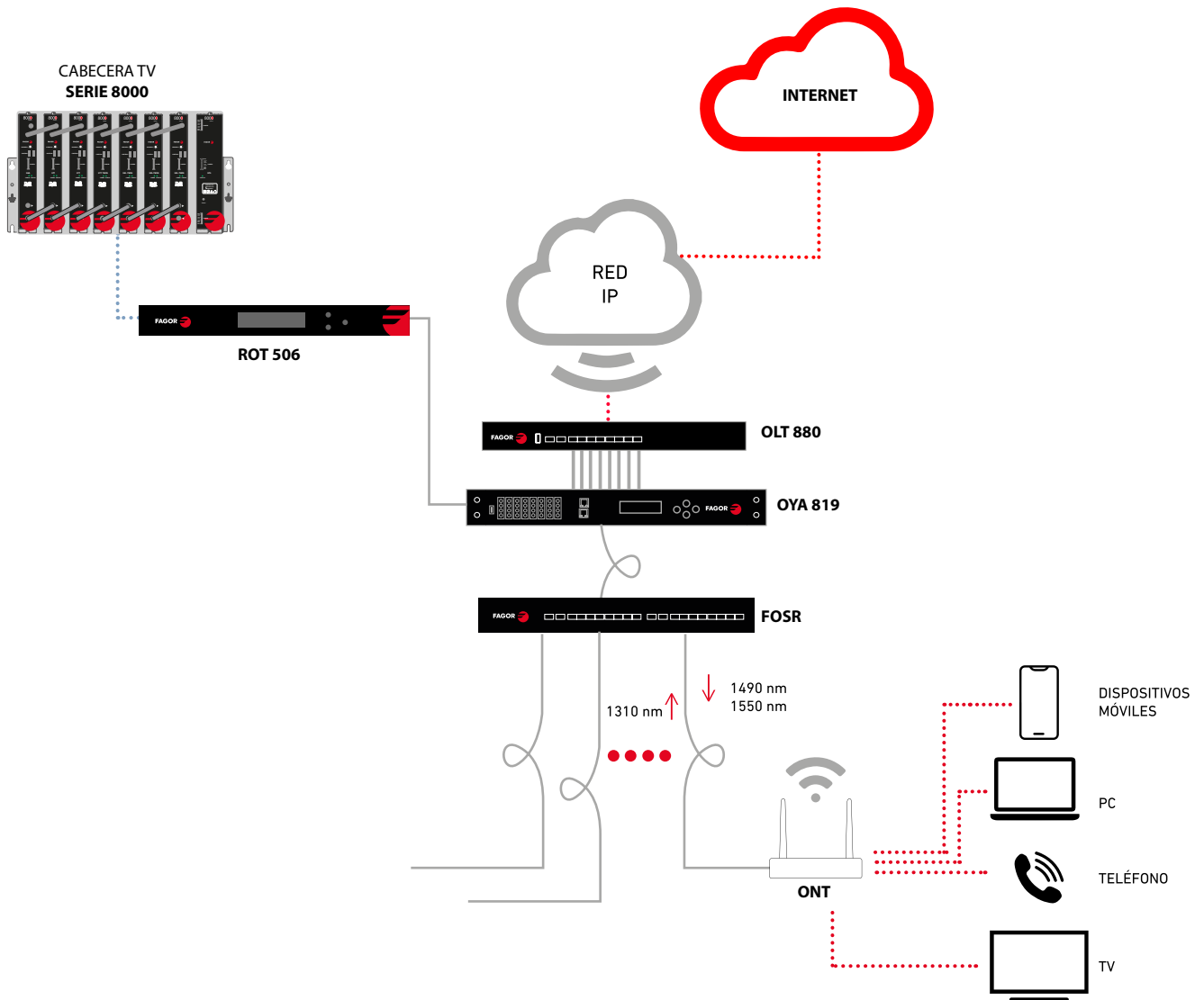
FEATURES

- 19" rack installation
- Allows the management of IPTV, Chromecast and PMS devices through the LAN network.
- Allows license control and remote device updating.



MODEL	LSR HP V1	
Reference	10041	
CPU	Intel Xeon E5-2430 Lv2 (6 Core 2.0GHz) or better	
RAM	16GB DDR4 RDIMM 2133MHz	
Hard disk	2X SSD 480GB SATA 2.5" + RAID Tray	
Power supply	2X HP 460w redundant power supply	
LAN Adapter	4 ports 1Gb	
Rack rails	19" rack mounting kit	
Operating temperature	°C	10°C to 35°C.
Dimensions	mm	4.32 x 43.46 x 75
Weight	Kg	14 Kg approx.

GPON + RF Overlay





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