



EKSELANS BY ITS

2024
VERSION

INTERNET OVER COAXIAL



ENTER THE EK WORLD



The EKOAX and EKOAX PLUS systems from Ekselans by ITS have been specially designed to convert coaxial networks into data networks very simply.

The EKOAX / EKOAX PLUS equipment allows for the transmission and reception of internet signals through the existing coaxial cable of a television installation, without the need to modify the infrastructure.

Simply by adding a master device at the headend (IPC-M2/IPC-M3/IPC-M300) and a user device (IPC-S2/IPC24/IPCAC) at each point where the internet signal needs to be distributed, the television installation can be upgraded to transmit high-speed IP data. The user device also acts as a WiFi router, allowing for the easy and quality creation of a wireless network wherever the IPC S2/24/AC is installed.

A single master device can manage up to 253 user devices with encrypted communication to each one. Additionally, it is possible to increase the number of user devices using the same network by simply installing new master devices in parallel (up to a maximum of 4 IPC-M3 for a single coaxial cable, using the same power supply FA 524).

EKOAX PLUS: THE EVOLUTION

The EKOAX PLUS system from Ekselans by ITS has been specially designed to convert coaxial networks into data networks very simply, allowing for the transmission and reception of internet signals through the existing coaxial cable of a television installation, in most cases without the need to modify the infrastructure.

Simply by adding a master device at the headend (IPC-M300) and a user device (IPC24/IPCAC) at each point where the internet signal needs to be distributed, the television installation can be upgraded to transmit high-speed IP data. The user device also acts as a WiFi router, allowing for the easy and quality creation of a wireless network wherever the IPC 24/AC is installed.

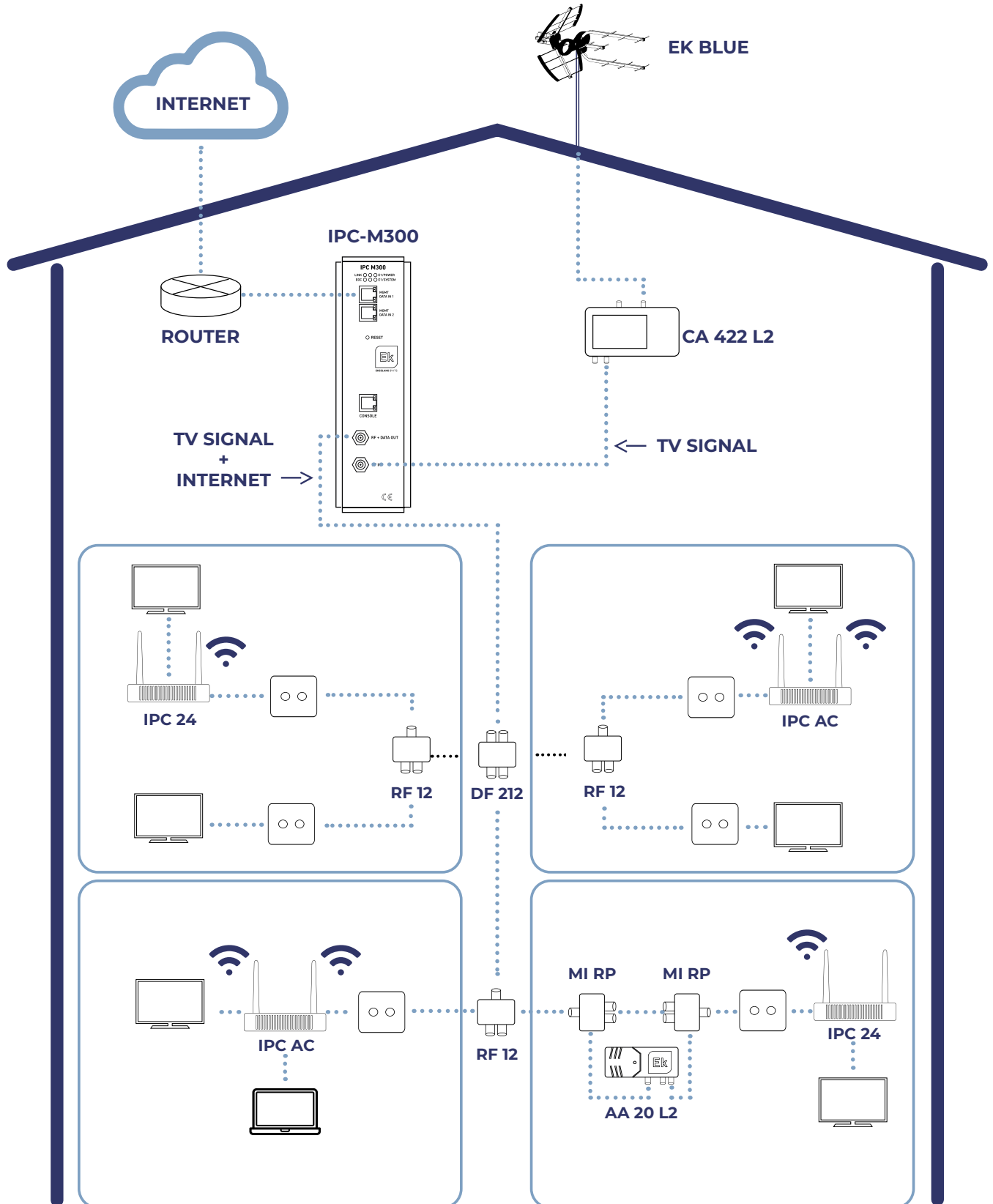
The IPCM300 has interesting provisioning and control features such as the application of WiFi configuration templates to the user devices on the network. From the user equipment perspective, EKOAX PLUS offers devices with 2.4GHz WiFi (IPC-24) and dual-band 2.4 and 5 GHz (IPC-AC) with high-speed wireless communication.

EKOAX PLUS offers very high versatility that adapts to any type of installation: single-family homes - both for internet/WiFi extension and for operator IPTV extension - buildings, hotels, tourist complexes,... Wherever there is a need to distribute the internet signal without additional wiring costs, EKOAX PLUS is the solution.

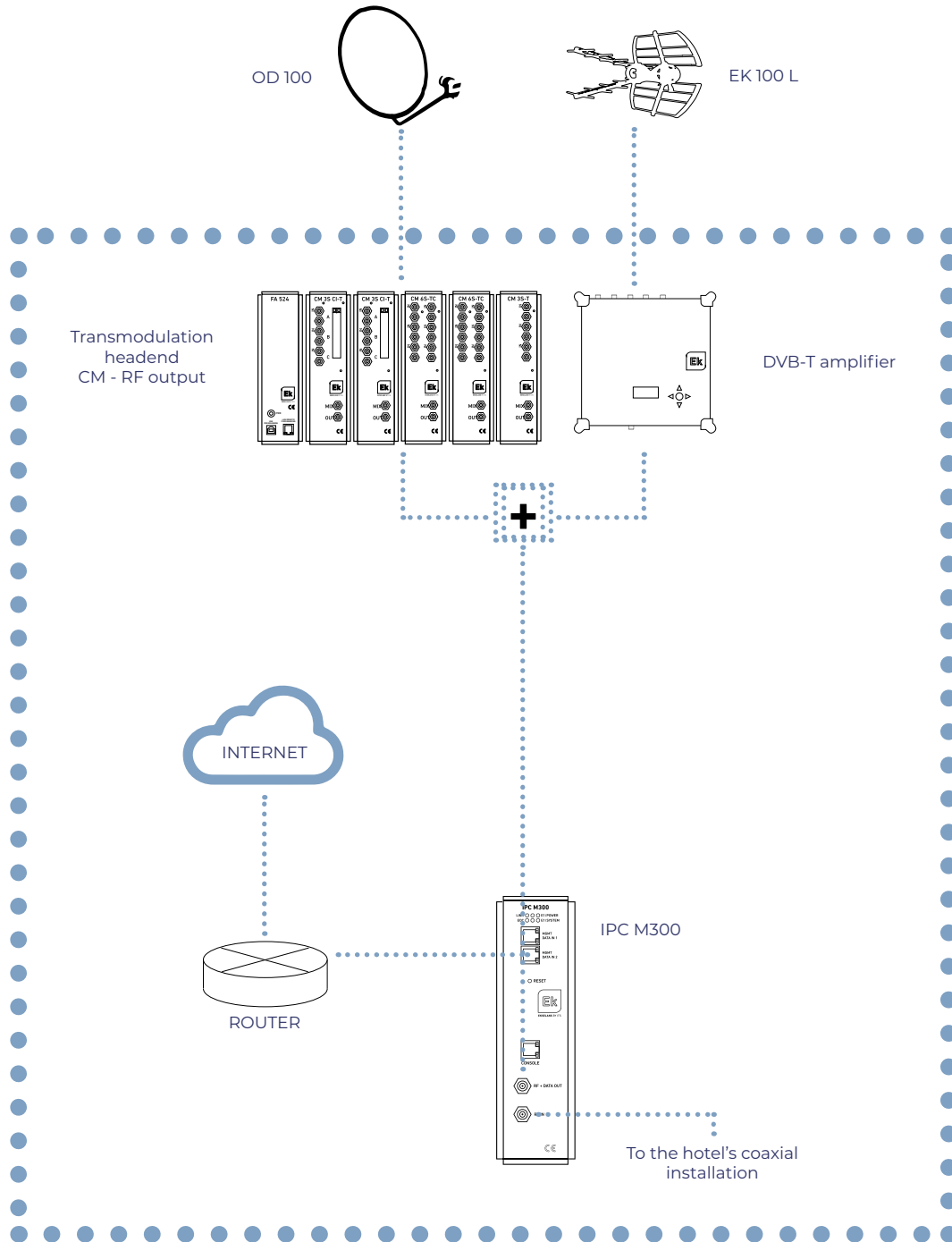
GIGAEKOAX. THE EVOLUTION FOR 1 Gbps COMMUNICATION OVER COAXIAL CABLE

GIGAEKOAX is the new technology that allows for high-speed transmission over coaxial cables. The Gigabox device is an intelligent device that can be installed as a master or slave, automatically detecting its role in the installation. With a maximum of 16 devices per installation (1 master + 15 slaves), Gigabox communicates in the 5 to 100 MHz band with a real maximum transmission of 1 Gbps.

APPLICATION OF THE EKOAX SOLUTION IN RESIDENTIAL INSTALLATIONS

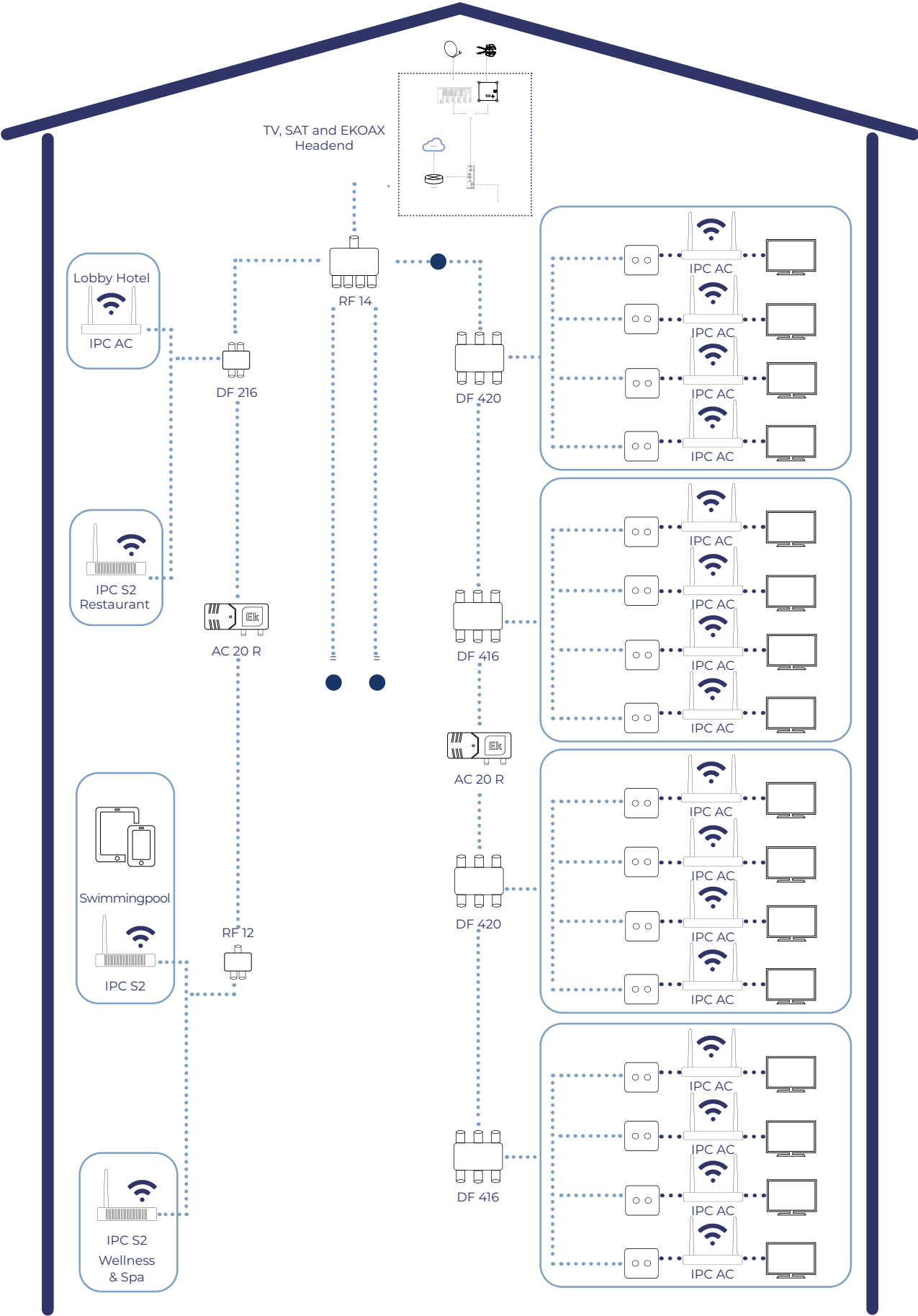


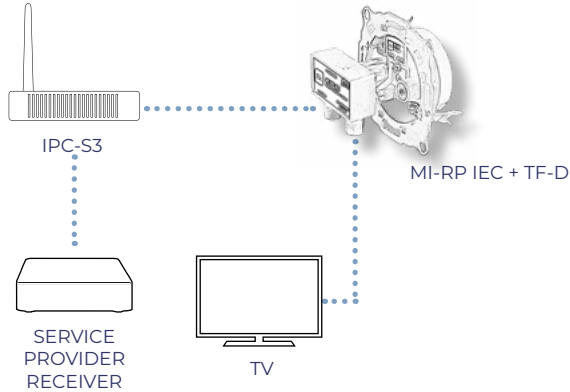
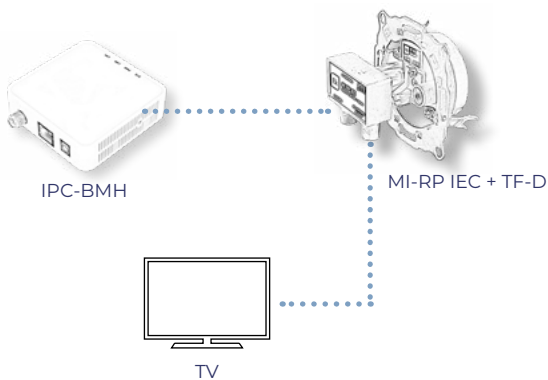
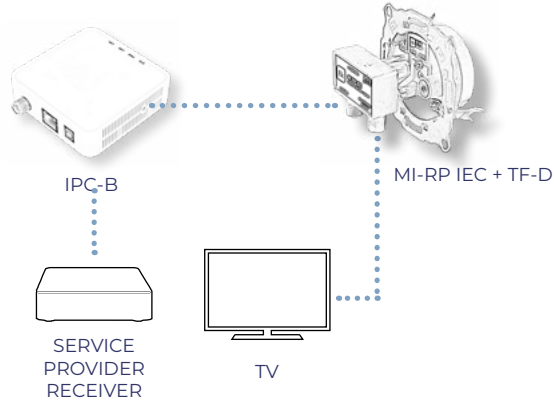
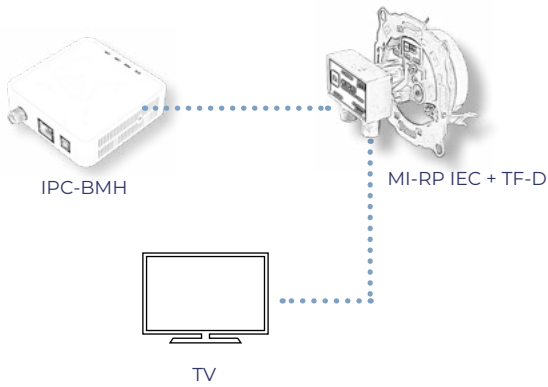
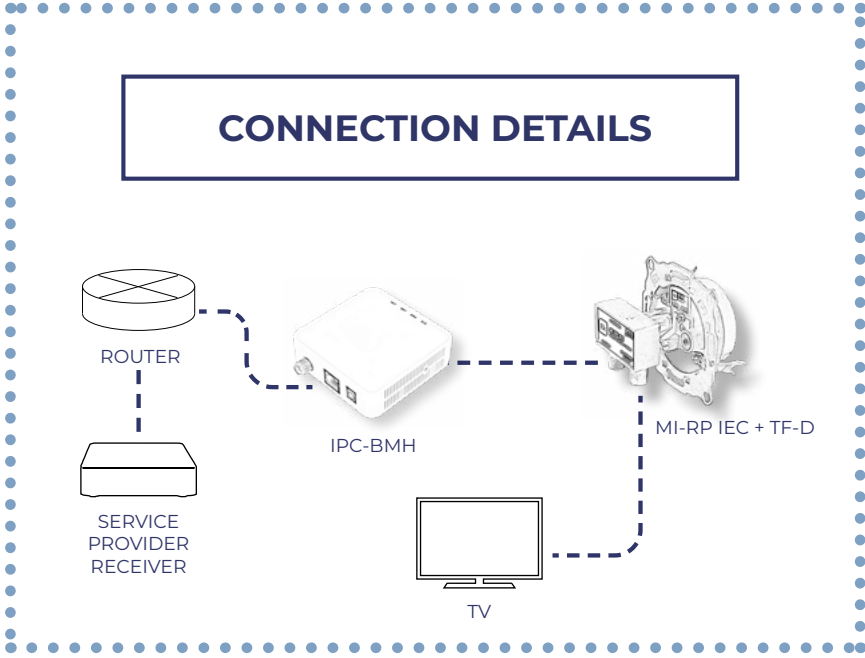
APPLICATION OF THE EKOAX SOLUTION IN HOTEL INSTALLATIONS





APPLICATION OF THE EKOAX SOLUTION IN HOTEL INSTALLATIONS



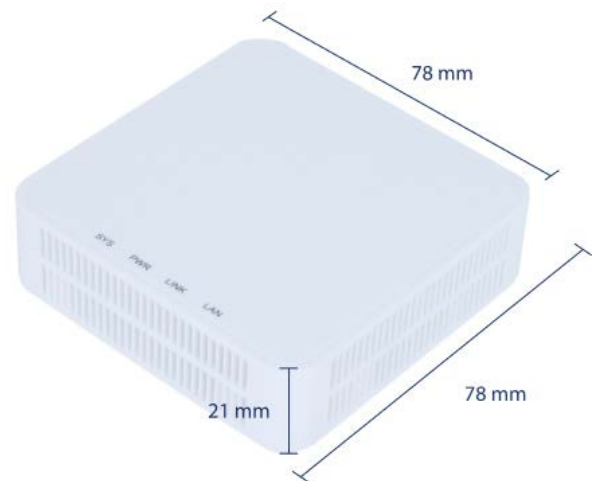


1 MASTER HOME SOLUTION

IPC-BMH

REFERENCE	IPC BMH
Code	250015
Operating characteristics	
RF parameters	
Frequency	7,5 – 65 MHz
Output level	95 dBuV
Minimum input level	45 dBuV
Return loss	> 15 dB
Transmission speed	
Physical layer speed	600 Mbps
Physical layer MAC	300 Mbps
Modulation	OFDM-2690 portadoras 4096/1024/256/64/16/8-QAM, QPSK, BPSK, ROBO
Operating mode	TDMA / CSMA
Encryption	AES-128
Standards	
EOC Standard	IEEE P1901 HomePlug AV
Ethernet protocols	IEEE802.3, IEEE802.3x, IEEE802.3u, IEEE802.1P, IEEE802.1Q
RF Connection	1 RF OUT (conector F)
Ethernet Interface	1 port Ethernet (RJ45)
Alimentation	12 Vdc
Consumption	< 5 W

- √ Master device for indoor use
- √ IP transmission over coaxial cable
- √ Frequency 7,5-65 MHz
- √ 600 Mbps speed (physical layer)
- √ Up to 6 slave-devices IPC-S / S2
- √ Plug&Play
- √ 1 RJ45 Port
- √ With IPTV management for indoor internet extension



1 MASTER PROFESSIONAL SOLUTION

REFERENCE	IPC M2
Code	250003
Operating characteristics	
RF Parameters	
Frequency	7,5 – 65 MHz
Output level	120 dBuV
Minimum Recommended Input Level	43 dBuV
Return loss	> 16 dB
Transmission speed	
Speed on physical layer	600 Mbps
Speed on MAC layer	300 Mbps
Modulation	OFDM-2690 carriers 4096/1024/256/64/16/8-QAM, QPSK, BPSK, ROBO
Work band	TDMA / CSMA
Encryption	AES-128
Standards	
EOC Standard	IEEE P1901 HomePlug AV
Ethernet protocols	IEEE802.3ab, IEEE802.3, IEEE802.3x, IEEE802.3u, IEEE802.1P, IEEE802.1Q
Software	
Method of use	WEB, CLI y SNMP
Software characteristics	VLAN, QoS, bandwidth control, limitation "broadcast storm", ...
Conexions	
RF Conexion	1 RF IN-MIX (F connector) 1 RF OUT (F connector)
Ethernet interface	1 port 10/100M/1000M Self-adaptive Ethernet (RJ45)
Power	24 Vdc
Consumption	< 8 W

IPC-M2

- √ Master equipment
- √ Transmission IP signal over coaxial cable
- √ Work band 7,5-65 MHz
- √ Speed 600 mbps on physical layer
- √ Up to 253 users (Ekoax slaves)
- √ Possibility of remote management
- √ Power supply (12Vdc) included
- √ With IPC-M2 is only possible to install one master using the same power supply. Is able to install up to 4 masters in parallel, each one with its own power supply



IPC-M2

MIXER / DEMIXER FOR EKOAX

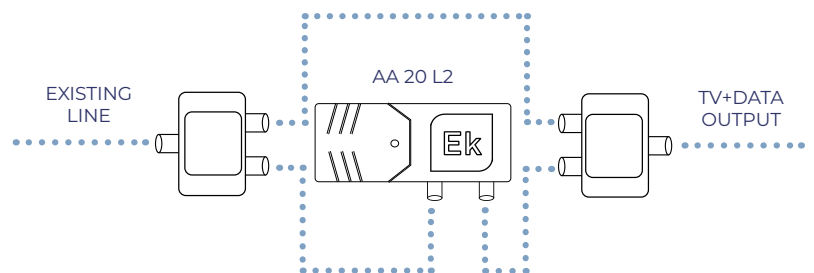
REFERENCE		MI RP	
Code		132001	
Inputs		DATA	TV
Input connector		F	F
Frequency range	MHz	5-65	85-2150
Insertion loss	dB	<1	<1,5
Rejection	dB	>30	>25
Outputs	N°	1= DATA + TV	
Output connectors		F	
DC Pass		NO	SI

MI RP

- √ Return path mixer / demixer
- √ Ekoax compatible



Installation with line amplifier without return path

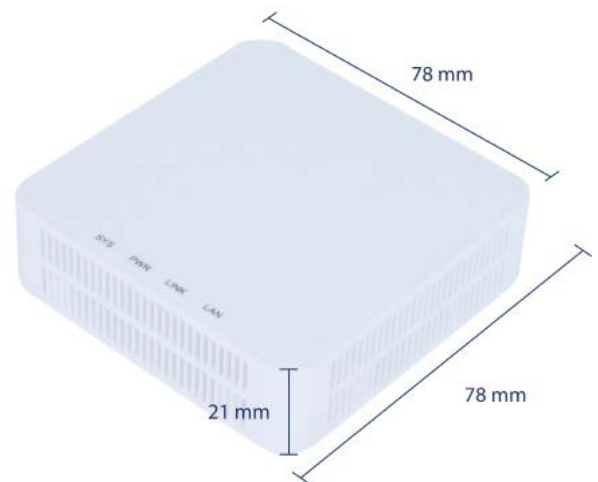


END USER DEVICES

IPC-B MINI

REFERENCE	IPC-B MINI
Code	250013
Operating characteristics	
RF parameters	
Frequency	7,5-65MHz
Minimum input level	45 dBuV
Return loss	> 15 dB
Transmission speed	
Physical layer speed	600Mbps
Operating mode	TDMA/CSMA
Encryption	AES-128
Standards	
EOC Standard	IEEEP1901 HomePlug AV
Ethernet protocols	IEEE802.3, IEEE802.3x, IEEE802.3u, IEEE802.1P, IEEE802.1Q
Software	
Manner of use	NetworkmanagementWEB,CLIand SNMP
Software character- istics	VLAN, QoS, bandwidth control, limita- tion "broadcast storm",....
Connections	
RF Connection	1 RF IN (connector F)
Ethernet Interface	1 10/100/1000 Ethernet (connectors RJ45) port
Power Supply	DC12Vdc Connector
Consumption	< 5W
Operating mode	Bridge

- √ IP reception signal via coaxial cable
- √ Working bandwidth 7,5-65 MHz
- √ 4 ports LAN
- √ Transparent media converter (bridge)
- √ With IPTV management for indoor internet ex-
tension



UNIDAD DE UN USUARIO

IPC-S3

REFERENCE	IPC-S3
Código	250024
Operating characteristics	
RF parameters	
Frequency	7.5–65MHz
Output level	110 dBuV
Minimum input level	45 dBuV
Return loss	> 15 dB
Transmission speed	
Operating mode	TDMA / CSMA
Encryption	AES-128
Standards	
EOC Standard	IEEE P1901 HomePlug AV
Ethernet protocols	IEEE802.3, IEEE802.3x, IEEE802.3u, IEEE802.1P, IEEE802.1Q
Software	
Manner of use	Network management WEB, CLI and SNMP
Software characteristics	VLAN, QoS, bandwidth control, limitation "broadcast storm", ...
Connections	
RF Connection	1 RF IN (connector F) 1 RF OUT (connector F)
Ethernet Interface	4 10/100M Ethernet (connec- tors RJ45) ports
Power Supply	DC12Vdc Connector
Consumption	< 5W
Wi-Fi Characteristics	
Operating mode	Router or Bridge
Antenna	2 x Antennas 2.4 Ghz
Throughput	IEEE802.11b: 11Mbps
	IEEE802.11g: 54Mbps
	IEEE802.11n: 300Mbps
Frequency	2.412GHz–2.472GHz
Channel	13. Configurable for various standards
Modulation mode	DSSS, CCK and OFDM
Coding	BPSK, QPSK, 16QAM and 64QAM
Encryption	802.11i Security: WEP-64/128, TKIP(WPA-PSK) and AES(W- PA2-PSK)

- ✓ IP reception signal via coaxial cable
- ✓ Working bandwidth 7,5-65 MHz
- ✓ 4 ports LAN 10/100 + Router Wifi
- ✓ VLAN Configuration
- ✓ 2 antenna, 300 Mbps
- ✓ With IPTV management for indoor WiFi extension



MIXER / DEMIXER FOR EKOAX

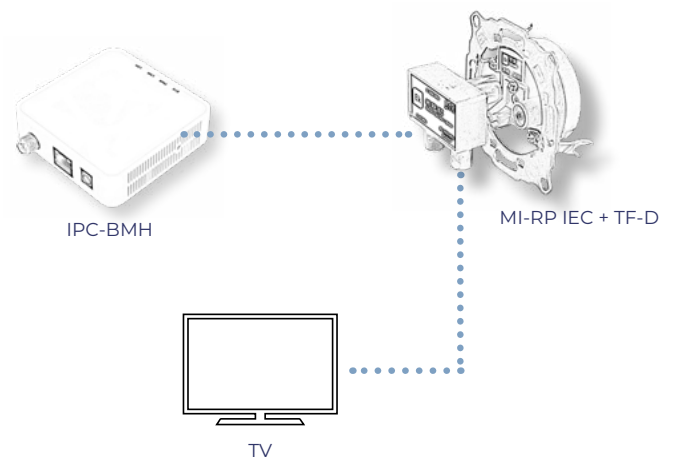
REFERENCE	MI RP IEC		
Code	132002		
Inputs	DATA	TV	
Input connector	F	IEC Male	
Frequency range	MHz	5-65	85-1000
Insertion loss	dB	<0,5	<1
Rejection	dB	>40	>32
Outputs	N°	1= DATA + TV	
Output connectors	IEC female		
DC Pass		NO	YES

MI RP IEC

- √ Return channel mixer/demixer
- √ Compatible with Ekoax
- √ Mix-demix for connection to TV outlet



Installation of MI RP IEC on an outlet



IPTV EXTENDER KITS

CODE	REFERENCE	DESCRIPTION
250022	KIT IP	Kit for extending IPTV via coaxial
250023	KIT IP-W	Kit for extending IPTV and WiFi via coaxial
250025	KIT IP AC	Kit for extending IPTV and WiFi AC via coaxial

KIT IP



KIT IP-W



KIT AC



IPC M300

REFERENCE	IPC M300
Code	250019
Operating characteristics	
RF Parameters	
Frequency	7,5 – 65 MHz
Output level	120 dBuV
Minimum Recommended Input Level	43 dBuV
Return loss	> 16 dB
Transmission speed	
Speed on physical layer	600 Mbps
Speed on MAC layer	300 Mbps
Modulation	OFDM-2690 carriers 4096/1024/256/64/16/8-QAM, QPSK, BPSK, ROBO
Work band	TDMA / CSMA
Encryption	AES-128
Standards	
EOC Standard	IEEE P1901 HomePlug AV
Ethernet protocols	IEEE802.3ab, IEEE802.3, IEEE802.3x, IEEE802.3u, IEEE802.1P, IEEE802.1Q
Software	
Method of use	WEB, CLI y SNMP
Software characteristics	VLAN, QoS, bandwidth control, limitation "broadcast storm", ...
Conexions	
RF Conexion	1 RF IN-MIX (F connector) 1 RF OUT (F connector)
Ethernet interface	2 x port 10/100M/1000M Self-adaptive Ethernet (RJ45)
Power	12 Vdc
Consumption	< 10 W

- √ Master equipment
- √ Transmission IP signal over coaxial cable
- √ Work band 7,5-65 MHz
- √ Speed 600 mbps on physical layer
- √ Up to 253 users (Ekoax slaves)
- √ Possibility of remote management
- √ Optimized configuration menu for simple system provisioning.
- √ Complete provisioning of IPC 24 and IPC AC equipment.
- √ Configuration of templates of all parameters, including WiFi, of IPC 24 user equipment and IPC AC.



IPC-M3

IPC 24

REFERENCE	IPC-24
Code	250020
Operating characteristics	
RF parameters	
Frequency	7.5–65MHz
Output level	110 dBuV
Minimum input level	45 dBuV
Return loss	> 16 dB
Transmission speed	
Operating mode	TDMA/CSMA
Encryption	AES-128
Standards	
EOC Standard	IEEEP1901 HomePlug AV
Ethernet protocols	IEEE802.3, IEEE802.3x, IEEE802.3u, IEEE802.1P, IEEE802.1Q
Software	
Manner of use	Network management WEB, CLI and SNMP
Software characteristics	VLAN, QoS, bandwidth control, limita- tion "broadcast storm",...
Connections	
RF Connection	1RF IN (connector F) 1RF OUT (connector F)
Ethernet Interface	4 10/100M Ethernet (connectors RJ45) ports
Power Supply	DC12Vdc Connector
Consumption	< 5W
Wi-Fi Characteristics	
Operating mode	Router or Bridge
Antenna	2 x Antennas 2.4 Ghz
Throughput	IEEE802.11b: 11Mbps IEEE802.11g: 54Mbps IEEE802.11n: 300Mbps
Frequency	2.412GHz–2.472GHz
Channel	13. Configurable for various standards
Modulation mode	DSSS, CCK and OFDM
Coding	BPSK, QPSK, 16QAM and 64QAM
Encryption	802.11i Security: WEP-64/128, TKIP(W- PA-PSK) and AES(WPA2-PSK)

- √ Receiving an IP signal through coax
- √ Working frequency 7.5-65 MHz
- √ 4 LAN ports 10/100 + Wifi Router
- √ VLAN configuration
- √ 2 antennas (1 internal and 1 external), 300 Mbps, 2.4GHz



IPC AC

REFERENCE	IPC-AC	
Code	250021	
Operating characteristics		
RF parameters		
Frequency	7.5–65MHz	
Output level	110 dBuV	
Minimum input level	45 dBuV	
Return loss	> 16 dB	
Transmission speed		
Operating mode	TDMA / CSMA	
Encryption	AES-128	
Standards		
EOC Standard	IEEE P1901 HomePlug AV	
Ethernet protocols	IEEE802.3, IEEE802.3x, IEEE802.3u, IEEE802.1P, IEEE802.1Q	
Software		
Manner of use	Network management WEB, CLI and SNMP	
Software characteristics	VLAN, QoS, bandwidth control, limita- tion "broadcast storm", ,...	
Connections		
RF Connection	1RF IN (connector F) 1RF OUT (connector F)	
Ethernet Interface	4 10/100M Ethernet (connectors RJ45) ports	
Power Supply	DC12Vdc Connector	
Consumption	< 5W	
Wi-Fi Characteristics		
Operating mode	Router or Bridge	
Antenna	2 x Antennas 2.4 Ghz	2 x Antennas 5 Ghz
Throughput	IEEE802.11b: 11Mbps	IEEE802.11b: 11Mbps
	IEEE802.11g: 54Mbps	IEEE802.11g: 54Mbps
	IEEE802.11n: 300Mbps	IEEE802.11n: 300Mbps
		IEEE802.11ac: 800Mbps
Frequency	2.412GHz–2.472GHz	
Channel	1 - 13 para 2.4 Ghz	
	36 - 165 para 5.8 Ghz	

- √ Receiving an IP signal through coax
- √ Working frequency 7.5-65 MHz
- √ 4 LAN ports 10/100 + Wifi Router
- √ VLAN configuration
- √ 2 antennas, 300 Mbps, 2.4GHz
- √ 2 antennas, 800 Mbps, 5GHz



REFERENCE	GIGABOX
Code	250026
Operating characteristics	
RF parameters	
Frequency	2-100 MHz
Output level	110 dBuV
Minimum input level	40 dBuV
Return loss	> 15 dB
Transmission speed	
Physical layer speed	1 Gbps
Physical layer MAC	800 Mbps
Modulation	OFDM-2690 portadoras 4096/1024/256/64/16/8-QAM, QPSK, BPSK, ROBO
Operating mode	TDMA
Encryption	AES-128
Standards	
EOC Standard	IEEE P1901 HomePlug AV
Ethernet protocols	IEEE802.3, IEEE802.3x, IEEE802.3u, IEEE802.1P, IEEE802.1Q
RF Connection	1 RF OUT (conector F)
Ethernet Interface	1 port Ethernet (RJ45)
Alimentation	5 Vdc
Consumption	< 5 W

GIGABOX

- √ Master device for indoor use
- √ IP transmission over coaxial cable
- √ Frequency 2-100 MHz
- √ 1000 Mbps speed (physical layer)
- √ Up to 16 slave-devices
- √ Plug&Play
- √ 1 RJ45 Port
- √ With IPTV management for indoor internet extension



REFERENCE	MI RP GB		
Code	132003		
Inputs		DATA	TV
Input connector		F	F
Frequency range	MHz	5-100	120-2150
Insertion loss	dB	<0,5	<1
Rejection	dB	>30	>25
Outputs	Nº	1= DATA + TV	
Output connectors		F	
DC Pass		NO	SI

MI RP GB

- √ Mezclador / Desmezclador de canal de retorno
- √  **GIGAekoax** Compatible





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