

KROMA Telecom, S.A. is a wholly Spanish company dedicated to the design, manufacture and commercialisation of a wide offer of TFT monitors as well as Intercom systems for professional Broadcast.

esting projects in countries such as Peru, Chile, Argentina, Mexico, Colombia and Brazil that have all played a big role in the position that KROMA has today.

## Brief History of the company technological developments

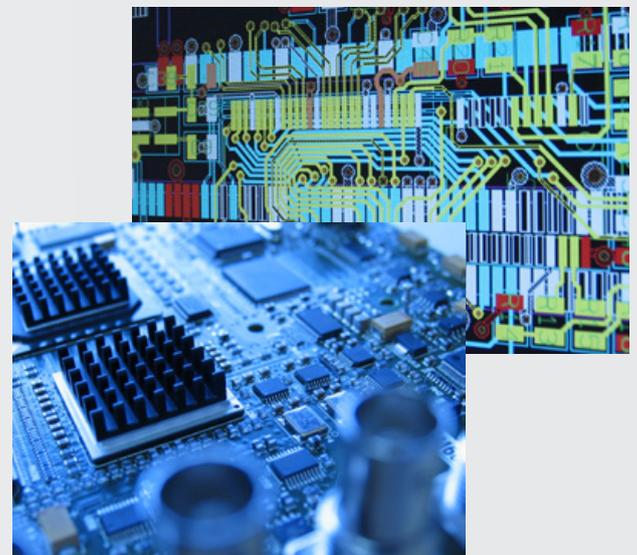
Since its early stages, KROMA placed all efforts and resources in the R&D, with innovation and quality as main concepts.

Back in the day, on the video family, KROMA contributed to the improvement of the CRT video technology implementing digital video inputs (standard resolution) in the tube monitors. It also improved the analogue parts of the circuits and started using FPGA circuits in the digital process. Those first developments were to play a big role in future projects. While the company was working on those lines, most TV stations around the world were starting their transition from analogue to digital TV. Both the technical and the sales team of KROMA in partnership with the TV channels helped design the video (and audio) equipment. Real needs shaped the final pro-



Since its establishment in 1996, KROMA has been defined by a great investment in R&D, together with a constant innovation and special care of all products to meet a fast changing market's needs. Founded by Pesa Electronica's (AMPER group) senior engineers, the company has come a long way since then. In 2011 KROMA Telecom reached the milestone of 15 years manufacturing cutting-edge equipment and servicing customers in more than 50 countries. Currently, the 70% of the total turnover of the company arises from international projects, which gives an idea on the trust our international customers place in KROMA. Our equipment can be found in the BBC, Televisa, Globo TV, TVE, France TV, Al Jazeera, TVP, RTP and RTL just to mention a few. Our committed approach and renowned quality have made us become a reference brand in the industry. Our 15 years experience mean that we are prepared and have a deep understanding on how to work in partnership with our customers, as their needs are what ultimately bring new technological challenges to our paths.

The company has experienced a critical growth in the past few years thanks to the opening of our new offices in Mexico, to support the increasing demand on our equipment in the Americas, and thanks as well to the great results and inter-



ducts.

The R&D laboratory is continuously testing and implementing new technology developments. Therefore, when the first TFT panels were available, our engineers decided to implement them. This was a great challenge, because circuits and video processing needs were totally different to those of the CRT monitors. KROMA can proudly claim to have been one of the very first companies to present a LCD monitor in IBC in 1999.

On the intercom family, KROMA first analogue intercom, was based on the established PESA talkback system, already installed in many TV stations around the world. This facilitated the continuity of the system for its users as well as the warm welcome of new developments. The first analogue talkback was modular 8x8, 16x16 and 32x32 that together with user panels and interfaces represented an affordable and highly reliable 4-wires system.

Increasing customers' needs for bigger systems 64x64, 96x96 and 128x128 made our laboratory to work in the developing of a complete digital system, which culminated in the launch of the digital intercom, TB7000, which is still in the market and successfully installed today in some major broadcasters such as the ERTU in Egypt (system with 200 panels). The system was then rounded with auxiliary communication equipment that allows integrating analogue telephone lines, ISDN or GSM for instance.



As with the video line, the fast changing industry conditions and technology made our Audio laboratory to keep developing new equipment. Our next challenge came from the wireless communication needs. Our first system, DECT (based on radio digital standards) was launched in 2004. Shortly after that, technology was quickly moving towards the IP digital communication, which translated into VoIP. KROMA developed then our first Wireless system, TW7100 (based on IP with radio WiFi support). In time, our laboratory decided to take the next big step and integrate that IP system into an audio matrix, matrix that would be able to support directly VoIP over standard IP communication networks. Our TH5000 Hybrid matrix is launched, thus enabling great flexibility of the whole system and reducing problems with the installation and cables.



Keeping the same concepts in mind, laboratory has continued to work and today our portfolio includes hybrid matrixes in 12, 24 and 48 ports as well as hybrid user panels.

Many customers around the world are now satisfied users of the hybrid system.

All the equipment is totally developed, manufactured and tested in Kroma headquarters in Madrid, with the highest standards and utmost care during the R&D and manufacturing process. Located in Alcobendas, where most of the major industries in Madrid have their business, and close to most national TV stations. Its 2.000 m<sup>2</sup> accommodate: R&D Laboratory (subdivided in Audio and Video), Factory, Quality Department as well as Admin and Sales Department (that coordinate projects in close conjunction with our international dealers)

The after-sales and technical support is in the hands of Broad Service, one of the companies that form the KROMA group. Broad Service is specialised in the service of multi-brand broadcasting equipment as well as installation of turnkey projects. KROMA equipment is also supported with a dedicated network of worldwide support with authorised service centres and distributors.

## Product Portfolio

The company has two lines of equipment, video: TFT monitors and audio: intercom systems.

### Broadcast Monitors

Kroma manufactures TFT professional monitors featuring the latest developments to meet the most demanding working environments. Monitors are designed by our video laboratory in Madrid to feature the most advanced technology in panels and components. Our panels are from the main and best manufacturers in the market, and are continually renovated to guarantee one of the best resolution and image reproduction of the industry.



Our Quality Department that works in close partnership with Factory and Laboratory, ensures that the equipment performance is spot on and problems are detected and conveniently solved.

The offer on sizes and features has increased in the last few years in direct answer to customers' needs. Currently Kroma has built one of the most comprehensive portfolios available in the market. Monitors range from 4" to 46" with different series for different settings: QuadSplit, HD monitors, 3G etc.



The latest addition is the new 7000 series, that includes new inputs and features, such as camera calibration functions like lumacheck and false colour; signal monitoring with precise on-screen waveform and vectorscope; as well as audio vu-meters and built-in speakers for audio monitoring.

	4"	5"	7"	8.4"	9"	15"	17"	18"	24"	46"
TBM							•			
7000					•		•		•	
6000				•	•	•	•	•	•	•
3000				•		•		•		
Preview	•	•	•		•					
QuadSplit							•		•	•



## Intercom Systems

KROMA audio line is fully designed, manufactured and tested in the Madrid headquarters. Our lab together with our Quality Department, make sure that the intercom system performance is as its best. Though being traditional broadcast equipment, our intercom



is flexible enough to be placed in different environments, such as medical applications, military, nuclear plants or auditoriums.

Our company philosophy of working in close partnership with our customers is quite patent when designing an intercom system, where functionalities and capabilities are sometimes tailor-made for each customer. Based on our system and listening to what the customer needs to communicate we can offer a solution able to be both flexible and cost effective.



Our different lines can fit each facility: The Digital system, based on a master able to control 128x128 crosspoints and modular matrixes (16, 24, 32, 64, 96 and 128). This system is

completed with digital user panels and a choice of interfaces to achieve customers' needs from small to big systems.

The digital+ analogue system is designed for small to medium sizes talkback systems with two matrixes of 12 or 20 ports. It features 4 analogue ports for 4 wires connection.

The WiFi base station, with a choice of matrixes to host from 4 to 16 wireless beltacks to work as stand alone system or to be connected to an existing KROMA system.

The hybrid system supports digital panels + analogue sources + IP sources directly without any interface. The IP sources can be remote user panels or /and wireless beltacks). The system is based in a scalable matrix (12, 24 and 48 ports) upgradeable by software that offers a flexible solution since it allows easy interconnection (IP) of remote locations without the hassle of complicated interfaces or cables.

End-users have a choice of different user panels to meet different communication needs: from the simple analogue connection to a remote IP link. Hybrid panels facilitate installation with remote communication between sites.



The WiFi beltacks (with coverage of 150m approx per Point of Access) allows free movements to the operators. Beltacks can also be remotely integrated to the matrix by IP link, increasing the flexibility of the system.

For more basic needs, our wired (4-wires analogue) beltacks (with 30m cable) can effectively communicate camera operators with the matrix.

In terms of interfaces, there is a great choice to assist implementation of auxiliary communication channels like ISDN lines, GSM, GPIO etc.

*For detailed information on KROMA products please check our online catalogues at [issuu.com](http://issuu.com).*

