AMG

TRANSMISSION **WITH INNOVATION**

AMG Systems selected by CK Communications help digitise Cardiff's traffic monitoring and CCTV Network

When CK Communications was asked to upgrade all of Cardiff's traffic control rooms from analogue to IP, they called on video transmission and networking experts AMG Systems to help move video and data to more than 30 separate monitoring locations across the city.

Cardiff-based CK Communications has a 22-year history and offers a unique service integrating CCTV, RPS, VMS, fibre, security and electrical services from design stages through to installation and commissioning.

The company's projects include city centres, council-owned buildings, data centres, motorways and tunnels and it works closely with the main roads agencies in South Wales to provide support on their current and future projects.

When CK won the contract to upgrade all traffic control rooms in Cardiff from analogue to IP, it faced a significant task. These monitoring stations include four main and no less than 27 remotely sited control desks across the city. The control rooms and desks are required for the use of police, urban traffic control (which has responsibility for traffic signals across Cardiff), a Silver Command post for major events including monitoring large-scale football and rugby match days, tunnel service buildings, bus depots and more.

According to Ian Jones, the existing Cardiff traffic monitoring network was very much in need of an upgrade. He describes it as formerly "an analogue beast".

"It meant there was lots of video switching, and video matrixes dotted all over the place," Ian says.
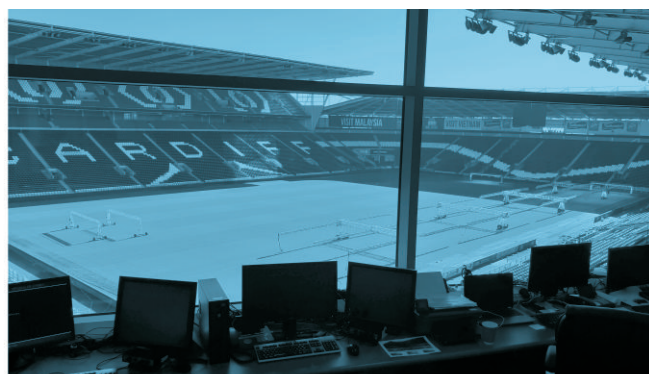
"Our first task was to get all of those camera images from the analogue world on to an IP solution. The products to be used were Pelco, but then we had to send 500 images around the city from a variety of locations to different control rooms. So that's where AMG came in."
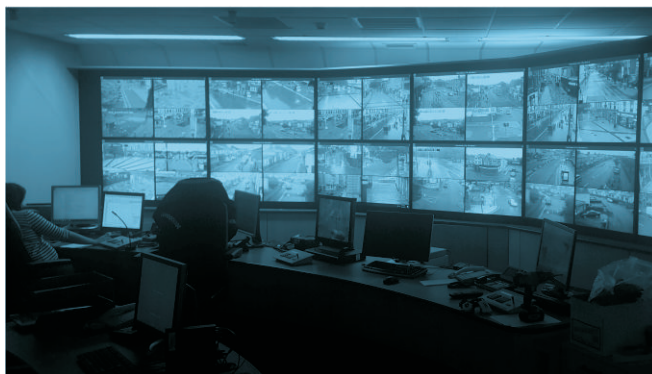
/ OVERVIEW

Moving to Multi-casting.

Cardiff UTC Control Room

CCFC Stadium Control Room

Police Control Room

Silver Command Control Room

AMG Systems is the leading UK-based manufacturer of environmentally robust fibre, analogue, IP/Ethernet, wireless and hybrid communication transmission solutions.

Ian worked with Sara Fisher, AMG's Sales and Marketing Director, to design the system which would work best on the existing customer-owned fibre network in place across Cardiff.

"That involved utilising lots of Layer 2 switches, as well as fibre switches which are dotted across the city now," he says. "A significant factor in the installation was that the existing Pelco equipment was only able to unicast a certain number of images; they prefer to use multicast."

So AMG provided switches for multicasting (including IGMP and IGMP snooping) and other specific jobs.

"Those AMG switches help to send data - including video and audio - to all of the various control rooms and control desks across the city."

Analogue to IP.

Front page and above — Invictus Hybrid cameras from 360 Vision Technology watch over Cardiff

CK has also moved Cardiff's analogue cameras to IP, which has involved using AMG transmission equipment at the edge of the network, integrating into switches CK has built into the nodes.

The AMG equipment in use in Cardiff includes AMG 5900 hybrid units, which are able to transmit analogue video, data, audio and Ethernet, a variety of edge-of-network managed and unmanaged switches, 10Gb/s managed switches, both standard and modular, and hybrid (analogue over IP) wireless links.

Ian is himself an experienced highways engineer and has been responsible at CK for projects in Cardiff for more than a decade. His first exposure to AMG's products came about when working on upgrading camera sites on the M25 motorway.

"I saw that around the M25 at the time the preferred transmission equipment was AMG," he says. "I approached AMG because we had a requirement to future-proof Cardiff's transmission equipment and that's when I met Sara. We started using AMG for transmission equipment for traffic lights and then we used a similar sort of switch for RPS signs for a new road going into Cardiff."

At that point CK was awarded the contract to upgrade the CCTV camera networks in Cardiff. Ian was faced with a decision over which Ethernet switching transmission equipment CK should utilise. the company opted to use AMG for all of their Cardiff projects.
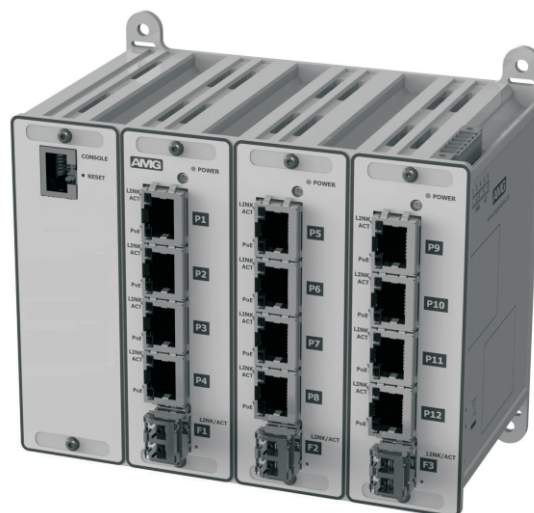
AMG

Product spotlight
Industrial Hardened Managed Plus Switches

AMG's Managed PLUS Industrial Ethernet Switches, along with other devices in the series, offer full layer 2 Managed Ethernet functionality.

[AMG9HM2P-12G-3S]

/ **OVERVIEW**

AMG Managed PLUS Industrial Switches have up to 16 Fast or Gigabit Ethernet ports with up to 4 additional Dual Speed SFP ports for data uplink.

The switches uniquely offer a common web-browser interface with the rest of all AMG Ethernet switch range for configuration of all aspects of the device.

Supporting 10/100/1000Mbps data rates, full duplex, this flexible, compact and easy to use fully managed Ethernet switch also has the benefit of Rapid Spanning Tree and Multiple Spanning Tree Protocols, with Ethernet Ring Protection Switching and IGMP functionality to deal with the multicast traffic which is commonly used in IP CCTV deployments.

/ **FEATURES**

— Compact format for minimum space usage

— 10/100/1000 Mbps full bandwidth Ethernet

— Compliant with all IEEE 802.3 variants (u/ab/x/z)

— Compliant with all relevant Safety and EMC Standards

— Dual Speed SFP ports

— Supports RSTP, MSTP, ERPS, SNMP v1/v2c/v3 and IGMP v1/v2/v3

— LED indicators

— IEEE 802.1x Port Security

— Extended operating temperature compared with industry equivalents -40°C to +75°C

— On-board PoE option

— Console Port

— Optional Serial and I/O capability

Managed Plus	10/100 up to x16	Gigabit up to x16	100/1000 up to x4	Temp −40°C~+75°C	Mounting DIN/Surface

"I'd much prefer to have just the one bit of kit on the shelf," Ian says. "That way, if anything does go wrong, we can react quickly. So now we've got AMG equipment used for CCTV in Cardiff, as well all the signage that we look after and all the traffic signals, all utilising AMG's four-port devices.."

"AMG's equipment is robust and reliable and we know from working with them that they provide great service as well. So if any of my engineers are working on one aspect of the system, say they move from CCTV to traffic signals, they know what to look for and what to expect. We benefit from that consistency and so does Cardiff, as issues can be picked up and acted upon more efficiently."

Summarising on this important showcase project for AMG, Sara said: "We were really delighted to have been selected by Ian Jones for the Cardiff upgrade. Ian has been so great to work with and it's wonderful to have such a breadth of AMG technology represented in one project."