

# CASE STUDY

## TREND PACKAGE A PERFECT FIT FOR TALKTALK TECHNOLOGY'S REMOTE MONITORING NEEDS

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Trend's IQ3xcite controller and '963' supervisory software have proved an ideal combination for critical monitoring tasks on the high speed fibre optic Next Generation Network (NGN) operated by TalkTalk Technology (part of The Carphone Warehouse Group). The equipment monitors critical power supplies and environmental conditions and provides centralised alarm and data management. Crucially, it is playing a key role in preventing the loss of network services and over the past year has shown itself to be highly reliable and user-friendly as well as easy to adapt and expand.

TalkTalk Technology is one of the UK's largest telecom network operators and a Next Generation leader. Its customers include the UK's largest residential phone and broadband provider TalkTalk. Over the last year the company has been installing high bandwidth optical fibre multiplexers into exchanges across the UK. Built into the cabinets at each site is a Trend IQ3xcite.

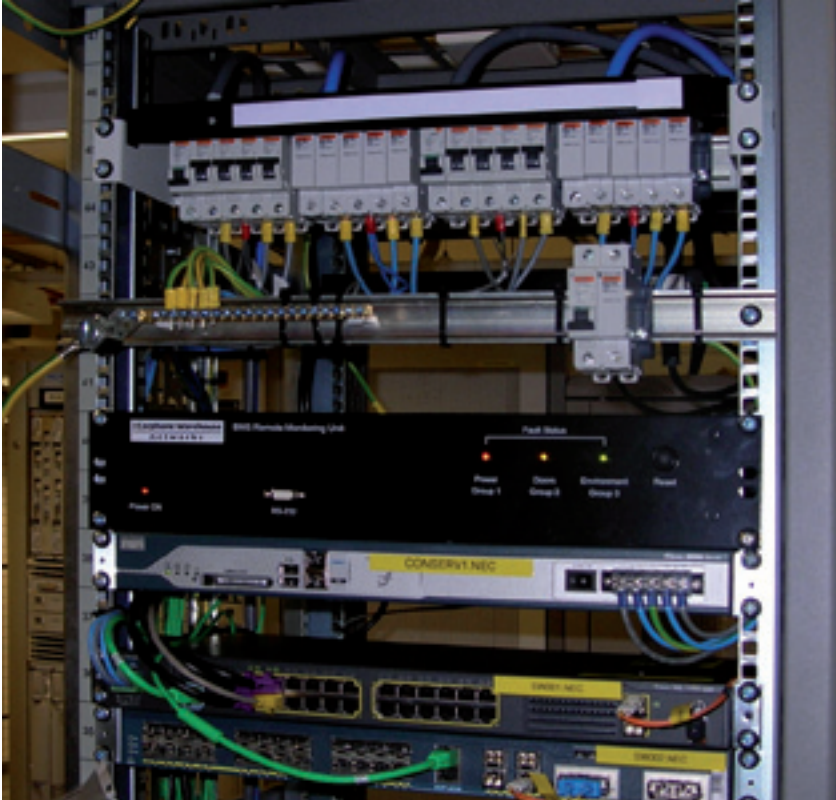
Part of the IQ3xcite's role is to monitor for failure of a cabinet's power supplies, which comprise two UPS-

backed ac feeds (duty/back-up), two battery-backed 48Vdc feeds and the site's main ac supply. In addition, it constantly monitors the temperature inside and outside the cabinets as well as room humidity and water leaks from air conditioning units. Should the temperature or humidity exceed preset limits, a leak be detected, or a power fault occur, the controller instantly triggers an alarm and sends it via the company's wide area network to a 963 Supervisor server at TalkTalk Technology's 24hr Network Operations Centre in Manchester.

Up to six cabinets are monitored by a single 96point IQ3xcite and additional 8 universal input module. The controller – plus its add-on inputs, dc-dc controller, battery charger, back-up batteries and other components such as relays – are housed within a purpose built 19in 2U high chassis that is designed to fit within the standard multiplexer cabinet. LED indicators on the face plate provide a local indication of power and environmental problems. A further LED indicator illuminates if a monitored cabinet door is opened – the time of the door movement being logged by the 963 for security and monitoring purposes.

At the Network Operations Centre, the '963' server generates graphics pages showing the IQ monitored data for all the sites. The pages are displayed on a large LCD screen, which constantly scrolls from site to site. If an alarm is received from any of the IQs, a mimic panel is immediately thrown up on the screen, accompanied by an audible warning. An operator would then log onto the supervisor server to identify the cause of the alarm and take appropriate action. A second 963 server, which gives access to exactly





The first of the IQ3xcites were installed in October 2008 and by the end of this year they will be in 47 exchanges around the UK. The system is already being expanded to monitor critical systems at TalkTalk Technology switch sites in Manchester, London and Birmingham; these will eventually link back to the existing 963 supervisors. Potentially, the system could be extended to cover a further 1700 UK exchanges where the company has a presence.

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the same data, is used by TalkTalk Technology engineers to investigate problems in more detail. The system can be accessed remotely, allowing engineers to log on from home through their laptops.

The IQ at each location records temperature and humidity readings every half hour. Since it can log 1000 points of data for each sensor it is able to store the last three weeks' worth of values, all of which are available through the '963' supervisors. All data is archived on the server's hard-drive, thus making it possible to see how environmental conditions have varied long term.

TalkTalk Technology's, Paul Ashford has been very pleased with the Trend system: "It has provided a complete package that satisfies all

our requirements for external site monitoring and has been extremely reliable in service. The operators at our Manchester Network Operations Centre find the supervisor easy to use, and our service engineers are able to quickly navigate to and view any item of monitored data. A particularly attractive feature of the system is that we have been able to adapt it ourselves to match the different needs of individual sites, so we aren't completely reliant on outside help in order to expand the system."

The system was supplied by Liverpool-based Trend Technology Centre Impact Controls, who designed the monitoring strategy in collaboration with TalkTalk Technology.

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