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Applications for RAPTOR RXi Counter Surveillance Receiver

Key Applications

- Technical surveillance countermeasures (TSCM)
- Spectrum monitoring and interference mitigation
- Radio monitoring and enforcement by regulatory government authorities

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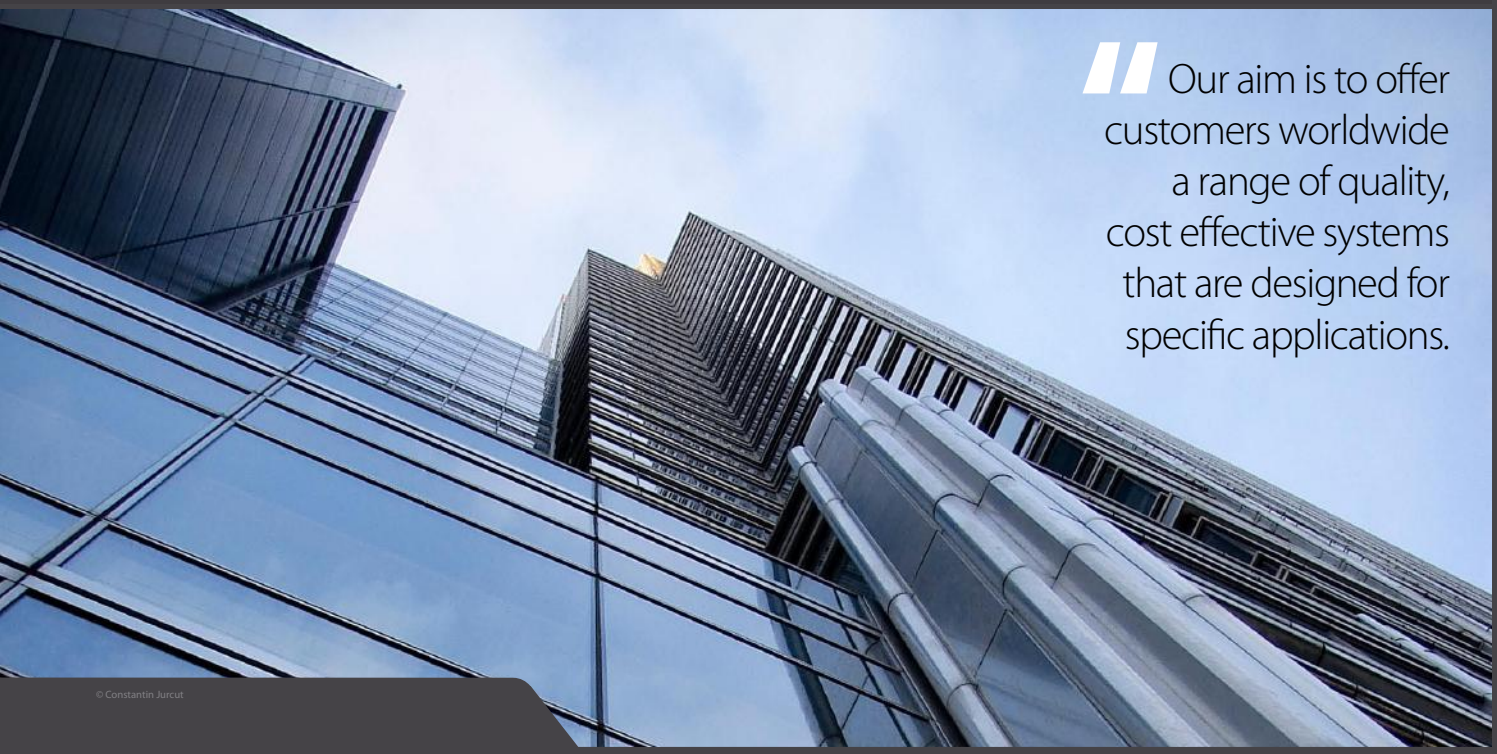

Winkelmann's new TSCM spectrum analyser solution has been developed in response to increasing market demand for a reliable system that has the capability to detect threat signals (bugging devices) in today's crowded spectrum.

One of the main objectives of the RAPTOR RXi is to detect and identify new signals. "New" signals can be RF surveillance devices, unlicensed stations or unwanted signals such as interference.

Searching for "threat" transmitters is increasingly like "looking for a needle in a haystack". However, the RAPTOR RXi provides the tools to look through this "haystack" and find "threat" transmitters simply and reliably. The Raptor RXi Counter Surveillance Receiver scans from 10kHz to 26GHz in under 4s, detecting even the briefest pulsed transmissions. Featuring a fast Core 2 Duo processor, its multiple software tools and demodulators detect frequency-hopping, burst mode and spread spectrum devices as well as analogue audio and video signals. Two spectrum analyser windows allow the user to simultaneously view the whole spectrum and zoom in on individual frequencies. The 'Waterfall' display mode gives an intuitive display of signals over time. The Raptor is as a portable device, allowing reference scans to be easily run in different areas of a building, operating either from an internal rechargeable battery or an external supply. Its integrated antenna system provides excellent wideband performance from 10kHz to 26GHz.

Technology

The system contains a full-feature Core 2 Duo PC running Windows 7 and a state-of-the-art receiver (designed by Winkelmann). The receiver uses an analogue front end, combined with software filtering and demodulation to provide the best combination of fast scan speed and receiver performance. This design enables the system to sweep extremely fast; the software provides a wide range of analysis tools for the detection and location of bugging devices. The user interface has been carefully designed to be simple and intuitive; the spectrum analyzer display shows the entire spectrum in one graphical window with the facility to zoom in on areas of interest. A separate zoom window allows the user to simultaneously look at areas of the spectrum in high-resolution mode. Displays spectrum as a list or graphically. Facility to compare lists or graphs sampled in different locations, plus allows user to zoom over the spectrum without any interruption at even 20MHz.

Applications for RAPTOR RXi Counter Surveillance Receiver

Technical surveillance countermeasures (TSCM)

TSCM is defined as the gathering of any information using audio, visual, or technical attack methods leading to loss or unauthorised disclosure of data or information.

To ensure confidentiality a technical surveillance risk assessment should be carried out and recommendations should be implemented when considering information security and business continuity arrangements.

The Raptor RXi is intended to analyse and monitor the radio frequency spectrum in electronic countermeasure operations. Radio transmitting devices are probably the most popular types of eavesdropping device. They are readily available, relatively cheap, and widely advertised. In addition, information on eavesdropping attack methods are now readily available on the internet.

The Raptor RXi is a portable device, allowing reference scans to be easily run in different areas of a building. The system quickly identifies localized RF transmissions of all types of modulation over the entire frequency spectrum.

Spectrum monitoring and interference mitigation

The Raptor RXi is an all-in-one spectrum monitoring solution for detecting all types of communications signals using any modulation and transmission method.

The Raptor RXi provides reliable detection of radio interference caused by defective electronic equipment. Monitor RF bands to determine compliance with local laws and regulations.

Monitor assigned frequencies to look for interfering signals or to determine if your transmitters are working properly. Fast and effective elimination of interference sources, e.g. at airports.

Radio monitoring and enforcement by regulatory government authorities

The Raptor RXi from Winkelmann can be adapted by users to carry out specific radio monitoring tasks (for internal and external security) as well as spectrum management tasks.

Monitoring of a large number of radio services or an organisation's own emissions in an assigned service band. Continuous monitoring of an emergency channel during operation as well as broadband spectrum scanning. Government spectrum licensing monitoring and enforcement.

Winkelmann (UK) Limited
Unit 63, Rowfant Business Centre
Wallage Lane, Rowfant, Nr Crawley,
West Sussex RH10 4NQ U.K.

T: +44 (0) 1342 719024
F: +44 (0) 1342 719030
E: sales@winkelmann.co.uk
www.winkelmann.co.uk