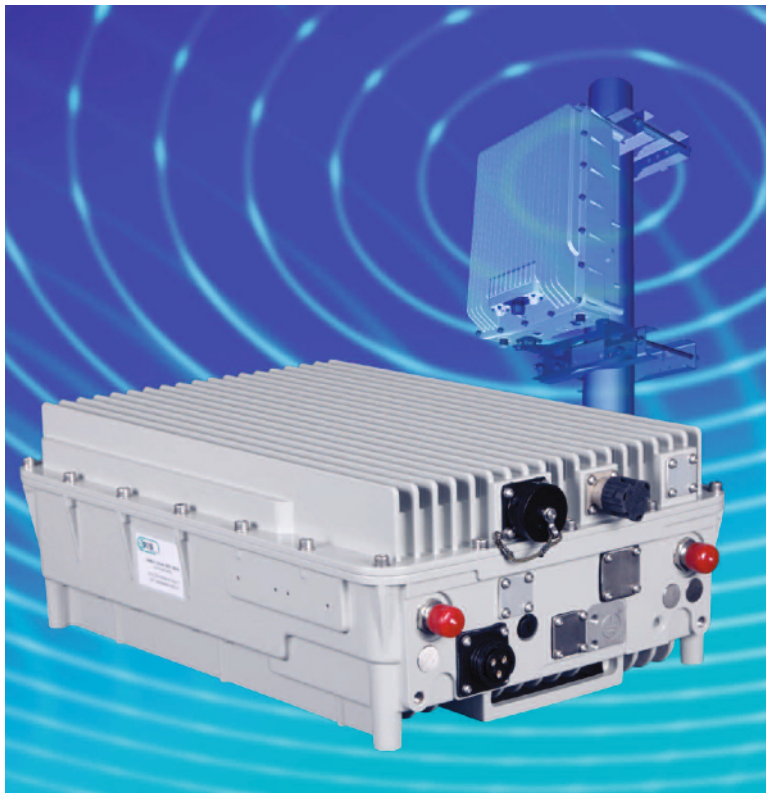


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Remote radio heads reduce Wimax basestation costs

Axis Network Technology has highlighted the importance of multiple-input and multiple-output (MIMO) antenna technology for the roll-out of wide area Wimax communications networks.

The Aylesbury-based system developer has introduced MIMO remote radio heads for OEM deployment of Wimax networks at 2.5GHz and 3.5GHz.

The company claimed that the use of remote radio heads, which can be mounted close to the actual antennas, will reduce the cost of Wimax basestations.

“The use of an RRH allows the radio to be located alongside the antennas and physically separate from the basestation, removing the losses associated with long cable runs by replacing them with an optical fibre data interface,” said a company spokesman.

Available with downlink output power levels of up to 28W, the RRH models are available for use in the 2.3-2.7GHz and 3.3-3.8GHz spectrum bands, and Axis radios are configurable for frequencies between 400MHz and 4GHz. Each of the models offers dual channel operation for MIMO, to comply with Wimax and IEEE 802.16 d/e standards.

They are also capable of 4-channel MIMO operation using 2-channel units driven separately from OBSAI/CPRI or daisy chained. Channel bandwidth is variable between 3.5MHz and 20MHz for TDD or FDD air interfaces.

Based on digitally controlled Doherty amplifiers, the RRH also feature automatic calibration of transmit, receive and PA bias control loops, and are fitted with OBSAI RP3-01 or CPRI V2 digital baseband interfaces with either 1 or 2 optical connectors as required.

They integrate an AxisIPR configurable IP radio processor, along with an AxisOS remote management and local craft interfaces. Support for Adaptive Antenna Systems (AAS) and AISG v2.0 antenna control is provided.

Superior receiver performance of better than -98dBm can be achieved with single channel operation, and better than -100dBm using MIMO.

www.axisnt.com 

LED drivers run 15 white LEDs at up to 95% efficiency

Maxim Integrated Products has a family of 2MHz, high-brightness (HB) LED drivers with integrated mosfets and high-side current-sense circuitry.

The switch-mode HB LED drivers are capable of delivering over 18W (MAX16822A/B) or 36W (MAX16832A/C) of output power with up to 95% efficiency, while driving as many as 15 white LEDs in series.

The MAX16822A/B can deliver up to 350mA of continuous DC current, while the MAX16832A/C can deliver up to 700mA of continuous DC current to the LED string. These devices offer an analogue dimming feature that allows the LED current to be controlled by an external DC voltage and PWM dimming input for a wide range of brightness levels.

By integrating a 65V switching mosfet with RDS(on) values of 0.85Ω (MAX16822A/B) and 0.45Ω (MAX16832A/C), they remove the need for an external power transistor.

www.maxim-ic.com 

Demonstration kit for voice synthesis uses 16-bit MCU

An NEC demonstration kit, which includes hardware and software components to demonstrate voice synthesis functions, is available from Gleichmann Sunrise.

The development tool is hardware-based on a low power 78K0R/KG3 16-bit microcontroller with 20MHz operating frequency.

In addition to 256kbyte of flash memory and 12kbyte of RAM, the device also includes a 16 x 16-bit hardware multiplier, a buzzer output controller, a BCD adjustment as well as a wide selection of serial interfaces.

Voice signals are outputted via one of the channels of the internal 8-bit D/A converters or one of the seven 16-bit PWM timers.

There is also an Audio Data Conversion Tool (CvADPCM) for conversion and downloading of voice data

via the USB port. CvADPCM runs as a Windows application on a PC and converts WAVE files (PCM) into frequency data, which can then be loaded to the IAR Embedded Workbench.

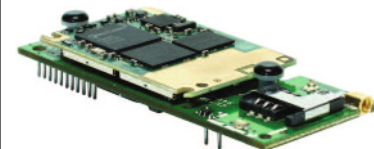
The compression and expansion of data is implemented by Adaptive Differential PCM (ADPCM) library. The library contains extremely compact middleware and is available free of charge from NEC Electronics.

The kit is provided together with sample programs and sample voices. A code-limited version of IAR Workbench, which serves as compiler, is also included in the kit. The 78K0R/KG3 MCU is designed for a wide supply voltage range of 1.8 V to 5.5 V and furthermore, has an on-chip debug interface for direct debugging via a USB connection.

www.ge-sunrise.com 

Socket modem integrates transceiver for multimedia

Basingstoke distributor TDC is aiming at video surveillance and other multimedia embedded systems with its socket modem.



From Multi-Tech Systems, the modem integrates the controller, RF transceiver, antenna interface and SIM card holder in one type-approved communications device.

Designed for tri-band UMTS/HSDPA as well as GSM/GPRS/EDGE, the only additions needed are an antenna, a SIM card and a power feed.

There is a choice of serial or USB2.0 interfaces. The modem can be driven with standard AT commands.

Its serial DTE channel is capable of transfer speeds of up to 920kbit/s and can be interfaced directly to a UART or microcontroller.

As it is based on Multi-Tech's universal socket architecture, the modems can be swapped with other interfaces offering Ethernet, Wi-Fi, PSTN, and other cellular standards. The modems are FCC, PTCRB and R&TTE certified.

www.tdc.co.uk 