

Press Release

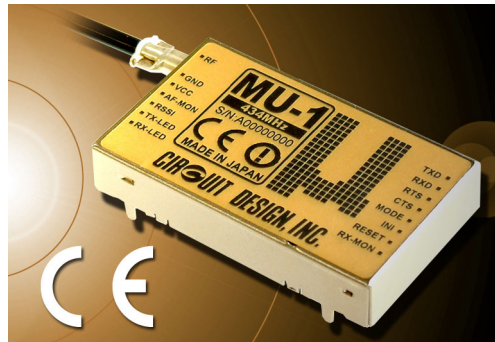
May 31, 2004

Announcing an embedded low power radio modem for the European market

Long range embedded low power modem MU-1 434 MHz for industrial applications.

Circuit Design, Inc., the leading supplier of narrowband radio modules, has recently developed a low power radio modem, the MU-1. Designed for embedding in industrial equipment, the MU-1 goes on sale in Europe from June this year.

The MU-1 is a radio modem for serial data communications that uses the UART serial interface to interface with the host system, while data input/output is performed with simple commands.



A narrowband radio component using Circuit Design's leading narrowband radio technology, a CPU for control, and high frequency circuitry are enclosed in a robust metal shield case. The internal CPU ensures stable operation of the high performance radio component, and besides processing data, it communicates with the host system.

While the MU-1 is no bigger than conventional modules that contain only a radio component, it offers serial data communication with dedicated commands and reliable long distance communication with good noise resistance. It is highly versatile, making it suitable for a wide range of applications that require an industrial use radio modem.

The MU-1 meets the requirements of the European standard R&TTE Directive 1999/5/EC, and operates within the harmonized 434 MHz ISM band, with 64 channels in 25 KHz steps.

The complicated PLL control and associated data input timing control required with a conventional radio module, insertion of the preamble before the data, and the radio data link are all handled by the internal CPU of the MU-1. In addition, the circuit board which is optimally designed for high frequencies, is mounted with all the components required for control of the radio component. The MU-1 also comes with an antenna, so that the user can concentrate on development of the host system without having to pay much attention to the high frequency element. As a result, it is possible to shorten product development time significantly, and reduce the number of parts.

In order to simplify the development of data acquisition applications wirelessly using a computer, Circuit Design will simultaneously release interface kits that enable use of USB and LAN interfaces in addition to the RS232C interface. These interface kits include an interface board, MU-1, cables, and an evaluation software program so that the user can check the operation of the product straight away.

The features of the MU-1 are explained below.

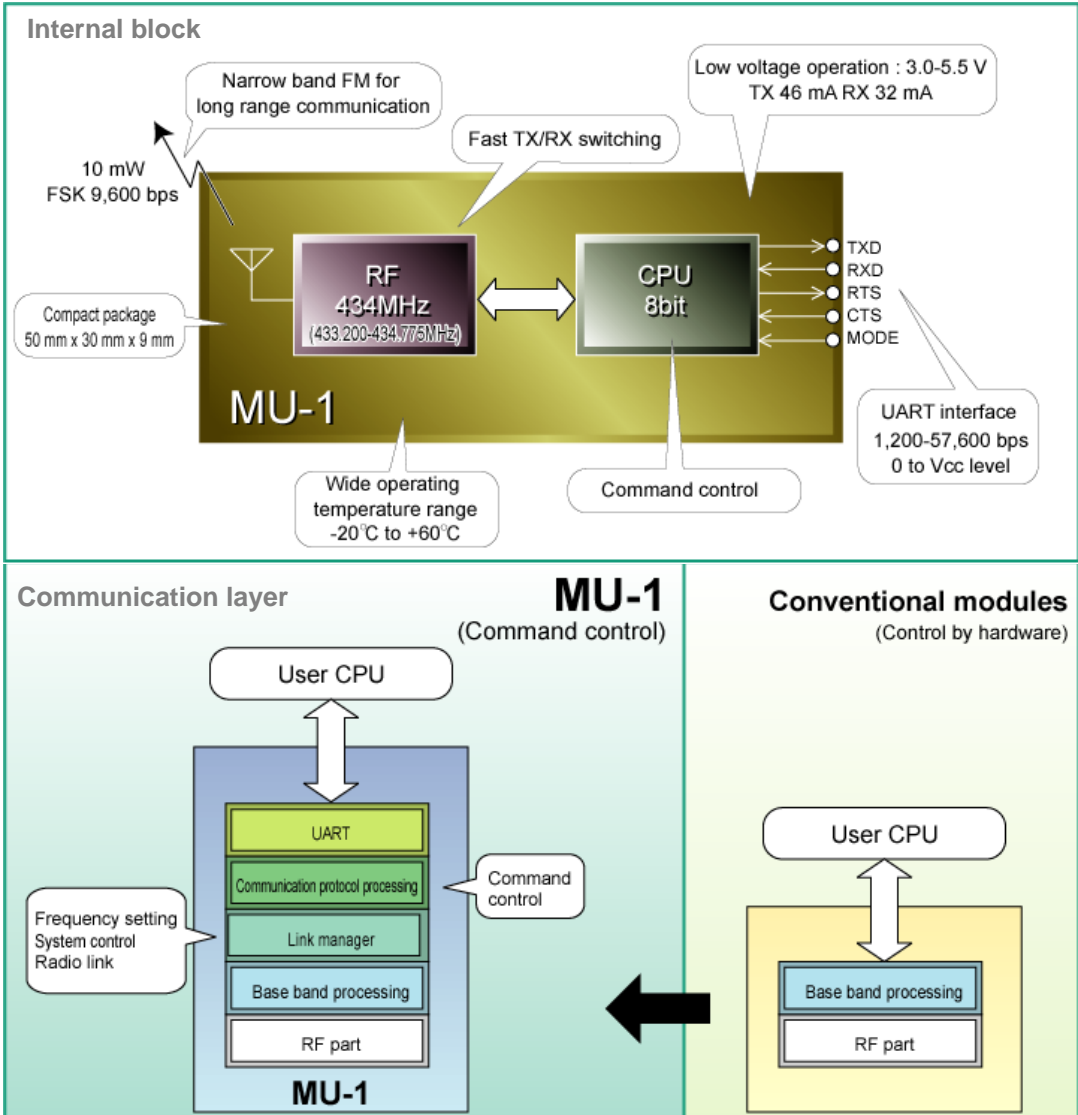
1. Controlled using dedicated commands through the UART interface
 - The UART serial interface is used for the user interface
 - Transmitting and receiving data, and changing and setting communication parameters and Link IDs is possible using dedicated 2-character commands.
2. A highly reliable, industrial use modem
 - A design that offers the reliability, shock resistance, vibration resistance and high quality required for use in industrial applications
 - Achieves an operating temperature range from -20 to 60 °C using our unique temperature compensation circuit
 - Narrow band FM and double superheterodyne receiver circuits with high receiver sensitivity enable stable, long distance communication
 - The receiver uses a SAW filter with sharp filtering characteristics to prevent radio interference
 - Flexible Link IDs can be set, enabling error-free communication between multiple devices, and a variety of system configurations.
 - Achieves stable operation with all high frequency circuits enclosed inside the shield case
3. Support for a variety of interfaces
 - An RS232C interface kit, USB interface kit, and LAN interface kit are available to enable connection to a PC or network

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International Business Div.

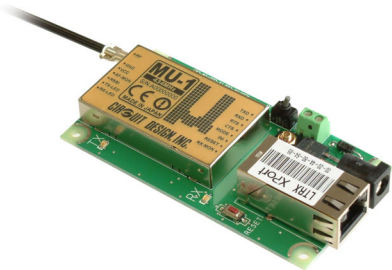
Price: MU-1 single unit price Euro 225

MU-1 technical characteristics:

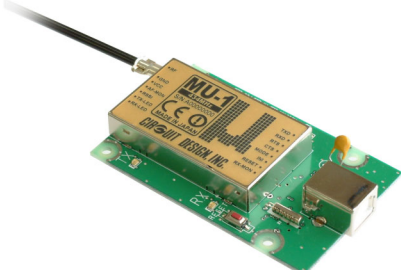


The internal CPU of the MU-1 handles radio links, communication protocols and base band processing.

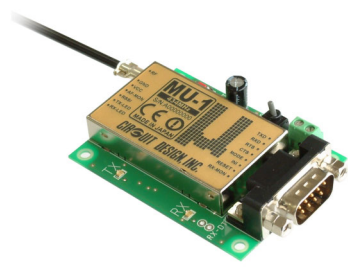
Interface boards



MU-1 with LAN interface board



MU-1 with USB interface board



MU-1 with RS232C interface board

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