



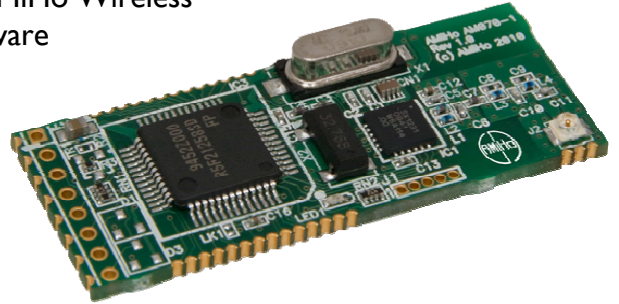
# EVK070 Wireless Meter-Bus Evaluation Kit

## Narrow-band Multi-Channel 868MHz Radio Modem

Preliminary Information – Subject to change © AMiHo 2011

The Evaluation Kit for the AM070 Wireless Meter-Bus modem is a complete evaluation and development system for the AM070 Renesas / Semtech / AMiHo Wireless M-Bus / 868 MHz narrowband modem. It provides a hardware environment to test the AM070 radio transceiver and the EN13757:4 Wireless Meter-Bus software stack.

It consists of a USB-attached or battery powered master node that may be connected to a PC, a USB or battery-operated slave node (with USB and CMOS-level RS232 communications), 2 x AM070 modules, antennas, batteries, and PC software to allow users to test the functionality of the modems.



### Hardware Overview

- The EVK070 is supplied with two USB compatible modules for the evaluation and testing of applications running on the AM070 Wireless M-Bus narrow band 868MHz modem.
- All of the AM070 connector pins are brought to 0.1” pitch connector pads, enabling the connection of switches, potentiometers and other I/O.
- Additional application LEDs are provided for signal strength monitoring and can also be used for a user’s own application.
- Power for the modules can be provided by the USB connection or from an on-board battery pack.
- All additional hardware can be disabled to allow true power consumption measurements.

### Ordering Information

#### EVK070 Evaluation Kit

Evaluation kit for Wireless Meter-Bus. Applications include concentrator (master) module with PC application and meter (slave) module.

#### AM070-Au (Module)

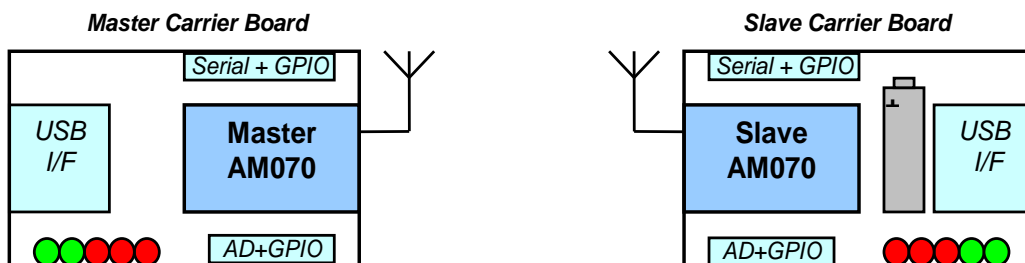
AM070 Wireless Meter-Bus module. U.FL antenna connector  
64kB Flash, 3kB RAM, 2kB NV RAM

#### AM070-Ae (Module)

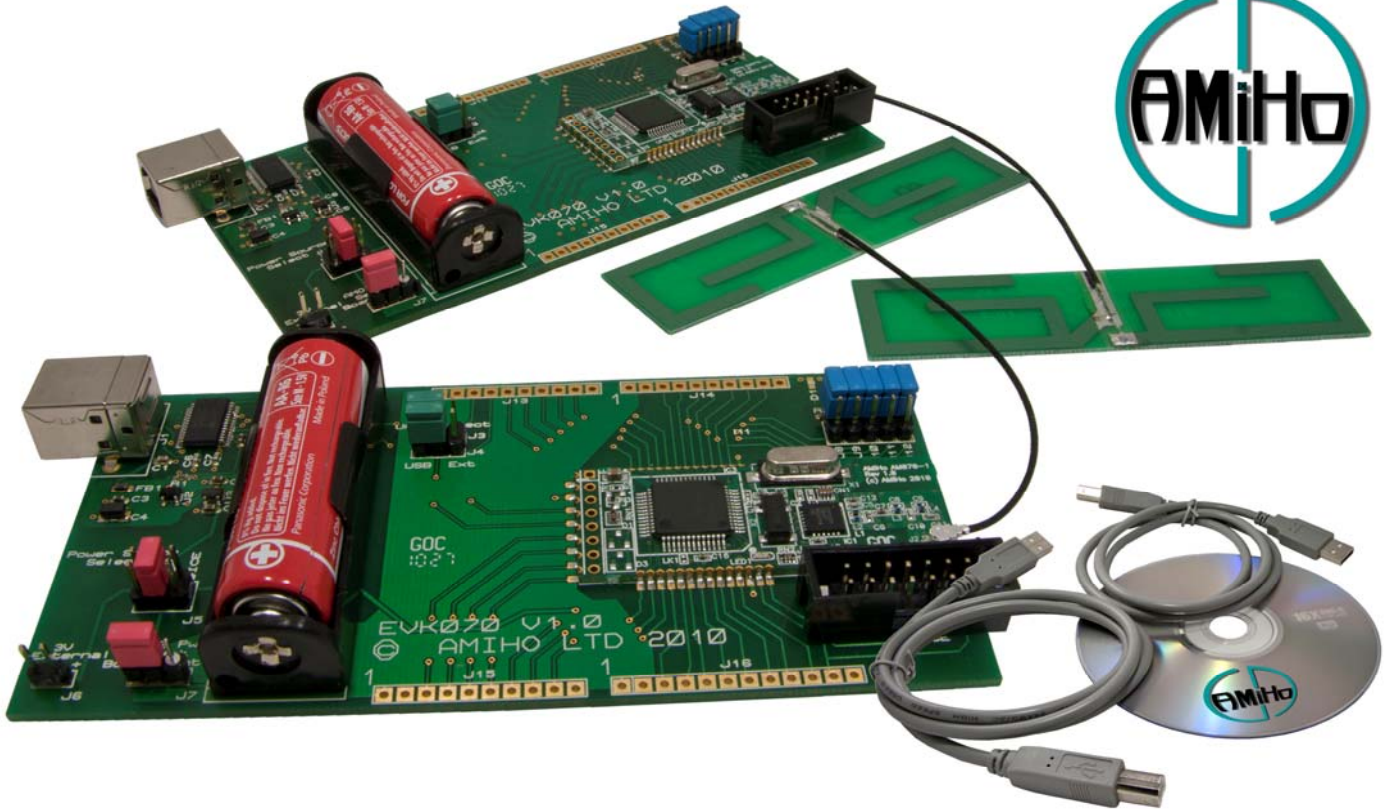
AM070 Wireless Meter-Bus module. External antenna PCB edge connection  
64kB Flash, 3kB RAM, 2kB NV RAM

Other variations are available to order

### Block Diagram



Each unit can be used in stand-alone battery mode or powered from USB or an external device



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## Evaluation Kit Details

### Software

AT command interface  
Packet sniffer mode  
Network formation mode  
Pulse accumulator  
Example gas meter application:  
Display readings on remote PC or collect via AT commands  
Network Statistics:  
Received packet counts; error counts; RSSI  
Ping-pong mode for range evaluation  
Direct message send / receive mode

### Features

Master Operation:  
PC application for demo software interface and diagnostics  
Slave Operation:  
Stand-alone mode as remote device  
Use RS232 interface for debug and remote connection to slave  
Connect to E8 / E8a eICE via adaptor for application loading and debug - supported by standard R8C toolchain

## Contents

2 x development boards, each one with:

- AM070-Au module
- USB 2.0 and CMOS level UART serial interface
- Stand-alone mode for remote operation
- Power from USB port, battery (1 x Lithium Thionyle Chloride or 2x Alkaline) or external device
- Current monitoring port
- 5 LEDs
- Serial I/O
- Analogue inputs
- GPIOs

2 x antennas  
2 x Lithium Thionyle Chloride batteries  
2 x USB cables  
CD ROM with applications example  
'Getting Started' guide  
Release notes

