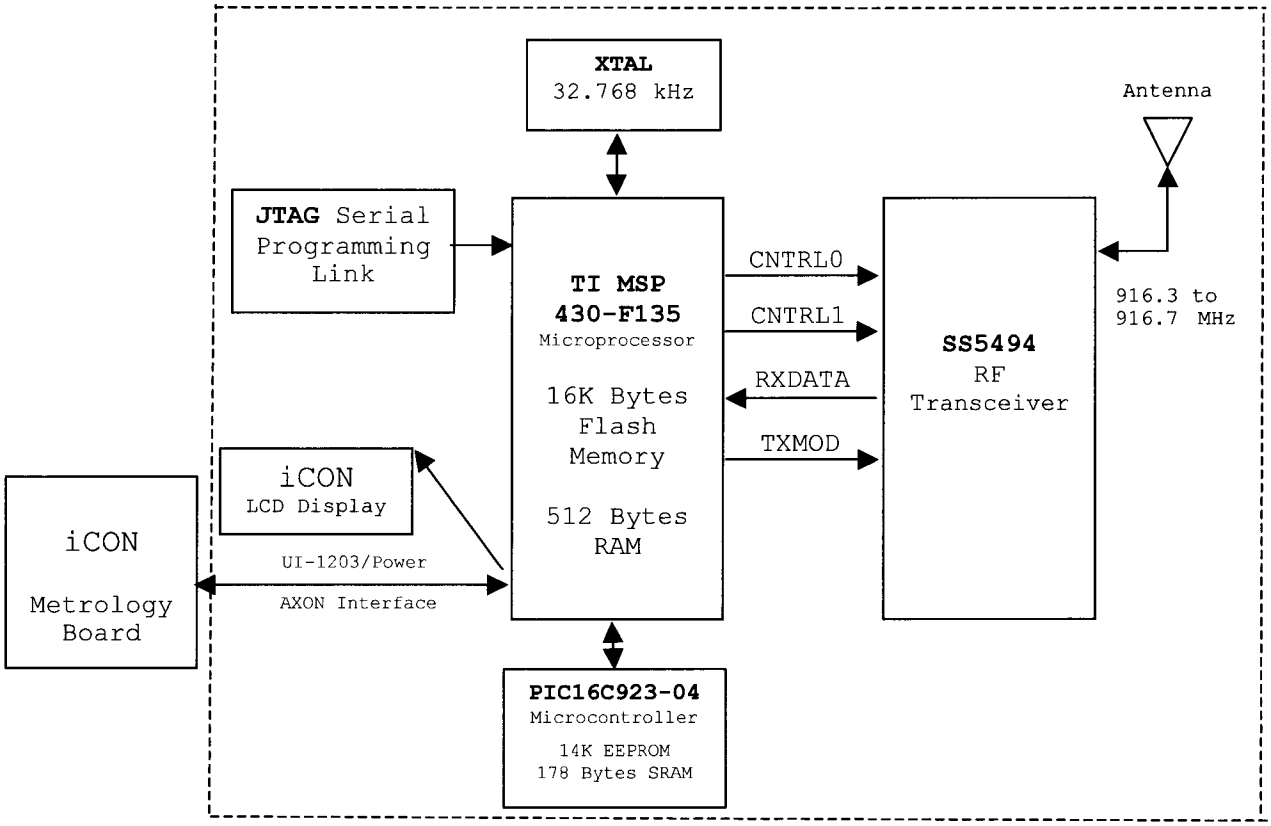
STATSIGNAL

2859 Paces Ferry Road, Suite 700, Atlanta, Georgia 30339, (404) 252-5512

iCON Meter Interface
Block Diagram and Component Description



The TI MSP 430 series Microprocessor responds to commands received from the Site Controller via the SS5494 RF Transceiver. A "Read Status" command from the Site Controller results in the Microprocessor sending the current meter count to the Site Controller along with a Status Byte that reflects the value of its Retry Counter and Power failure notification.

The PIC16C923-04 Microcontroller drives the LCD display of the iCON Meter and provides the Interface between Invensys UI-1203 Interface and StatSignal's SOS-OEA Protocol.

The MS1V-TK 32.768 kHz low frequency crystal provides the reference clock frequency for microprocessor operation.

The TI JTAG Serial Programming Link provides capability to load Application (Operational) Program Data and Device Identification and Address Information into the TI MSP430 series Microprocessor.

The SS5494 RF Transceiver and the Antenna provide the RF communication link between the 200170 iCON Meter Interface and other devices within the Network.

The Antenna provides RF signal reception and transmission.

The AXON Interface is a 16-wire flat flex cable, which provides the connection between the PIC16C923 Controller and the Invensys Metrology Board.

The Antenna, with complex impedance is incorporated, as an area of copper tracking, within the *200170 iCON*

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Meter Interface circuit board assembly to provide RF signal reception and transmission.

The Antenna impedance is matched to the output impedance of the SS5494 radio chip by a 10nH series inductor and a 100nH shunt inductor.
The shunt inductor also performs as an ESD protection coil to the Antenna.

The following diagram shows the SS5494 radio chip matched to the input impedance of the Antenna: