

American Micro Detection Systems, Inc.

REX Specifications: As of 23 July, 2012



Overall Dimensions

- Height 17 inches
- Length 16.44 inches
- Depth 18.5 inches

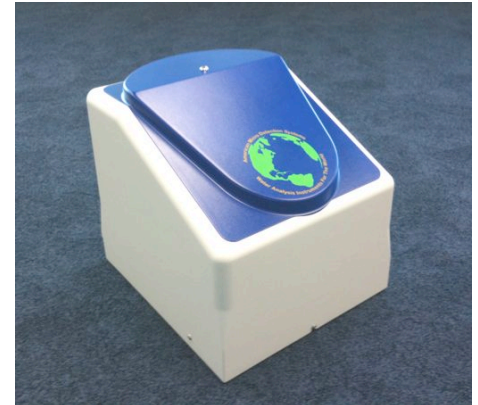
Weight: 34 lbs

Processor Board

- 400 MHz real-time processor
- 128GB Storage Memory (Stick) / with Ethernet to USB

Electrical

- Input 110V/ 60 cycle (w/ US to European)
- Peak Current 3 amps
- Internal
 - 5VDC Smart power supply
 - 0-1 VDC Smart power supply



Electrical output:

- Four AC/DC 7amp relay contact sets
 - System Failure
 - Trouble / Service
 - Inter-lock Programmable – Event or Data Alert
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Data interface:

- Standard Serial port
- USB port WIFI ready
- Ethernet CAT 5
 - Ethernet Switch – 8 port
- Two levels of interaction with REX System
 - Service
 - Acquire and talk to sub-systems
 - Intelligent Source Power Unit (direct feed to X-Ray)
 - Sensor Control
 - Data/System Controller Co
 - Push data
 - Read 16 GB USB device as a hard drive for data logger
 - Each REX run is recorded and data logged
 - System Push
 - Auto push routine that attempts to send and deliver last data recorded to a Ethernet address
- Auto data sent/completed/on-air –connected
- If the REX unit does not get confirmation (Std end –to-end handshake) on an attempted data send, it stores that data and tries to resend the data on the next data packet action.
 - At next REX test



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- At detect e-net reestablished connection

Liquid flow:

- 40 Milliliters per minute (nominal)
- Liquid viscosity: Water above freezing to SEA 5 weight 24C

Elemental analysis:

To Low ppb: 5-15 ppb @ 3 sigma accuracy



REX – Designed to Detect a Variety of Metals in a Variety of Fluids

<u>Fluid condition</u>	<u>Typical source</u>	<u>Metal(s) of primary interest</u>
Humic laden / brackish	Agricultural run off	Se, Ni, Cr, As
Well waters	Aquifer	As, Cr, Th, Pb, Se, Cd
Process Outflow	Process fluids in chemical and pharma plants	Mg, Mn, Al, Ca, Ba
Light Oils	Cooking oils, cosmetics	Pb, Zn, Fe, Cu, Cd, Mn, Mg
Waste streams; Contains acids, detergents	Various process industries	Pb, Bi, Au, Ag, W, Sn, Cu, Zn, Cd, Sb, F

