



## Blue Water Design A2M Specifications

### Overview

The A2M from Blue Water Design is a low power, transmit only ALERT2 intelligent network device (IND). Rated for operation across the industrial temperature range (-40 - +80 °C) the A2M is designed to be used primarily in remote, unattended locations, and to be powered with a solar panel and battery.

The A2M is compatible with the ALERT2 standards produced by the National Hydrologic Warning Council, implementing IND, encoder, and modulator functionality in a single device. ALERT2 provides a means to reliably deliver short messages over a shared channel, using TDMA and error detection and correction algorithms to ensure that sites do not interfere with one another and that data integrity is maintained through the network.

### Physical

Dimensions	7.5" x 4" x 1.25"
Weight	1.3lbs (600g)
Temperature Range	-40 - +80 °C

### Electrical

Power Supply	9 - 17 vDC, reverse polarity protected
Current Drain	1.4mA (@12VDC), normal operation, no LEDs, no external connections ~34mA GPS searching ~29mA GPS locked ~1mA each LED (disabled via jumper) ~1.5mA each connected serial port ~17mA during message transmission
TX Radio Modulation Voltage	2 preconfigured values, selected via jumper, for use with Ritron or Maxon radios, plus a user-adjustable level via potentiometer

### Clock

Supported Interfaces	GPS Clock
GPS Clock Sync Interval	Configurable 5-60 minutes
Clock Drift	2ppm (0 - 40 °C); 3.5ppm (-40- +80 °C)

### Interfaces

Power	2 pin, spring clip, polarity protected
RS-232	2 ports, line-level, custom 3-pin cable, 1200 - 57600 bps
LEDs	5 Status LEDs: Serial 2, Serial 1, GPS On, Clock Sync, Transmit, TX Radio On
Configuration	microUSB console and configuration port
Active GPS Antenna	SMA, female
TX Radio	5 pin, spring clip: power, ground, ptt, data, channel select



### ALERT2

Compatible with NHWC ALERT2 AirLink v1.1, MANT v1.1, API v1.0  
 Supports ALERT2 API input, and ALERT2 API and ASCII output  
 Implements ALERT data concentration and ALERT2 IND interface  
 Implements proposed protocol extension for Configurable Forward Error Correction  
 Flexible addressing support: assign an address to the whole device, or customize a specific serial port with a unique address

### Backplane Configurations

The A2M is available in a standalone, cased configuration or mounted on a pre-drilled, flexible 10.88" x 12.75" backplane with a radio. Optionally, add a data logger and sensor wiring block to the backplane for a complete sensing solution.