

# ARM Energy Probe

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# ARM®

## The Easy Way To Create Energy Efficient Software

The ARM Energy Probe is an easily deployable Streamline accessory that collects voltage, current and power from up to three probe points in the system to enable software developers to optimize system energy consumption.

The probe does not depend on additional in-circuit emulators or trace units and can monitor up to three power rails simultaneously, correlating in time power data, processor performance counters, OS performance metrics and software hotspots.



## Key characteristics

- **Simple setup** - No dependency on ICE or trace units means easy connection and cost effectiveness to enable wide deployment among application and middleware developers.
- **Multiple channels** - Each of the three channels is independently configured to permit simultaneous measurement of peak and average current, voltage and/or power on key system components.
- **Energy information** - For the many times when you need visibility to energy instead of instant power, Streamline allows easy customization of the Energy Probe data charts so that the information of energy consumption over any selected time slice is readily available.
- **Smart data synchronization** - Streamline uses advanced DSP techniques to detect known power consumption patterns on the CPU to synchronize performance data and the probe readings.

## Technical Specification

| Parameter                                | Value     | Parameter             | Value      |
|--|-----------|-----------------------|------------|
| Number of channels                       | 3         | Connection to host    | USB        |
| Maximum voltage                          | 15V       | Maximum shunt voltage | 165mV      |
| Measurement error for $V_{shunt} > 20mV$ | $\pm 5\%$ | Sampling rate         | 10KHz      |
| ADC resolution                           | 10 bit    | Compatibility         | DS-5 v5.9+ |