Hydra-X Features and Benefits:

- 32-bit ARM Cortex Core
- Multi-mode Power Manager (AC-DC, DC-DC switchers, LDOs)
- 14 channels of Analog to Digital conversion
- Configurable AFE with single-ended & differential amplifiers, comparators
- 52V, 72V, 600V high-side, low-side gate drivers to drive up to 3 half-bridges
- Open drain drivers
- Up to 14 PWM timing functions
- On chip temperature sensor
- UART, SPI or I²C Serial Communication
- GPIOs
- On Board Debugger
- Single Unit Debugger/Compiler/Programmer
HYDRA-X CREATION CONTEST

This contest is an 8-week design competition for any students interested in microprocessor technology. Each individual or team will be provided with a Hydra-X 10 microcontroller designed by Active-Semi Inc. The goal is to build the most original and useful projects to showcase your creativity and the Hydra-X's capability. (Project must be documented step by step via the Instructables structure)

PRIZES: $500/$300/$100/$50 (Media Documentation)

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<thead>
<tr>
<th>TIME LINE</th>
<th>ACTIVITY</th>
<th>DATE &amp; LOCATION</th>
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<tbody>
<tr>
<td>WORKSHOPS</td>
<td>Active-Semi Inc’s Engineer introduces the usage of the Hydra-X microcontroller and Hydra-X Instructables. Students also learn about the contest’s rules.</td>
<td>Sept 11 or 12: 5-7PM T.I Auditorium</td>
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<tr>
<td>KICK-OFF</td>
<td>Registration, $15 deposit per person (refunded at end of competition) and receive one Hydra-X microcontroller per entry, either as a team or individual.</td>
<td>Sept 25: 5-7PM (TBD)</td>
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<td>BUILD-NIGHTS</td>
<td>Student build their projects at the UTD Design Makerspace facility every Thursday’s night. Active-Semi Inc.’s Hydra-X designer assists students with his microprocessor and project expertise.</td>
<td>Every Thursday, Oct 2-Nov 27: 6-9PM UTD Design</td>
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<td>DEMO DAY</td>
<td>Student groups showcase their projects. Judges will pick the winning teams to award prizes.</td>
<td>Dec 2</td>
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How to participate?

• Participate as an individual or form a group of 2-5 people
• Pay $15 deposit per person (refunded at the end of the competition)
• Attend Kick-off day to register
• Receive the Hydra-X 10 Microcontroller after registration

Rules:

• Must integrate the Hydra-X's unique features (the Analog blocks) in their projects
• Must use the Hydra-X 10 as the only microprocessor on the system (no Arduino, Raspberry Pi, BeagleBone, etc allowed)
• Off-the-shelf modules like motor, sensor, Bluetooth, WiFi, joystick, etc. are allowed.

Judging Criteria: Innovation/ Project Integrity/ Hydra-X Analog Block Utilization/ Documentation/ Final Presentation

Contact: http://goo.gl/Gnp6nz