ADM1266 Linux API and Python Library
Top Level Functions

- Firmware Load/Upgrade
- Configuration Load/Upgrade
- Monitoring and Telemetry Readback
- Closed Loop Margining
- Blackbox Readback
- Open Loop Margining
Benefits

- Significantly reduces time to implement ADM1266 functions into user software
  - The API and library is modular and can be easily integrated into existing software
  - In-depth documentation of the functions
- Scalable from 1 device to 16 devices
  - Automatically scales based on the number of ADM1266 PMBus addresses provided
  - No additional modifications required
- Provides system level information relevant to the end user
- Linux API uses standard Linux SMBus system calls
  - Can also be easily modified to interface with custom SMBus/I2C API
- Python Library can be used with Total Phase Aardvark dongle for programming in ICT
  - Can also be easily modified to interface with other I2C masters
  - Compatible with Python 2.7 and 3.x
Firmware and Configuration Loading

- Selectable option to load firmware, configuration or both
- User only provides the paths to firmware and configuration HEX files
  - HEX files are automatically parsed
  - Follows the required delay specification after writing to commands
- Option to do a seamless update or reset after loading a new configuration
- Checks for CRCs to confirm configuration and firmware were loaded successfully
- Triggers a memory refresh
- Displays summary of the CRC and update status
Monitoring and Telemetry

- Read and display real-time telemetry information from all the ADM1266 in a system
  - Telemetry from all the ADM1266 are combined and displayed as system information
- User defined rail and signal names are read back from ADM1266 and displayed
- Fault statuses are displayed based on priority (OV, UV, Normal, Disabled)
- Option to read back individual or all rails and signals
Closed Loop Margining

- Displays a list of all the rails that are configured for closed loop margining in a system
- Option to Margin High, Low, Vout or Disable
  - Option to margin a single rail or all rails in a system
  - Margin based on the thresholds defined in the configuration
- Update margining thresholds by percentage
Blackbox

- Read and display Blackbox information for all the ADM1266 in a system
  - Data from all the ADM1266 are combined and displayed as system information
  - User defined rail and signal names are read back from ADM1266 and displayed
  - Fault statuses are displayed based on priority (OV, UV, Normal, Disabled)
  - Option to read and display specific or all Blackbox records
- Additional information such as power-up counter, fault time, configuration name are displayed
- Option to erase Blackbox records
Open Loop Margining

- Automatically calculates the DAC range and code based on the user entered DAC output voltage
- Checks if the DAC is configured for open loop margining
- Gives the user option to convert DAC used for closed loop margining to open loop margining