ATE5800 Series
Parallel Flash Programming TMS570/470 Devices

Programming of the Flash memory of an embedded processor is often done at the PCB build stage of manufacturing. This is due to the nature of rapid product development cycles and the need to change software/configurations at short notice.

The VIAVI ATE5800 Series presents a number of advantages when choosing a standardized solution for production programming.

- Fully re-configurable, new devices can be catered for by software updates and be-spoke features can be implemented
- Parallel programming capability hence increasing production line throughput
- Reduced risk of ESD damage often caused by direct semiconductor device handling
- System contains all necessary power supplies, switching cards and peripherals for setting up the device
- Serialization and arbitrary data programming routines can be added to the sequence
- Eliminates the need to keep a stock of many different programming pods
- Hardware flexible and re-usable protecting your investment

Introducing the ATE5800 Series Hardware

The ATE5800 Series has a dedicated set of hardware and software resources that are highly suited to the task of FLASH programming. The suite enables the developer to create highly customized applications.

Features

Pattern Generators
- On board memory used in the generation of 'custom' Flash data through to the Digital pins. Custom data is clocked out in sequence with the DTC master clock.
- 4 Generators 1M Byte Depth

Timing Generation
- Each digital channel can be configured to meet timing parameters of the signalling scheme
- Up to 32 steps per master clock cycle

Digital I/O Channels
- Scalable set of Digital pins including programmable voltage levels, slew rate/termination
- Max 1152 channels

Sequencer/Controller
- A dedicated sequencer (DTC) controls all signalling activity of the Digital pins in the system
- 64K Program Memory

Event Detection
- Possible to perform conditional processing based upon changing activity on Digital pins
Programming Solution for TMS570/470 MCU (ARM based)

An additional software solution meeting the needs for programming the Flash memories for the TMS570/470 range can be added to the system.

This is available as single stage or Parallel programming version.

<table>
<thead>
<tr>
<th>Device</th>
<th>Memory Size</th>
<th>Mode</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMS470MF03107</td>
<td>320 Kb</td>
<td>Parallel</td>
<td>SPI Eeprom</td>
</tr>
<tr>
<td>TMS470MF04207</td>
<td>448 Kb</td>
<td>Single</td>
<td>test/program</td>
</tr>
<tr>
<td>TMS470MF06607</td>
<td>640 Kb</td>
<td>Parallel</td>
<td>SPI Eeprom</td>
</tr>
<tr>
<td>TMS570LSxxx4</td>
<td>Up to 3 Mb</td>
<td>Parallel</td>
<td>SPI Eeprom</td>
</tr>
<tr>
<td>TMS570LSxxx5</td>
<td>Up to 3 Mb</td>
<td>Single</td>
<td>test/program</td>
</tr>
<tr>
<td>TMS570LS3137</td>
<td>Up to 3 Mb</td>
<td>Parallel</td>
<td>SPI Eeprom</td>
</tr>
</tbody>
</table>

1.0 Table of Devices Supported

TMS570/470 Device Programming Main Features

- Uses manufacturers flash programming libraries to control flash writing operations
- Optimum timing/device clock settings used for fast programming
- Faster CRC verify operation available
- Supply voltage and current monitoring option
- Checks ID register content conforms to correct device
- Peripheral device e.g EEPROM/FLASHES can be programmed
- Intelligent flow control