

实用案例：4 工位多管脚 PMIC 测试方案

High pin-count(48) quad sites PMIC test solution

FEATURES

INTEGRATED POWER SUPPLIES

- One 4A DC/DC Step-Down with by-pass switch option
- Three 2.5A DC/DC Step-Down (Buck) Regulators
- One 750mA LDO with Dedicated Power Supply Input
- Two 150mA LDOs with Shared Power Supply input
- Programmable Reset and Power Good GPIO's

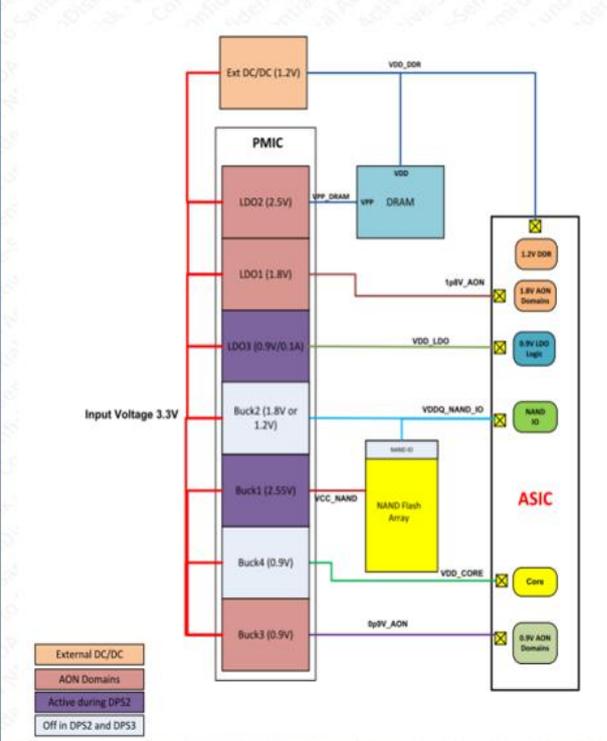
SYSTEM CONTROL AND INTERFACE

- I²C Serial Interface operating at 1Mhz supporting Multiple Register Write Sequence and Multiple Devices on the Bus

Wafer Level Chip-Scale Package

	A	B	C	D	E	F	G	H
1	PGND_B1	SW_B1	SW_B1	VIN_B1	VIN_B1	VIN_B4	SW_B4	PGND_B4
2	PGND_B1	SW_B1	SW_B1	VIN_B1	VIN_B1	FB_B4	SW_B4	PGND_B3
3	PGND_B1	PGND_B2	POK	AVIN	FB_B1	VIN_MODE1	SW_B3	SW_B3
4	SW_B2	SW_B2	IRQ	AGND	PG_B4	VIN_MODE2	FB_B3	VIN_B3
5	VIN_B2	FB_B2	LPM_EXIT	nRESET	EXT_EN	EXT_PG	VIO_IN	VIN_LDO23
6	VIN_LDO1	VOUT_LDO1	ADDR_RESET	SCL	SDA	PWR_DN	VOUT_LDO2	VOUT_LDO3

SYSTEM POWER BLOCK DIAGRAM



Tester configuration:

Module	FOVI	FVI16	FQVI	QTMU	CBIT	DPU32
Quantity	8	4	4	1	2	1

该产品为 48 脚 CSP 封装的混合信号 PMIC，利用 STT-700(26 槽位)可以实现 4 工位的并行测试方案，测试相对复杂，测试项目超过了 1000 个。具体配置如下：

- 测试机主机：STT-700，具 26 槽位，最多可配置 416 路 VI 源
- 4xFQVI 提供 16 路 3A 的恒流源
- 8xFOVI 提供 64 路 50V/300mA/1A pulse 的 VI 源
- 4xFVI16 提供 64 路通用 40V/100Ma VI 源
- 1xDPU32(100Mhz) 提供 32 路数字通道
- 1xQTMU 提供 4 路时间测量单元
- 2xCBIT 提供 144 路控制位