

Partial Teardown



▶ Original Video (Starts at 27:22)

▶ Begin

Note: Some information may come from other sources. All pictures from uploader unless noted otherwise. Block Diagram is based on available information from the teardown.

Original Source Information

Source	YouTube
Uploader	EEVblog
Video Name	EEVblog #1110 - Mailbag
Posted Date	July 29, 2018

Donor Information

Donor	Paul Arden
Donor General Location	Australia

Device Information

Device Type	Calculator
Brand	Texas Instruments
Device Name	TI-Nspire CAS+ (Prototype)
Device Model	Unknown

Post Information

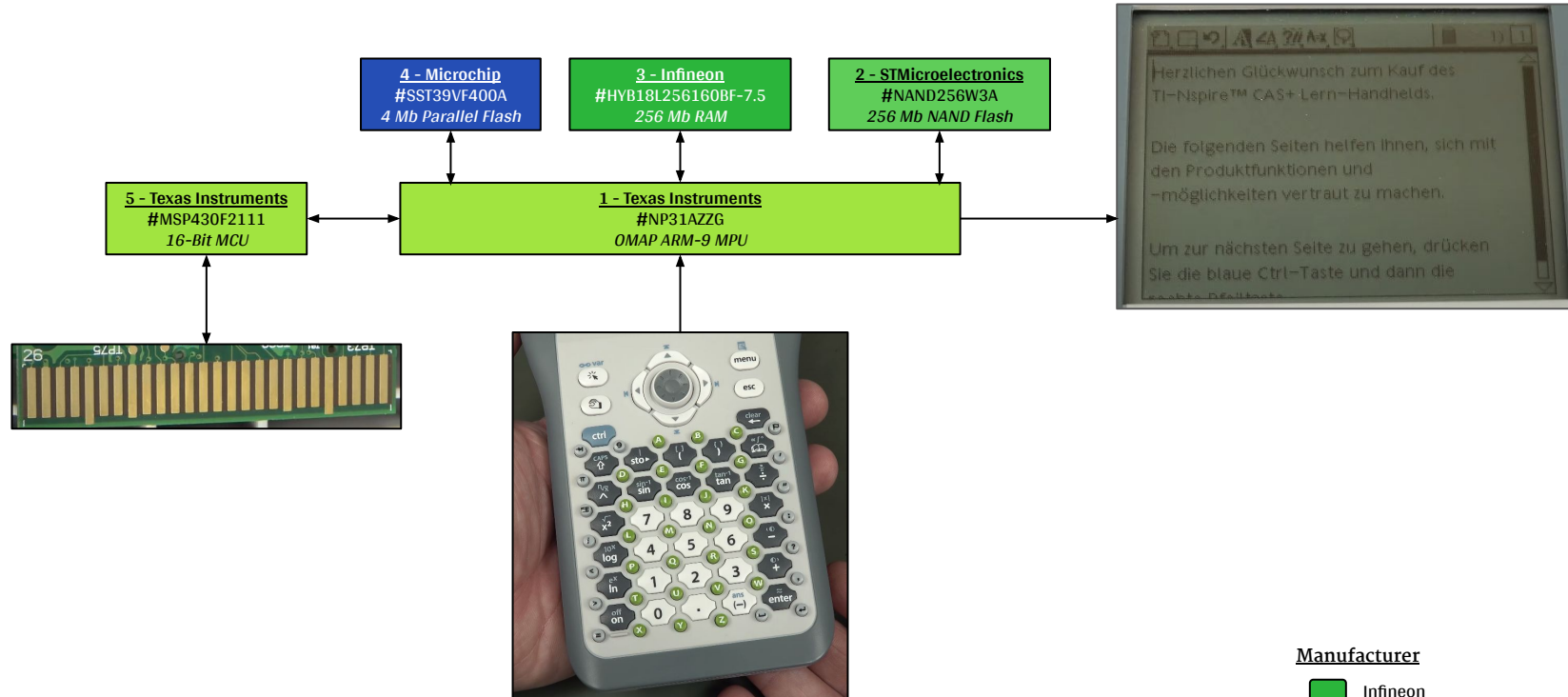
Post Date	August 27, 2020
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Device Analysis














Design Wins

Purpose	Manufacturer	Part Number
Processor	Texas Instruments	NP31AZZG
RAM	Infineon	HYB18L256160BF-7.5
NAND Flash	STMicroelectronics	NAND256W3A

Block Diagram

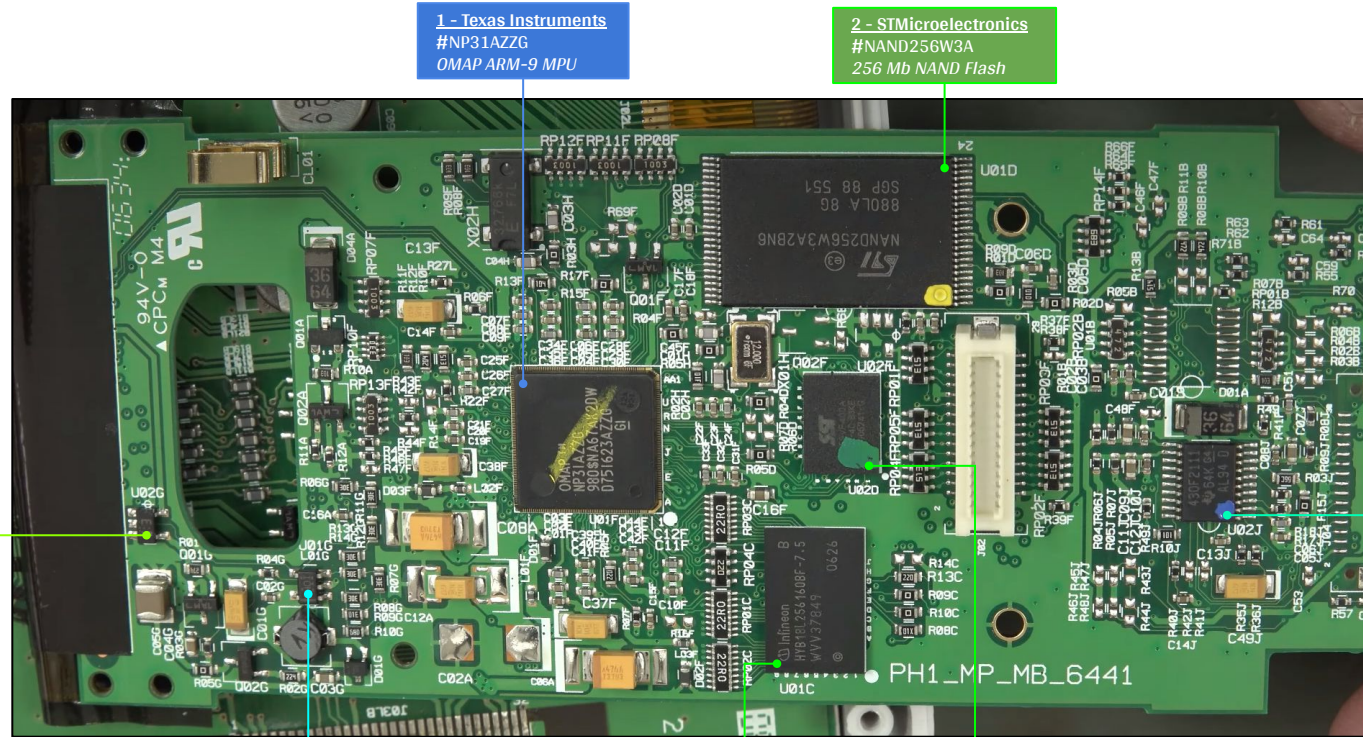


Component Function Guide

Color	Chip Use	Examples
	Audio	Amplifiers/CODECs/Microphones
	Camera/Image	Image Sensors/Video Processors
	Connectivity	Antennas/Bluetooth/GPS/USB/WiFi Stuff
	Display/Touchscreen	Touchscreen/Display Drivers
	Logic	PLDs/FPGAs/Logic Gates
	Memory	EEPROMs/NAND/RAM/SDRAM
	Mixed Signal	DSPs/MCUs
	Power	Battery Protection/Charge Controllers/PMICs/Voltage Regulators
	Processor	Application/Baseband Processors
	Radio Frequency	Radio Frequency/Envelope Tracking Stuff
	Sensor	Accelerometer/Pressure/Temperature
	Other	LED Controllers/Operational Amplifiers
	Unknown	Chips with no predictions of use

Main PCB

Side 1 IC Identification



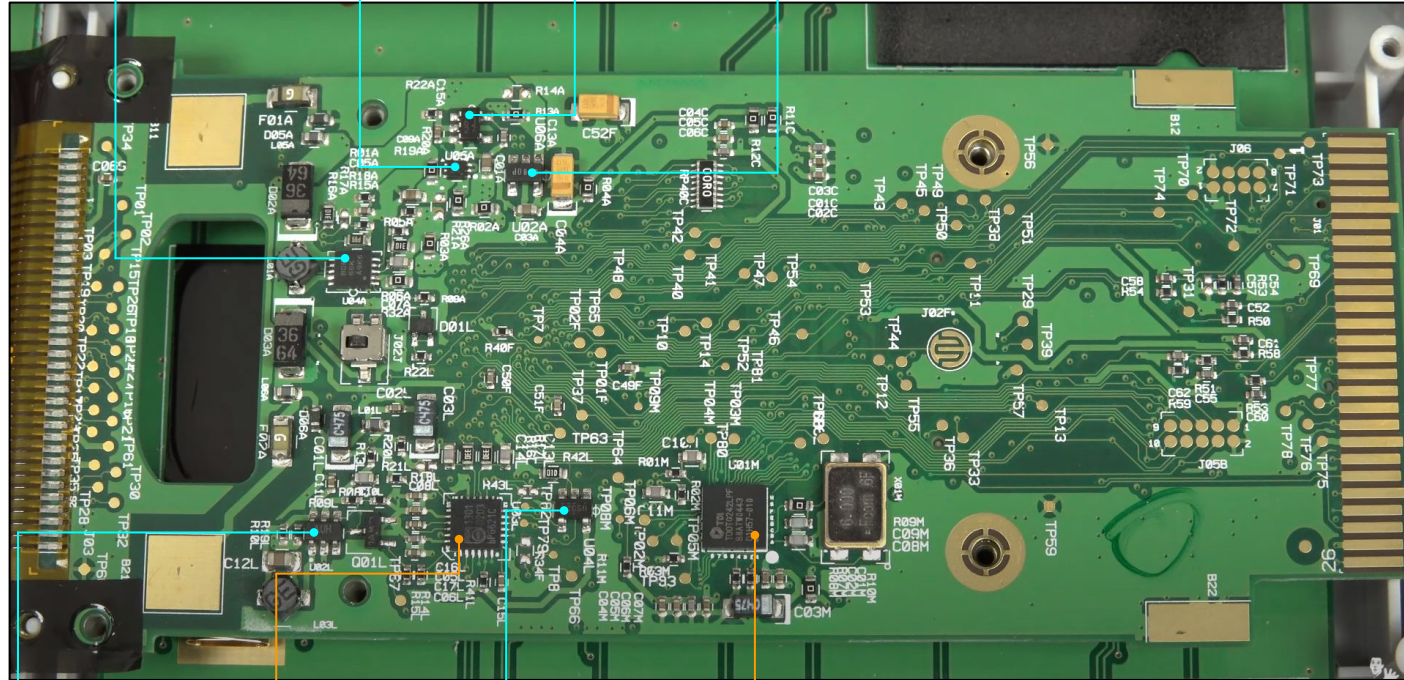
Function

- Logic
- Memory
- Mixed Signal
- Power
- Processor

Main PCB

Side 2 IC Identification

11 - Texas Instruments #TPSG1020 Synchronous Boost Converter	12 - Renesas #ISL9016IRUKFZ 150mA LDO Regulator	13 - Rohm #BU4213 1.3 V Voltage Detector	15 - Unknown #Unknown DC-DC Regulator ?
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10 - Texas Instruments #TPSG1070 Synchronous Boost Converter	9 - NXP Semiconductor #ISP1301 USB OTG Transceiver	14 - ON Semiconductor #Unknown Regulator ?	8 - Broadcom ? #TD242LP Two Port USB Low Power OTG
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Function

- Connectivity
- Power