

Device Menu

I²C Monitor Status and Control Bar

I²C Generic Register View

I²C Power State Control

I²C Global Settings

MCP16503 Diagnostic

VSETx / VSETLx
Installed Resistors

Status Bar

The screenshot shows the MCP16503 I2C configuration software interface. The top menu bar includes Device, File, Settings, Debug, Tools, and About. Below the menu bar, the Device section shows the address 0x5a and connector MCP222X-1-MCP2221 USB-I2C/. The OPERATION section shows the Register 0x00 and buttons for Read, Write, Read All, Write All, Read Modified, and Write Modified. The I2C Generic Register View shows a table of addresses and data. The I2C Power State Control section shows Mode Functionality, Shutdown Mode, Active Mode, Low Power Mode, Hibernate Mode, and High Performance Mode. The I2C Global Settings section shows ENTO delay, ENINTTO delay, nRSTO delay, FSD, and checkboxes for HPMPEN, AWKPDIS, TSDMSK, and TWRMSK. The MCP16503 Diagnostic section shows a table of installed resistors. The VSETx / VSETLx Installed Resistors section shows a table of installed resistors. The Status Bar shows the status as Connected!.

Device: File Settings Debug Tools About

Addr: 0x5a Connector: MCP222X-1-MCP2221 USB-I2C/ ScanAddr: Connect Disconnect Voltage: V Rate: 400 kHz Pullups:

OPERATION

Register: 0x00 Read Write Read All Write All Read Modified Write Modified Number of Registers: 47 Address Size: 8-bit Update

Address (Hex)	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F	20	21	22	23	24	25	26	27	28	29	2A	2B	2C	2D	2E	2F	30	31	32	33	34	35	36	37	38	39	3A	3B	3C	3D	3E	3F	40	41	42	43	44	45	46	47	48	49	4A	4B	4C	4D	4E	4F	50	51	52	53	54	55	56	57	58	59	5A	5B	5C	5D	5E	5F	60	61	62	63	64	65
Data (Hex)	DA	00	14	C0	00	07	07	07	07	07	07	F7	B7	37	F7	09	B0	F1	B1	F1	1D	A0	E5	A5	25	E5	2C	B0	D9	99	19	D9	2C	A0	A7	A7	27	A7	09	A0	99	99	99	99	1C	A0																																																								

Power states control

Mode Functionality: ☒ Mode Functionality ☐ Pin Functionality

Shutdown Mode: ☐ PWRHLD ☐ HPM ☐ LPM

Active Mode: ☐ Low Power Mode ☐ Hibernate Mode ☐ High Performance Mode

Jump control: ☒ Jumper control

Global Settings

ENTO delay: 0 s ☐ HPMPEN

ENINTTO delay: 0.5 s ☐ AWKPDIS

nRSTO delay: 16 ms ☒ TSDMSK

FSD: 0 % ☒ TWRMSK

Status: ☒ Autoread ☒ Check connection

Device: TSHD TWR ENINT nINTO STRTF

BUCK1: FLT HCP ZCD SSD POK ILIMNEG

BUCK2: FLT HCP ZCD SSD POK ILIMNEG

BUCK3: FLT HCP ZCD SSD POK ILIMNEG

BUCK4: FLT HCP ZCD SSD POK ILIMNEG

LDO1: FLT ILIM SSD POK

LDO2: FLT ILIM SSD POK

Clear Faults

Installed Resistors

BUCK1	BUCK2	BUCK3	BUCK4	LDO1	LDO2
140000 Ω	226000 Ω	13000 Ω	976 Ω	21000 Ω	13000 Ω

BUCK1: 1A Buck Regulator

Active Mode: ☒ Enable ☐ Auto PFM

Low Power Mode: ☒ Enable ☐ Auto PFM

Hibernate Mode: ☐ Enable ☐ Auto PFM

High Performance Mode: ☒ Enable ☐ Auto PFM

Vout: 3.300 V

Config: ☐ HCPEN ☒ PHASE ☐ B1HCEN ☒ FLTMSK ☒ DISCH ☐ REN ☐ RCON

Sequence: Soft Start Rate: 6.250 V/ms ☒ SEQEN

Startup Step: 1

Delay: 0.5 ms

BUCK2: 1A Buck Regulator

Active Mode: ☒ Enable ☐ Auto PFM

Low Power Mode: ☒ Enable ☐ Auto PFM

Hibernate Mode: ☒ Enable ☐ Auto PFM

High Performance Mode: ☒ Enable ☐ Auto PFM

Vout: 1.500 V

Config: ☐ HCPEN ☐ PHASE ☒ FLTMSK ☒ DISCH ☐ REN ☐ RCON

Sequence: Soft Start Rate: 3.125 V/ms ☒ SEQEN

Startup Step: 2

Delay: 8 ms

BUCK3: 1A Buck Regulator

Active Mode: ☒ Enable ☐ Auto PFM

Low Power Mode: ☒ Enable ☐ Auto PFM

Hibernate Mode: ☐ Enable ☐ Auto PFM

High Performance Mode: ☒ Enable ☐ Auto PFM

Vout: 1.200 V

Config: ☐ HCPEN ☒ PHASE ☐ FLTMSK ☒ DISCH ☐ REN ☐ RCON

Sequence: Soft Start Rate: 3.125 V/ms ☒ SEQEN

Startup Step: 3

Delay: 4 ms

BUCK4: 1A Buck Regulator

Active Mode: ☒ Enable ☐ Auto PFM

Low Power Mode: ☒ Enable ☐ Auto PFM

Hibernate Mode: ☐ Enable ☐ Auto PFM

High Performance Mode: ☒ Enable ☐ Auto PFM

Vout: 0.900 V

Config: ☐ HCPEN ☐ PHASE ☒ FLTMSK ☒ DISCH ☐ REN ☐ RCON

Sequence: Soft Start Rate: 3.125 V/ms ☒ SEQEN

Startup Step: 3

Delay: 4 ms

LDO1: 300mA LDO

Active Mode: ☒ Enable ☐ Auto PFM

Low Power Mode: ☒ Enable ☐ Auto PFM

Hibernate Mode: ☐ Enable ☐ Auto PFM

High Performance Mode: ☒ Enable ☐ Auto PFM

Vout: 2.500 V

Config: ☒ FLTMSK ☒ DISCH ☐ REN ☐ RCON

Sequence: Soft Start Rate: 6.250 V/ms ☒ SEQEN

Startup Step: 1

Delay: 0.5 ms

LDO2: 300mA LDO

Active Mode: ☒ Enable ☐ Auto PFM

Low Power Mode: ☒ Enable ☐ Auto PFM

Hibernate Mode: ☐ Enable ☐ Auto PFM

High Performance Mode: ☒ Enable ☐ Auto PFM

Vout: 1.800 V

Config: ☒ FLTMSK ☒ DISCH ☐ REN ☐ RCON

Sequence: Soft Start Rate: 6.250 V/ms ☒ SEQEN

Startup Step: 2

Delay: 4 ms

STATUS: Connected!

MCP16503 I²C Buck / LDO Settings