RC38616A100

FemtoClock4 Family Custom Configuration

General Description

This document details the custom configuration that is programmed into the one time programmable (OTP) memory of the RC38616A100. Please refer to the device datasheet for further information about the device.

Output Frequency Overview

Output	OUT0	OUT1	OUT2	OUT3	OUT4	OUT5
Freq	-	-	-	-	-	-

Output	OUT6	OUT7	OUT8	OUT9	OUT10	OUT11
Freq	-	-	-	-	-	-

Output	OUT12	OUT13	OUT14	OUT15	OUT16	OUT17
Freq	-	-	-	-	-	-

I2C Address Selection Bits

I2C Address bits	I2C Address Bit A2	I2C Address Bit A1	I2C Address Bit A0
Address Selection	0	SDO_A1 (PIN E7)	nCS_A0 (PIN D5)

Note: The serial interface mode is selected by the SPI_SEL pin. The pin must be set to GND for I2C mode.

GPIO Startup Configuration

Pin Number	GPIO	Function Description
D7	GPIO0	N/A
D8	GPIO1	N/A
E8	GPIO2	N/A
G6	GPIO3	N/A
H8	GPIO4	EEPROM_LOAD_EN
H7	GPIO5	N/A
H6	GPIO6	N/A
H5	GPIO7	N/A

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VDD Pins

Property	Value
VDD_VCO	1.8V
VDD_FAN	1.8V
VDDXO_DCD	1.8V
VDD_DIG	1.8V
VDD_CLK	1.8V
VDD_FOD0	1.8V
VDD_FOD1	1.8V
VDD_FOD2	1.8V
VDD_FOD3	1.8V
VDD_FOD4	1.8V
VDDO0	1.8V
VDDO1	1.8V
VDDO2	1.8V
VDDO3	1.8V
VDDO4	1.8V
VDDO5	1.8V
VDDO6	1.8V
VDDO7	1.8V
VDDO8	1.8V
VDDO9	1.8V
VDDO10	1.8V
VDDO11	1.8V
VDDO12	1.8V
VDDO13	1.8V
VDDO14	1.8V
VDDO15	1.8V
VDDO16	1.8V
VDDO17	1.8V

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General Overview

Property	Value
Serial Interface	SPI_NI2C_SEL pin determines mode (1=SPI,0=I2C)
Dash Code Register (0x007-0x006)	0x0000
External EEPROM Load	Enabled
REFIN	80M
CLKIN0	Disabled
CLKIN1	Disabled
CLKIN2	Disabled
CLKIN3	Disabled
CLKIN8	Disabled
CLKIN9	Disabled
CLKIN10	None (LVCMOS DC Coupled)
VCO Frequency	9.8304GHz
APLL Loop BW	~892.3194kHz

GPIO Settings

Pin Number	GPIO	Function Description	Polarity	Output Drive Strength	Internal PU	Internal PD
D7	GPIO0	gpi (input)	Do not invert	N/A	Enable	Disable
D8	GPIO1	gpi (input)	Do not invert	N/A	Enable	Disable
E8	GPIO2	gpi (input)	Do not invert	N/A	Enable	Disable
G6	GPIO3	gpi (input)	Do not invert	N/A	Disable	Enable
H8	GPIO4	gpi (input)	Do not invert	N/A	Disable	Enable
H7	GPIO5	gpi (input)	Do not invert	N/A	Enable	Disable
H6	GPIO6	gpi (input)	Do not invert	N/A	Enable	Disable
H5	GPIO7	gpi (input)	Do not invert	N/A	Enable	Disable

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Output Overview

Output	Reference Source	Frequency	Signal Type	Enable State
OUT0	VCO/N	-	HCSL (externally terminated)	powered down
OUT1	VCO/N	-	HCSL (externally terminated)	powered down
OUT2	VCO/N	-	HCSL (externally terminated)	powered down
OUT3	VCO/N	-	HCSL (externally terminated)	powered down
OUT4	VCO/N	-	HCSL (externally terminated)	powered down
OUT5	VCO/N	-	HCSL (externally terminated)	powered down
OUT6	VCO/N	-	HCSL (externally terminated)	powered down
OUT7	VCO/N	-	HCSL (externally terminated)	powered down
OUT8	VCO/N	-	HCSL (externally terminated)	powered down
OUT9	VCO/N	-	HCSL (externally terminated)	powered down
OUT10	VCO/N	-	HCSL (externally terminated)	powered down
OUT11	VCO/N	-	HCSL (externally terminated)	powered down
OUT12	VCO/N	-	HCSL (externally terminated)	powered down
OUT13	VCO/N	-	HCSL (externally terminated)	powered down
OUT14	VCO/N	-	HCSL (externally terminated)	powered down
OUT15	VCO/N	-	HCSL (externally terminated)	powered down
OUT16	VCO/N	-	HCSL (externally terminated)	powered down
OUT17	VCO/N	-	HCSL (externally terminated)	powered down

Note: All VDDOs need to ramp before or at the same time as other cores power rails.

External EEPROM Settings

Property	Value
Part Number	AT24C64
Address Size	2-byte address
I2C Speed	400kHz
Length	8KB
EEPROM Load Pins	GPIO0(SCL)/GPIO1(SDA)
7-bit Address	1 0 1 0 A2 A1 A0
EEPROM Address Bit A2	0
EEPROM Address Bit A1	0
EEPROM Address Bit A0	0

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Ordering Info

Part Number	Carrier Type
RC38616A100GBB#BC0	Tray
RC38616A100GBB#HC0	Tape, Pin 1 orientation: EIA-481-C
RC38616A100GBB#KC0	Tape, Pin 1 orientation: EIA-481-D/E

Notes:

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