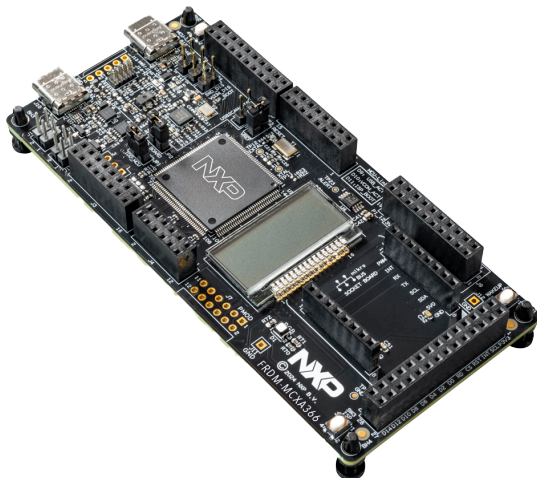
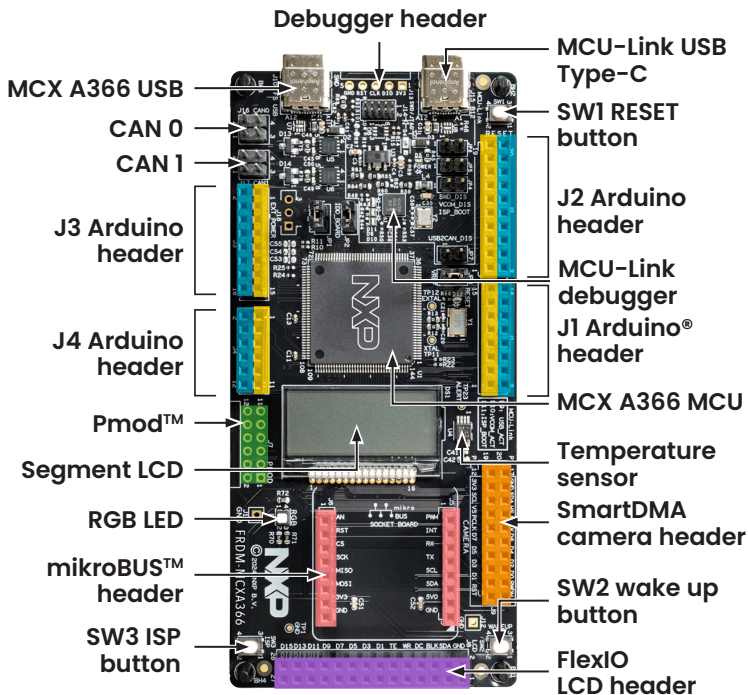




Quick Start Guide
FRDM-MCXA366

FRDM MCX A366 development platform





- | | | |
|--|---|--|
|  Arduino header |  FlexIO LCD header |  FRDM header |
|  Pmod |  mikroBUS header |  SmartDMA camera header |

Get to know FRDM-MCXA366

NXP's FRDM Development Platform provides you with cost-effective MCU development boards.

Easy I/O access supports expansion board use for fast prototyping and rapid evaluation.

Getting started

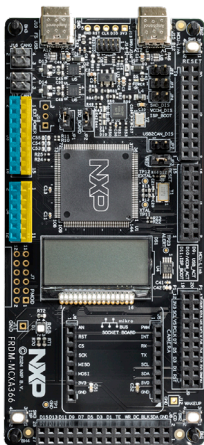
1. Connect the FRDM-MCXA366 board to a PC using the USB Type-C cable
2. The board comes preprogrammed with a blinky LED demo
3. Get started at nxp.com/FRDM-MCXA366



Software and expansion boards

4. Access software and tools through nxp.com/MCUXpresso
 - Expansion Board Hub mcuxpresso.nxp.com/eb-hub to find add-on boards from NXP and our partners with related MCUXpresso SDK-compatible drivers and examples
 - Application Code Hub mcuxpresso.nxp.com/appcodehub to browse application code examples from our experts to help kick start your project
5. Explore our entire FRDM platform of MCUs and MPUs at nxp.com/FRDM

J3/J4 Arduino headers and FRDM headers



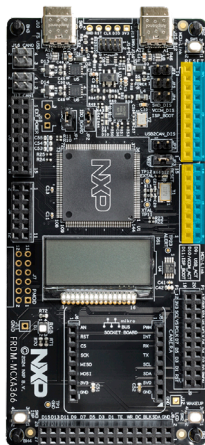
J3	NC	P1_11	2	1	P3_31	MC1_ENC_B
	IOREF	LDO_3V3	4	3	P1_13	MC1_ENC_A
	RESET	P1_29	6	5	P3_11	MC1_PWM_CB
	3V3_OUT	LDO_3V3	8	7	P3_10	MC1_PWM_CT
	5V0_OUT	SYS_5V0	10	9	P3_9	MC1_PWM_BB
	GND	GND	12	11	P3_8	MC1_PWM_BT
	GND	GND	14	13	P3_1	MC1_PWM_AB
	VIN	P5-9V_VIN	16	15	P3_0	MC1_PWM_AT

J4	A0	P1_14	2	1	P1_0	MC2_ENC_A
	A1	P2_5	4	3	P3_7	MC2_ENC_B
	A2	P2_7	6	5	P4_6	MC2_ENC_I
	A3	P3_30	8	7	P2_1	OPAMP2_INN
	A4	P1_0	10	9	P2_20	OPAMP3_INP
	A5	P1_1	12	11	P2_21	OPAMP3_INN

■ Arduino header

■ FRDM header

J2/J1 Arduino headers and FRDM headers



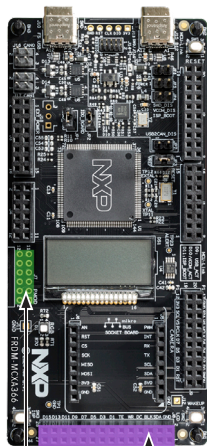
J2	MC2_CUR_DCB	P1_5	19	20	P1_9	D19/SCL
	MC2_VOLT_DCB	P1_3	17	18	P1_8	D18/SDA
	MC2_BEMF_C	P2_5	15	16	VDDA	AREF
	MC2_BEMF_B	P1_14	13	14	GND	GND
	MC2_BEMF_A	P1_6	11	12	P3_10	D13/SCK
	MC1_CUR_DCB	P2_4	9	10	P3_9	D12/SDI
	MC1_VOLT_DCB	P1_4	7	8	P3_8	D11/PWM/SDO
	MC1_BEMF_C	P3_30	5	6	P3_11	D10/PWM/SS
	MC1_BEMF_B	P1_10	3	4	P3_13	D9/PWM
	MC1_BEMF_A	P2_7	1	2	P4_3	D8

J1	MC2_PWM_CT	P3_12	15	16	P3_22	D7
	MC2_PWM_CB	P3_13	13	14	P3_17	D6/PWM
	MC2_PWM_BT	P3_14	11	12	P3_1	D5/PWM
	MC2_PWM_BB	P3_15	9	10	P4_7	D4/CTS
	MC2_PWM_AT	P3_16	7	8	P3_14	D3/PWM
	MC2_PWM_AB	P3_17	5	6	P3_31	D2/RTS
	MC1_ENC_I	P4_7	3	4	P2_2	D1/TX
	MC1_ENC_HOME	P1_1	1	2	P2_3	D0/RX

■ Arduino header

■ FRDM header

FlexIO LCD header and Pmod



Pmod

FlexIO
LCD header

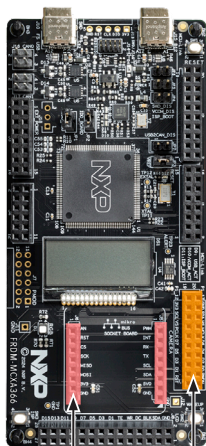
FlexIO LCD	GND	GND	2	1	LDO_3V3	3V3
	SDA	P3_28	4	3	P3_27	SCL
	BLK	P4_4	6	5	P2_24	INT
	DC	P4_1	8	7	P4_3	RST
	WR	P0_7	10	9	P3_16	CS
	TE	P2_25	12	11	P4_0	RD
	D1	P2_9	14	13	P2_8	D0
	D3	P2_11	16	15	P2_10	D2
	D5	P3_13	18	17	P3_12	D4
	D7	P1_15	20	19	P2_14	D6
	D9	P3_25	22	21	P3_24	D8
	D11	P1_19	24	23	P2_18	D10
	D13	P3_29	26	25	P3_20	D12
	D15	P3_23	28	27	P2_22	D14

Pmod	VCC	LDO_3V3	12	11	LDO_3V3	VCC
	GND	GND	10	9	GND	GND
	SDA	P3_28	8	7	P1_1	SCK
	SCL	P3_27	6	5	P1_2	SDI
	GPIO	P1_5	4	3	P1_0	SDO
	GPIO	P1_4	2	1	P1_6	SS

FlexIO LCD header

Pmod

SmartDMA camera header and mikroBUS



mikroBUS
header

SmartDMA
camera
header

SmartDMA camera	GPIO	P1_12	19	20	P1_17	GPIO
	VDD	LDO_3V3	17	18	GND	GND
	SCL	P1_9	15	16	P1_8	SDA
	VSYN	P2_26	13	14	P3_26	HSYN
	PCLK	P4_6	11	12	P4_2	MCLK
	D7	P3_7	9	10	P3_6	D6
	D5	P3_5	7	8	P3_4	D4
	D3	P3_3	5	6	P3_2	D2
	D1	P0_5	3	4	P0_4	D0
	RESET	P1_18	1	2	P1_16	PWDN

			J6	J5		
mikroBUS	AN	P1_6	1	1	P2_5	PWM
	RST	P1_7	2	2	P3_22	INT
	CS	P1_3	3	3	P4_2	RX
	SCK	P1_1	4	4	P4_5	TX
	SDI	P1_2	5	5	P3_27	SCL
	SDO	P1_0	6	6	P3_28	SDA
	3V3	LDO_3V3	7	7	SYS_5V0	5V0
	GND	GND	8	8	GND	GND



Get started

Download installation software and documentation under “Jump Start Your Design” at nxp.com/FRDM-MCXA366

Support

Visit nxp.com/support for a list of phone numbers within your region.

Warranty

Visit nxp.com/warranty for complete warranty information.

Home page

Visit nxp.com/FRDM-MCXA366 for more information.

NXP and the NXP logo are trademarks of NXP B.V. All other product or service names are the property of their respective owners. © 2025 NXP B.V.

Document Number: FRDMMCA366QSG REV 0

APN: 926-10095