

Content

AM5718 Single Board Computer OK5718-C.....	2
AM3354 Single Board Computer OK335xD.....	5
AM3354 Single Board Computer OK335xS.....	7
OK335xS-II Single Board Computer.....	9
i.MX6Q/DL Single Board Computer OKMX6Q/DL-C.....	11
i.MX6Q/ DL Single Board Computer OKMX6Q/DL.....	13
i.MX6UL Single Board Computer OKMX6UL-C1.....	15
i.MX6UL Single Board Computer OKMX6UL-C2.....	17
FCU1101 Gateway Module.....	19
i.MX RT1052 Development Board OK1052-C.....	20
i.MX RT1061 Single Board Computer OK1061-S.....	22
LS1012A Single Board Computer OK1012A-C.....	24
LS1043A Single Board Computer OK1043A-C.....	26
S5Pxx18 Single Board Computer OKxx18-C.....	29
OKXX18-C2 Single Board Computer.....	31

AM5718 Single Board Computer OK5718-C



Name: Single board computer
Model: OK5718-C
CPU: TI AM5718
Architecture: Cortex-A15+ DSP+ PRU+ Cortex-M4
RAM: 1GB DDR3L
Flash: 8GB eMMC
Frequency: 1.5GHz+ 750MHz+ 200MHz+ 213MHz
OS: Linux, Win CE, Android

OK5718-C is a development board designed based on TI AM5718 processor, it consists of carrier board and SoM, it integrates with ARM Cortex-A15, frequency up to 1.5GHz, DSP C66x with frequency of 750MHz, 2x dual-core ARM Cortex-M4 with frequency of 213MHz and two dual-core PRU with frequency of 200MHz.



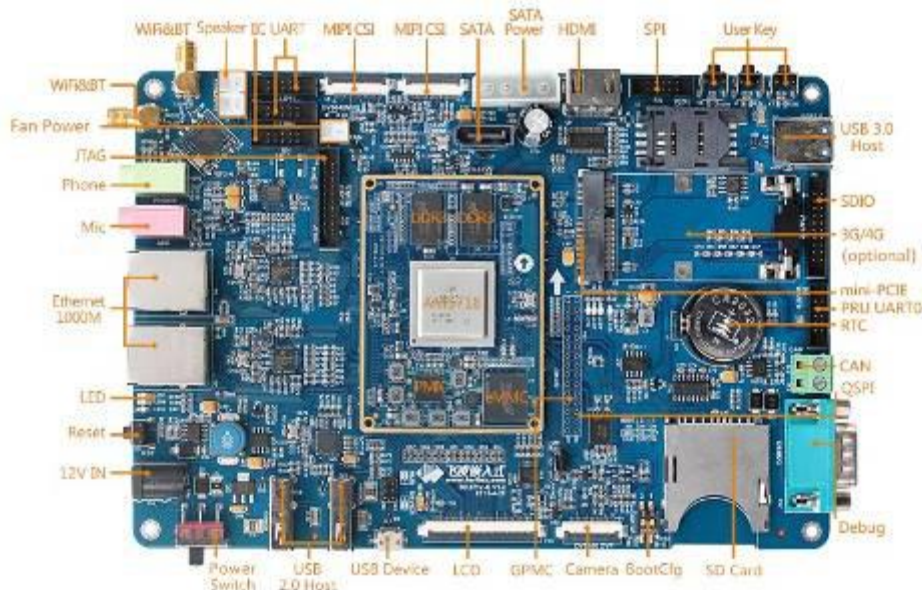
Front of SoM FET5718-C



Back of SoM FET5718-C

Overview of SoM FET5718-C			
CPU	TI Sitara AM5718		
Architecture	Cortex-A15-1.5GHz	DSP-C66X-750MHz	2x dual-core Cortex-M4-213MHz
	2x dual-core PRU-200MHz	PowerVR SGX544 3D GPU	Vivante GC320 2D GPU
RAM	1GB DDR3L	Flash Memory	8GB eMMC
Dimensions	50*70mm	Connection Type	board to board connectors
PMU	TPS659162RGZR	Voltage Input	5V
Working Temp	-40℃ to +85℃	Relative Humidity	10% to 90% RH none condensing
OS	Linux4.9.41+ QT5.6+ Wayland		

SoM FET5718-C Features		
Interface	QTY	Spec.
LCD	≤3	RGB 888
HDMI	1	HDMI 1.4a, 1080P@60Hz; 36-bit RGB display; HDCP encryption; Deep color mode (10-bit, 12-bit color depth are both supported by pixel clock of 148.5MHz
Camera	≤4	2x 8-bit DVP, up to 5.0MP; 2x 8/ 16/ 24-bit DVP
MIPI CSI-2	≤2	CSI-2_PHY1: 1 clock lane+ 4 data lane; CSI2_PHY1: 1 clock lane+ 1 data lane
SD/ MMC/ SDIO	≤4	1 or 4-bit transferring mode supported by SD and SDIO card with UHS-I SDR104 mode (up to 104MB/s) SD/ MMC/ SDIO1: 4-bit data; SD/ MMC/ SDIO2: 8-bit data (used as eMMC on SoM) SD/ MMC/ SDIO3: 8-bit data; SD/ MMC/ SDIO4: 4-bit data
USB	2	USB2.0 (up to 480Mbps), integrated with HS USB PHY
IIC	≤5	IIC1/ 2: up to 400Kbps, standard OD; IIC3/ 4/ 5: up to 3.4Mbps, analogy OD
HDQ1W	≤1	Support TI/ Benchmarq HDQ master device function; Comply with Dallas 1-Wire protocol
UART	≤10	UART1: full serial interface is supported; UART3: IrDA 1.4, CIR are supported others are standard interface
SPI	≤4	up to 4x SPI, each with up to 4 master channel
QSPI	≤1	work as master mode only, 6 signal pins
McASP	≤8	supports 8-ch audio at most McASP1/2: up to 16 separate TX/ RX channel McASP3-8: up to 4 separate TX/ RX channel
USB3.0	≤1	super speed USB3.0 Dual-Role-Device, Host is supported
USB2.0	1	high-speed USB 2.0 Dual-Role-Device, Host is supported
SATA	1	SATA Gen2
PCIE	≤2	PCI Express 3.0 subsystem, with 2x 5-Gbps channel 1x Dual-channel interface with GEN2 standard, 2x Single-channel intergrace with Gen2 standard
CAN	≤2	two CAN controller at most, complys with CAN2.0 protocol
Ethernet	≤2	3-port gigabit ethernet switch subsystem provides ethernet packet communication and can be configured as an ethernet switch. It provides two network ports and available for RGMII/ RMII/ MII interface, 10M/ 100M/ 1000M adaptive
PWMSS	≤3	supports up to 3x PWMSS, each is available for: eHRPWM: 16-bit timer, up to 2 separate PWM output eCAP: 32-bit timer, one channel is special for input capture pin eQEP: rotating decode unit
JTAG	supported	standard IEEE1149.1 interface
Keypad Port	supported	9*9 keypad
GPMC	1	8-bit/ 16-bit data bus width, up to 28-bit address bus, up to 8-bit chip selection bus


OK5718-C Carrier Board Features

Interface	QTY	Spec.
LCD	1	RGB 888, supports resolution up to 1920*1080 (60Hz)
HDMI	1	HDMI V1.4, up to 1080P 60FPS
Camera	3	8-bit DVP OV5640, MIPI OV5640, MIPI OV5645
Audio	1	1x MIC, 1x Phone, 2x Speaker
USB Host	2	expended by HUB, USB 2.0 (up to 480Mbps)
USB 3.0	1	up to 5Gbps
USB Device	1	
Ethernet	2	10M/ 100M/ 1000Mbps, RJ-45
WIFI	1	RL-UM02WBS-8723BU-V1.2
BT	1	IEEE 802.11b/ g/ n 1T1R WLAN and Bluetooth
SD card	1	compatible with SD, SDHC and SDXC (UHS-1)
SDIO	1	drawn out by 20-pin headers with pitch of 2mm, multiplexed with SD card
LED	2	for user's definition to LED
GPMC	1	general purpose memory controller bus
QSPI	1	on-board 256Mb QSPI NOR Flash
SPI	1	
IIC	2	
CAN	1	CAN2.0B
UART	3	UART0 and UART1 are 5-wire serial interface, UART2 is a 3-wire interface, all are with 3.3V, each up to 5.0Mbps
UART Debug	1	RS232, DB9 connector
JTAG Debug	1	
HDQ	1	single line interface, on-board DS18B20
SATA	1	SATA2, on-board 4pin D type power input connector

AM3354 Single Board Computer OK335xD

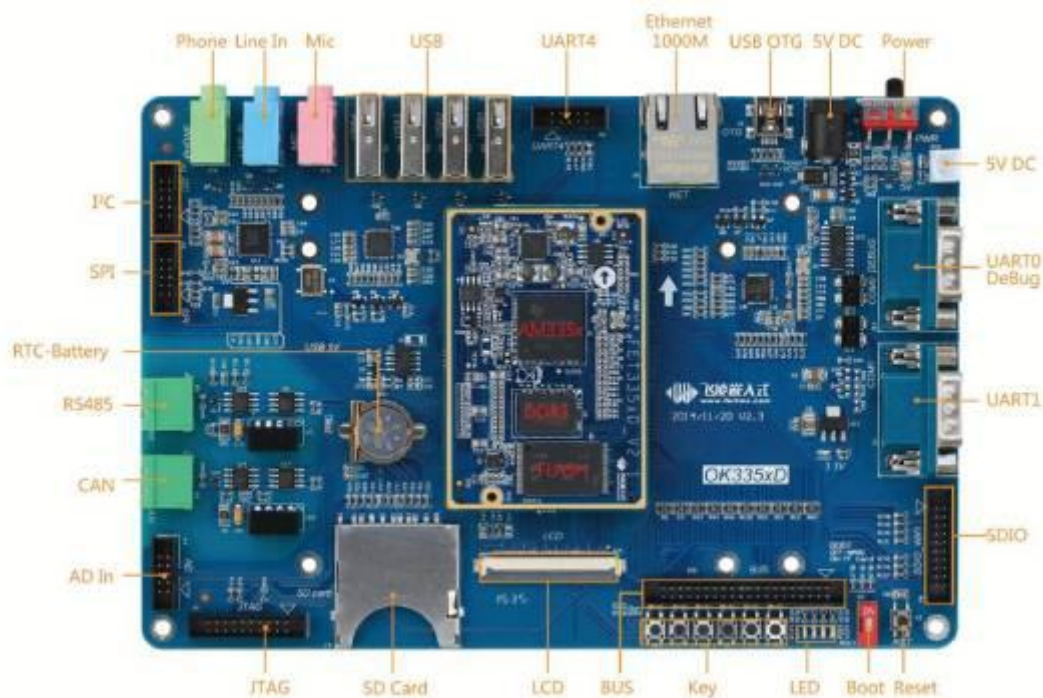


Name: Single board computer
Model: OK335xD
CPU: TI AM3354
Architecture: Cortex-A8
RAM: 512M DDR3
Flash: 256M NandFlash
Main Frequency: 800MHz
OS: Linux, Win CE, Android

TI AM335x microprocessors is a simple and stable industrial development platform with main frequency up to 800MHz, operating temperature ranges from -40°C to +85°C.



FET335xD SoM Features			
CPU	TI Sitara AM335x Cortex-A8 processor	I2C	3-ch
Architecture	ARMv7 Cortex-A8	SPI	2-ch
Main Frequency	800MHz	CAN	2-ch
RAM	512M DDR3	USB HOST	1-ch USB HOST 2.0
FLASH	256M SLC Nandflash	USB DEVICE	1-ch USB DEVICE 2.0
Input voltage	5V	SD/MMC/SDIO	3-ch MMC
2D/3D	Supported	Ethernet	2-ch Gigabit Ethernet
GPU	PowerVRSGX530	UART/IrDA	6-ch
Hardware Watchdog	SP706SEN	EINT/GPIO	Supported
PMU	TPS65217C	ADC	8-ch
Size	46mm*70mm	Video Codec	Software codec
Connection method	Pin connector	EBI	16-bit data bus, 12-bit address bus
OS	Linux/Android//WinCE/Starter Ware	JTAG	1-ch
LCD	RGB16-bit	EEPROM	Support (Only for Encryption)
Audio	IIS interface	PWM	1-ch (For backlight)



OK335xD Carrier Board Features

Audio	3-ch(1-ch phone,1-ch MIC,1-ch speaker)	JTAG	1-ch
CAN	1-ch(With isolation protection)	RTC	Supported
RS485	1-ch (With isolation protection)	User key	6
SD/MMC/SDIO	2-ch(1-ch SDIO WIFI,1-ch SD card slot)	Reset	1
Serial	3-ch (2-ch RS232, 1-ch TTL)	PWM	1-ch(For LCD backlight)
Input Voltage	5V	LED	4-ch
EBI	Support 12 bit address bus,16 bit data bus	USB HOST	4-ch, USB 2.0
Boot	Set to boot from Nand Flash or SD card	SPI	1-ch
LCD	1-ch, support resistive, capacitive touch screen; support LCD to VGA module	GPIO	More than 20-ch
ADC	8-ch, in which 4-ch for resistive touch, 4-ch for self definition by users.	LVDS	Supported
SATA	Support to connect with USB to SATA module	USB DEVICE	1-ch, USB 2.0
GPS	Support to connect with external GPS module	Ethernet	1-ch Gigabit Ethernet port
3G	Support external AD3812 module(USB)	I2C	2-ch

AM3354 Single Board Computer OK335xS



Name: Single board computer with dual Ethernet

Model: OK335xS

CPU: TI AM3354

Architecture: Cortex-A8

RAM: 512M DDR3

Flash: 256M SLC Nand Flash

Main Frequency: 800MHz

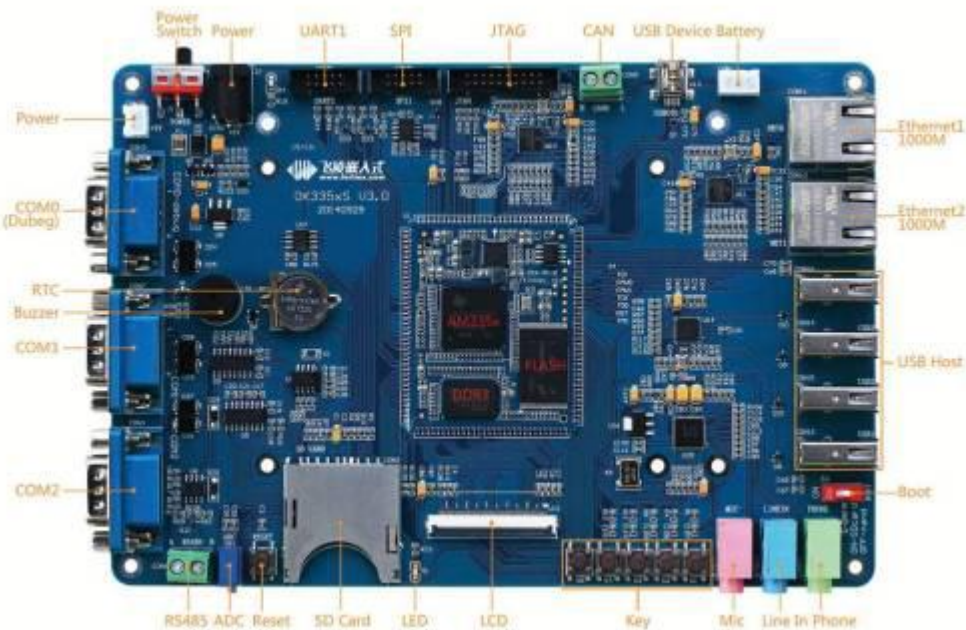
OS: Linux, Win CE, Android

OK335xS single board computer is with dual Ethernet ports which is also based on TI AM335x processor and with industrial grade working temp. It is with main frequency reaches up to 800MHz, and with 512M DDR3 RAM and 256M Nand flash.



FET335xS Industrial CPU Module Features

CPU	TI Sitara AM3354@ 800MHz	I2C	3-ch
Architecture	ARMv7 Cortex-A8	SPI	2-ch
Audio	IIS interface	CAN	1-ch
RAM	512M DDR3	USB HOST	1-ch USB HOST 2.0
FLASH	256M SLC Nand Flash	USB DEVICE	1-ch USB DEVICE 2.0
Temp Range	-40℃~+85℃	SD/MMC/SDIO	3-ch MMC
Humidity	10-90%(Non-condensation)	Ethernet	2-ch Gb Ethernet port
Input Voltage	5V	UART/IrDA	6-ch
2D/3D	Supported	EINT/GPIO	More than 20-ch
GPU	PowerVRSGX530	ADC	7-ch
PMU	TPS65217C	Video Encoder	Software codec
Size	52mm*42mm	JTAG	1-ch
Connection Type	Pin connector	EEPROM	Supported (Only for Encryption)
OS	Linux/ Android// WinCE/ Starter Ware	PWM	2-ch (1-ch for backlight)
LCD	RGB24-bit	SATA	None(Support USB to SATA)



OK335xS Carrier Board Features

Audio	3-ch(1-ch phone,1-ch MIC,1-ch line in)	JTAG	1-ch
I2C	1-ch	User key	5
SPI	1-ch	Boot switch	Set to boot from Nandflash or SD card
CAN	1-ch	Reset	1
RS485	1-ch,multiplexed with Profibus	LED	1-ch
SD/MMC/SDIO	1-ch SD card	GPIO	More than 20-ch
USB HOST	4-ch, support USB 2.0 protocol	RTC	Support
USB DEVICE	1-ch, support USB 2.0 protocol	Ethernet	2-ch gigabit Ethernet port
Input Voltage	5V	UART	4-ch (3-ch RS232, 1-ch TTL)
PWM	2-ch(1-ch is for LCD backlight,1-ch is for buzzer)	3G	Support external AD3812 module(USB)
SATA	Support to connect with USB to SATA module	GPS	Support to connect with external GPS module
LCD	1-ch, support resistive, capacitive touch screen; support LCD to VGA module, LCD to LVDS module	ADC	5-ch (4-ch is for resistive touch, 1-ch is for slide rheostat)

OK335xS-II Single Board Computer



Name: Single board computer

Model: OK335xS-II

CPU: TI AM3354

Architecture: Cortex-A8

RAM: 128M DDR3

Flash: 256M SLC Nand Flash

Main Frequency: 600MHz

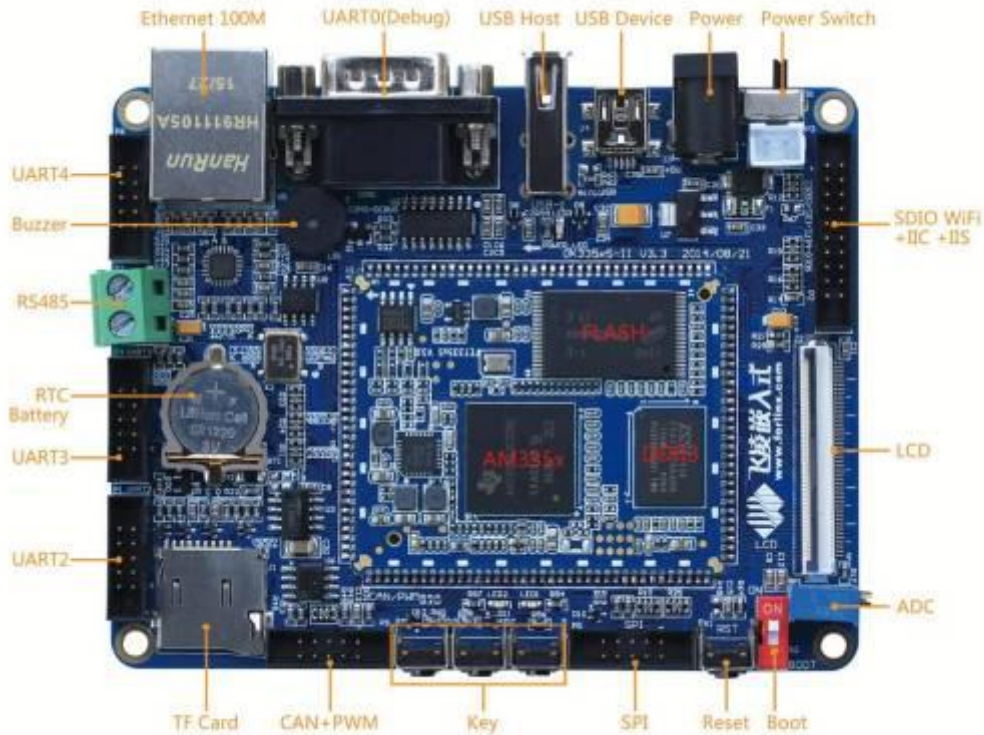
OS: Linux, Win CE

Same as other OK335x series single board computer, OK335xS –II is also based on TI Sitara AM335x processor with the advantages of high efficient processing capacity, with low consumption and highly integrated peripherals, advanced graphic controller and RTC function.



FET335xS-II Industrial CPU Module Features

CPU	TI Sitara AM3354@ 600MHz	I2C	3-ch
Architecture	ARMv7 Cortex-A8	SPI	2-ch
PWM	3-ch	CAN	2-ch
RAM	128M DDR3	USB HOST	1-ch USB HOST 2.0
FLASH	256M SLC Nand Flash	USB DEVICE	1-ch USB DEVICE 2.0
Temp Range	-40℃~+85℃	SD/MMC/SDIO	3-ch MMC
Humidity	10%~90%	Ethernet	2-ch Gb Ethernet port
Input Voltage	5V	UART/IrDA	6-ch
GPU	Power VRSGX530	EINT/GPIO	Support
PMU	TPS650250	ADC	7-ch
Size	52mm*42mm*2.6mm	Video Codec	Software codec
Connection Type	Stamp hole	JTAG	1-ch
OS	Linux3.2 WinCE6.0	EEPROM	Support (Only for Encryption)
LCD	RGB16bit	Audio	IIS interface
2D/3D	Support 2D/3D graphics acceleration	SATA	Support USB to SATA module



OK335xS-II Industrial Carrier Board Features

I2C	1-ch	RTC	Support
SPI	1-ch	User key	3
RS485	1-ch	Reset	1
SD/MMC/SDIO	1-ch SD card	PWM	3-ch
USB HOST	4-ch, support USB 2.0 protocol	LED	2-ch
USB DEVICE	1-ch, support USB 2.0 protocol	GPIO	Many, multiplexed with other pins
Ethernet	1-ch 100M Ethernet port	LVDS	Support
Input Voltage	5V	Serial	4-ch (1-ch is for debugging, 3-ch LVCOMS)
LCD	1-ch, support resistive, capacitive touch screen; support LCD to VGA module	ADC	7-ch, (2-ch is for self definition, 1-ch is for slide rheostat, 4-ch is for resistive touch)
CAN	2-ch (CAN transceiver is not on the board, only can bus here)	Boot switch	Set to boot from Nandflash or SD card
SATA	Support to connect with USB to SATA module	GPS	Support to connect with external GPS module
3G	Support to connect with external AD3812 module(USB)		

i.MX6Q/DL Single Board Computer OKMX6Q/DL-C



Name: Single board computer
Model: OKMX6Q-C, OKMX6DL-C
CPU: NXP i.MX6Q or i.MX6DL
Architecture: Cortex-A9
RAM: 1GB DDR3 (2GB optional)
Flash: 8GB eMMC
Main Frequency: 1GHz (industrial 800MHz)
OS: Linux4.1.15/ 3.0.35, Android6.0/ 4.4.2

OKMX6Q-C/ OKMX6DL-C is a ready-to-use single board computer consists a 4-layer EINT PCB carrier board and SoM FETMX6Q-C/ FETMX6DL-C, on-board Gigabit Ethernet, CAN bus, parallel camera, WIFI&BT are all available on its carrier board, MIPI, MLB and EMI bus are all unique features of its CPU. The CPU module was approved by EMC and working temp testing



SoM FETMX6DL/ FETMX6Q-C Features

CPU	NXP i.MX6Q/ i.MX6DL	UART	5-ch
Architecture	Cortex-A9	CAN	2-ch,
Main Frequency	1.0GHz (industrial: 800MHz)	IIC	3-ch
RAM	1GB DDR3 1066MHz (2G optional)	SPI	5-ch
FLASH	8GB eMMC	EIM	32-bit data bus, 27-bit address bus
OS	Android4.4/ Linux 3.0.35/ Linux 4.1.15	Camera	1x DVP, 1x MIPI_CSI
Working Temp	0℃~+70℃/ -40℃~+85℃	SD/ MMC/ SDIO	3-ch
Packing	connectors (4* 80pin, pitch of 0.5mm)	USB	1x USB2.0 Host, 1x USB2.0 OTG
Dimensions	40mm*70mm	SATA	1-ch (only for i.MX6Q)
PMU	MMPF0100NPEP	Mini PCIe	1-ch
GPU	Vivante GC355/ Vivante GC320	PWM	4-ch
Video Codec	Hardware codec	MLB	1-ch
Display interface	1x RGB888, 2x 8-bit LVDS, 1x HDMI, 1x MIPI	SPDIF	1-ch
IIS	4-ch	JTAG	1-ch
Ethernet	1-ch, 10/ 100/ 1000M	EINT/ GPIO	supported

Certificate: CE/ FCC/ RoHS



OKMX6Q-C Carrier Board Features

Audio	1-ch phone, 1-ch MIC, 2-ch speaker	Key	3
IIC	3-ch	DIP	for setting up of booting mode
SPI	3-ch	Reset	1
CAN	1-ch	PWM	4-ch, 1 for backlight
MIPI camera	1-ch	LCD	1-ch, resistive/capacitive
DVP camera	1-ch, OV5640	EINT	supported
SD/MMC/SDIO	2-ch	GPIO	Supported
USB Host	2-ch, USB 2.0 host	LVDS	2-ch
USB OTG	1-ch, USB2.0 OTG	HDMI	1-ch
Ethernet	1-ch, 1000/100/10M	MIPI Display	1-ch
UART	5-ch (1x debug, 3x 3-wire, 1x 5-wire)	SATA	1-ch, only for i.MX6Q
IrDA	1-ch	EIM	Supported
Power Adapter	5V	3G/4G	mini PCIE interface for 3G/4G module
RTC	CPU RTC and on-board RTC	WIFI&BT	1-ch
ADC	external expand resistive touching controller	JTAG	Supported

i.MX6Q/ DL Single Board Computer OKMX6Q/DL



Name: Single Board Computer

Model: OKMX6Q/DL

CPU: i.MX6Quad/i.MX6DL

Architecture: Cortex-A9

RAM: 1G DDR3 1066

Flash: 8GB eMMC

Main Frequency: 1GHz

OS: Android, Linux

OKMX6Q/DL is a Cortex-A9 featuring single board computer based on Freescale i.MX6Quad/Dual Lite processor with excellent hardware and software Performance. On-board connectors for DVP camera, LVDS, HDMI, SD card, CAN, RS485, IrDA, SATA, audio, 3-axis gravity accelerator, etc are all available and ready-to-use. Both commercial grade 0°C ~ +70°C and industrial grade -40°C ~ +85°C are optional.



FETMX6Q



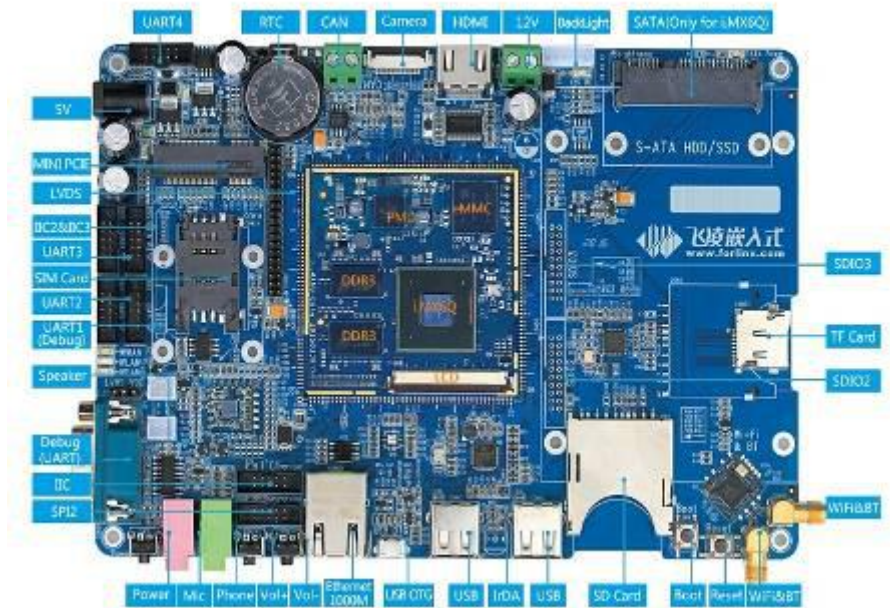
FETMX6DL



SoM FETMX6DL/ FETMX6Q Features

CPU	NXP i.MX6DL / i.MX6Quad	Display Interface	1x RGB 888, 2x LVDS with 8-bit, 1x HDMI
Architecture	Cortex-A9	IIS	1-ch
Main Frequency	1.0GHz (industrial grade 800MHz)	Ethernet	1-ch, 10/ 100/ 1000M
RAM	1GB DDR3 (2G optional)	UART	4-ch
FLASH	8GB eMMC	CAN	2-ch
OS	Android4.4/Linux3.0.35/ Linux4.1.15	IIC	3-ch
Voltage Input	4.2V	SPI	2-ch
Working Temp	0°C ~ +70°C/ -40°C ~ +85°C	Camera	1-ch, DVP OV5640
Packing	Edge soldering (220 pins, pitch of 1mm)	USB	1x USB2.0 Host, 1x USB2.0 OTG
Dimensions	60mm*60mm	SATA	1-ch(Only for i.MX6Q)
PMU	MMPF0100NPEP	Mini PCIe	1-ch
GPU	Vivante GC355/ Vivante GC320	EINT/ GPIO	Supported
Video Codec	Hardware codec	SD/ MMC/ SDIO	2-ch

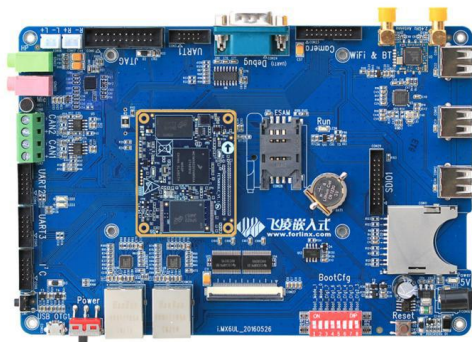
Certificate: CE/ FCC/ RoHS



OKMX6Q/DL Carrier Board Features

Audio	1-ch phone, 1-ch MIC, 2-ch speaker	IrDA	1-ch, empty soldering
I2C	3-ch	RTC	supported
SPI	1-ch	User Key	2
CAN	2-ch	DIP	1-ch, boot mode selection
Camera	1-ch	Sleeping Awake Key	1
SDIO	2-ch	Reset	1-ch
SD/MMC	2-ch	PWM	2-ch
USB HOST	2-ch, USB2.0 host	EINT	supported
USB DEVICE	1-ch, USB2.0 OTG	GPIO	supported
Ethernet	1-ch, 10M/100M/1000M Ethernet	LVDS	2-ch
UART	4-ch (1 debug port, 2x 3-wire serial, 1x 5-wire serial port)	Power Supply	1x 5V mandatory power 1x 12V auxiliary power
HDMI	1-ch	SATA	1-ch, only for i.MX6Q
Mini PCIE	1-ch	WIFI&BT	1-ch

i.MX6UL Single Board Computer OKMX6UL-C1



Name: Single board computer

Model: OKMX6UL-C1

CPU: i.MX6Ultra Lite

Architecture: Cortex-A7

RAM: 512MB LvDDR3

Flash: 4G eMMC

Main Frequency: 528MHz

OS: Linux

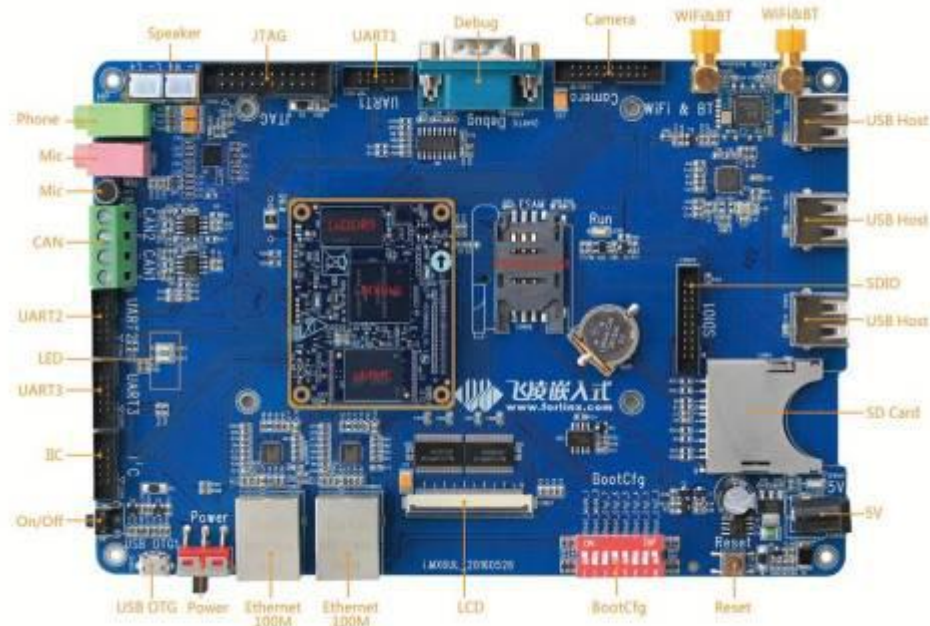
OKMX6UL-C1 development board/kit featuring NXP(Freescale) i.MX6Ultra Lite ARM Cortex-A7 processor. It is a complete, ready-to-use platform consists of a compact CPU module with based board,. OS Linux is well supported. It aims at low power applications such as automotive telematics, IoT gateway HMI, home energy management systems, smart energy concentrators, intelligent industrial control systems, electronics POS device, smart appliances, financial payment systems, etc.



SoM FETMX6UL-C1/ FETMX6ULC2 Features

CPU	NXP i.MX6UL	CAN	2-ch
Architecture	Cortex-A7	IIC	4-ch
Main Frequency	528MHz	SPI	4-ch
RAM	512MB LvDDR3 (commercial grade) 256MB DDR3 (industrial grade)	EIM	16-bit data bus 16-bit address bus
Flash	4GB eMMC (commercial grade) 256MB NAND Flash (industrial grade)	Camera	1-ch, DVP
OS	Linux3.14.38+ QT4.8.5; Linux 4.1.15+QT5.6	SD/ MMC/ SDIO	2-ch
Voltage Input	5V	USB	2-ch, USB2.0 OTG
Working Temp.	0℃~+70℃(commercial grade) -40℃~+85℃(industrial grade)	PWM	8-ch
Packing	Board-to-board connectors (2* 80 pins, pitch of 0.8mm)	SPDIF	1-ch
Dimensions	40* 50mm	JTAG	1-ch
Video Codec	Software codec	EINT/ GPIO	Supported
Display Interface	1-ch, RGB 888	Keypad	1-ch, 8x 8 matrix keypad
IIS	3-ch	ADC	10-ch
Ethernet	2-ch, 10/ 100Mbps	QSPI	1-ch
UART	8-ch	ISO7816-3	2-ch

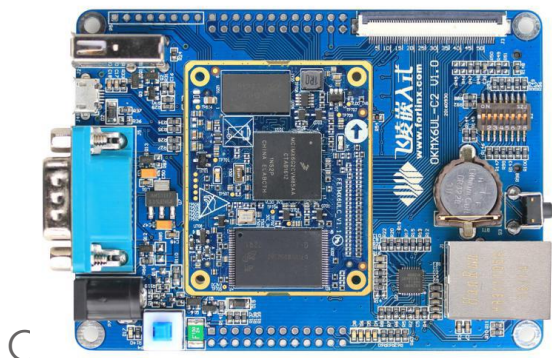
Certificate: CE/ FCC/ RoHS



OKMX6UL-C1 Carrier Board Features

AUDIO	1x Phone, 1x MIC, 2x Speaker	JTAG	Supported
I2C	2-ch, pinned out	PWM	1-ch for LCD backlight
SPI	Supported	DIP	8
CAN	2-ch	Reset	1-ch
CAMERA	1-ch, 5MP parallel interface camera, OV5640	ADC	4-ch for resistive touching
SD/MMC/SDIO	1-ch	LCD	1-ch for 7" resistive LCD
USB Host	3-ch, USB2.0 host	EINT	Supported
USB Device	1-ch, USB micro 2.0 device	GPIO	Supported
Ethernet	2-ch, 10/100M Ethernet, RJ45	EBI BUS	Supported
Serial Port	3-ch, pinned out	WiFi&BT	1-ch
Power Input	5V	GPS	Serial port GPS module
LED	4-ch	3G	USB 3G module
Camera	OV9650 (picture preview and take photos)	4G	Huawei 909ES module
RTC	Supported		

i.MX6UL Single Board Computer OKMX6UL-C2



Name: Single board computer
Model: OKMX6UL-C2
CPU: i.MX6Ultra Lite
Architecture: Cortex-A7
RAM: 256MB DDR2
Flash: 256MB NAND Flash
Main Frequency: 528MHz
OS: Linux

OKMX6UL-C2 is an compact sized industrial grade carrier board is available for both FETMX6UL-C1 and FETMX6UL-C2.



SoM FETMX6UL-C1/ C2 Features

CPU	NXP i.MX6UL	CAN	2-ch
Architecture	Cortex-A7	IIC	4-ch
Main Frequency	528MHz	SPI	4-ch
RAM	512MB LvDDR3 (commercial grade) 256MB DDR3 (industrial grade)	EIM	16-bit data bus 16-bit address bus
Flash	4GB eMMC (commercial grade) 256MB NAND Flash (industrial grade)	Camera	1-ch, DVP
OS	Linux3.14.38+ QT4.8.5; Linux 4.1.15+QT5.6	SD/ MMC/ SDIO	2-ch
Voltage Input	5V	USB	2-ch, USB2.0 OTG
Working Temp.	0℃~ +70℃(commercial grade) -40℃~ +85℃(industrial grade)	PWM	8-ch
Packing	Board-to-board connectors (2* 80 pins, pitch of 0.8mm)	SPDIF	1-ch
Dimensions	40* 50mm	JTAG	1-ch
Video Codec	Software codec	EINT/ GPIO	Supported
Display Interface	1-ch, RGB 888	Keypad	1-ch, 8x 8 matrix keypad
IIS	3-ch	ADC	10-ch
Ethernet	2-ch, 10/ 100Mbps	QSPI	1-ch
UART	8-ch	ISO7816-3	2-ch

Certificate: CE/ FCC/ RoHS



OKMX6UL-C2 Carrier Board Features

LCD	1-ch, RGB565	PWM	1-ch, backlight
USB Host	1-ch, USB2.0 host	ADC	4x-ch, for resistive touch
USB OTG	1-ch, USB 2.0 OTG	UART	4-ch, 2x 5-wire, 2x 3-wire
Ethernet	1-ch, 10/100Mbps Ethernet, RJ45	UART Debug	1-ch, DB9 debug port
SD Card	1-ch, SD/SDHC/SDXC(UHS-I)	JTAG	1-ch
LED	4-ch	GPIO	Supported
Reset	1-ch	Power Supply	5V
RTC	Supported	DIP	A boot key for booting mode selection

FCU1101 Gateway Module



Name: Embedded computer

Model: FCU1101

SoM: FETMX6UL-C2

Architecture: Cortex-A7

RAM: 256MB DDR2

Flash: 256MB NAND Flash

Main Frequency: 528MHz

OS: Linux

FCU1101 is an embedded computer designed based on NXP i.MX6UL processor with frequency of 528MHz, it has 256MB RAM and 256MB NAND Flash which could be upgraded to 1GB. Linux 3.14 is well supported with hardware float pointing. Prepherial interfaces such as RS485, Ethernet, WIFI, 4G, ZigBee/ LoRa are all available. It has stable performance under rough environment(-35℃ to +70℃)

Item	Spec.	
CPU	NXP i.MX6UltraLite	
Main Frequency	528MHz	
Architecture	ARM Cortex-A7	
RAM	256M DDR3	
Flash	256M NAND Flash(1GB expandable)	
Ethernet	1-ch, 10/ 100Mbps	
RS485	4-ch, with 1.5KV isolation protection, ESD4	
Reset	1-ch, for system reseting	
Boot key	1-ch, works together with reset key for firmware updating	
4G	Model: EC20(without GPS and audio functions) Netcom: China Mobile 4G/ 3G/ 2G, China Union: 4G/ 3G/ 2G and China Telecom 4G	
ZigBee	1-ch, 2.4GHz, model: WLT2408NZ	Optional
loRa	1-ch, 433MHz, 20dBm, 27dBm, 30dBm are all supported model: E32-TTL-100(433T20DC) 20dBm(default), E32(433T27D) E32-TTL-1W(433T30D)	
TF card	tested up to 32GB	
RTC	Protection for power failure, supports NTP	
Power IN	DC12V input, available for DC9V to 36V, designed with anti-reverse and over-current protection circuit	
RTC	On-board CR2032 RTC	
Power Input	Rated voltage 24V, workable range 12V to 24V, designed with reverse protection	
Environment	RM: 5% to 95%, non-condensing Working temp: -35℃ to +70℃(WIFI is 0℃ to +70℃); Storage temp: -40℃ to +85℃	
Dimensions	105mm x 100mm x 33mm	

i.MX RT1052 Development Board OK1052-C



Name: Single board computer
Model: OK1052-C
CPU: i.MX RT1052
Architecture: Cortex-M7
RAM: 16MB/ 32MB SDRAM
Flash: 4MB/ 16MB QSPI NOR Flash
Main Frequency: 528MHz
OS: Bare metal, uCLinux



SoM FET1052-C Features			
CPU	Cortex-M7 i.MX RT1052@ 528MHz		Power Input 5V
Craftwork	thickness 1.6mm, 4-layer EING PCB		Dimensions 31mm* 43mm
RAM	SRAM: 512KB, SDRAM: 16MB/ 32MB		Connector 2* 80-pin, pitch of 0.8mm
Flash	QSPI NorFlash: 4MB/ 16MB		Working Temp -40℃ to +85℃
Interface	QTY	Spec.	
LCD	1	upto RGB888, resolution up to 1366* 768*(WXGA), 480*x 272 and 800* 480 are available	
Camera	1	8-bit DVP, up to 5.0Mp	
SD/ MMC/ SDIO	≤2	SD card or SDIO card with 1-bit or 4-bit mode	
USB	2	1x USB2.0 OTG(up to 480Mbps), 1x USB2.0 host, integrated with HS USB Phy	
SAI	≤3	up to 3x IIS audio	
SPDIF	1	Sony/ Philips digital audio interface	
UART	≤8	each up to 5.0Mbps	
SPI	≤4	full duplex enhanced sync. serial interface, up to 52Mbit/s, it could be configured to host/ device mode, four chip selections are available	
IIC	≤4		
Ethernet	≤1	10M/ 100Mbps	
PWM	≤32		
SWD	supported		
Keypad	supported	8* 8	
QSPI	2		
CAN	≤2	CAN2.0B	
ADC	≤20	2x 12-bit ADC, up to 20 input channels	
ISO7816-3	≤2		
SEMC BUS	1	16-bit parallel bus	

OK1052-C is a single board computer/ development board designed based on NXP Cortex-M7 crossover processor i.MX RT1052 belongs to i.MX RT1050 series MCU. It consists of carrier board and SoM.



OK1052-C Carrier Board Features

Interface	QTY	Spec.
LCD	1	RGB565, resolution up to 1366* 768*(WXGA)
Camera	1	8-bit DVP, up to 5.0Mp
Audio	1	1x MIC, 1x Phone
USB Host	1	USB2.0(up to 480Mbps)
USB OTG	1	standard micro USB connector, USB2.0 OTG(up to 480Mbps)
Ethernet	1	10M/ 100Mbps, RJ-45
RTC	1	RX8010SJ chip, CR1220
EEPROM	1	24C02 chip with capability of 256 bytes
TF card	1	compatible of MICRO SD, SDHC
LED	1	users indicator
POR_BUTTON	1	reset key
WakeUp	1	
ON/ OFF	1	keep pressing it to power on or power off the board
BOOT	1	DIP switch for booting mode selection, only TF card mode and QSPI NOR Flash mode supported
PWM	1	for LCD backlight adjusting
ADC	5	4x ADC for resistive touching panel, and 1x ADC for adjustable resistor
IIC	1	for mounting of touching, camera, WM8960, EEPROM, RTC, IIC converted to 4-wired touching chip
CAN	1	CAN2.0
SPI	1	pin connectors (10-pin) with pitch of 2.0mm
UART	1	3 wired UART, 3.3V, up to 5.0Mbps, 10-pin header with pitch of 2.54mm
IIS	1	for WM8960
Debug	1	RS232, DB9 connector
SWD	1	debug port, 8-pin header with pitch of 2.54mm
Resistive touching	1	the carrier board compative the original touch and TSC2007 touching chip, TSC2007 is the default configuration
Keypad	1	4* 4 metrix keypad port by 8-pin header with pitch of 2.54mm

i.MX RT1061 Single Board Computer OK1061-S



Name: Single board computer

Model: OK1061-S

CPU: i.MX RT1061

Architecture: Cortex-M7

RAM: 1MB SRAM

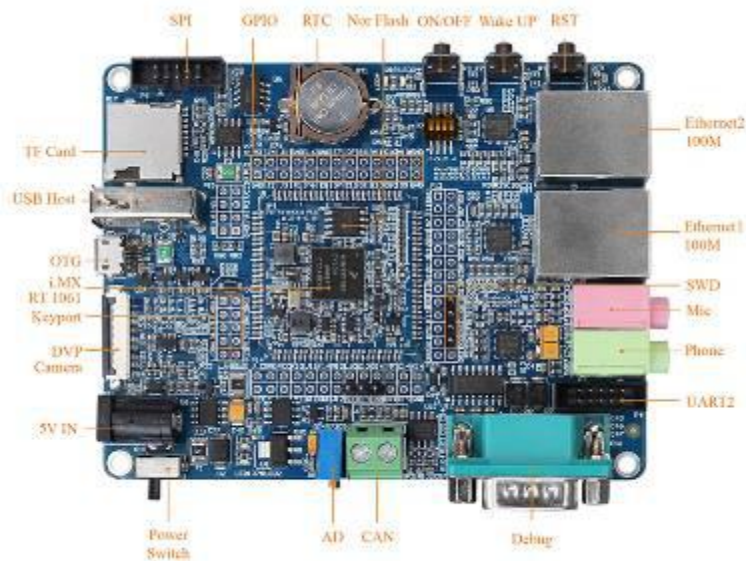
Flash: 4MB QSPI NOR Flash

Main Frequency: 528MHz

OS: Bare metal

OK1061-S is a single board computer designed based on NXP Cortex-M7 MCU i.MX RT1061@ 528MHz(commercial grade one 600MHz), it has on-chip SRAM up to 1MB, 512KB can be flexibly configured as TCM or general purposes on-chip RAM, and it can support QSPI-NOR Flash with capability of 4MB.

SoM FET1061-S Basic Information			
CPU	i.MX RT1061	Power Input	5V
Architecture	Cortex-M7	Dimensions	30x 30mm
Frequency	528MHz	Process	1mm thickness, 4-layer ENIG PCB
RAM	on-chip 1MB SRAM	Package	edge soldering, 4x 25 pins, pitch 1mm
Flash	QSPI NOR Flash 4MB	Temp Width	-40℃ to +85℃
OS	Bare metal, Free RTOS		
SoM FET1061-S Functional Features			
Interface	QTY	Spec.	
SD/ MMC/ SDIO	≤2	Supports SD/ SDIO card 1-bit or 4-bit transfer modes	
USB	2	USB2.0(up to 480Mbps), integrated with HS USB PHY	
SAI	≤2	Up to 3-ch I2S audio	
UART	≤7	Each up to 5.0Mbps	
eCSPI	≤3	Full duplex enhanced serial interface, data rate up to 52Mbit/s. It's available for both host and slave modes, each SPI controller has four chip selection to support multiple prepherial	
IIC	≤4		
Ethernet	≤2	10/ 100Mbps	
PWM	≤26	4x 16-bit PWM controller, each channel support up to 8 pins	
SWD	supported		
Keypad	supported	8x 8	
QSPI	≤2	Mounted to SoM	
CAN	≤2	CAN2.0B	
CAN-FD	1	CAN-FD	
ADC	≤10	two 12-bit ADC, with up to 10 input channel	


OK1061-S Carrier Board Features

Interface	QTY	Spec.
Camera	1	8-bit CSI, up to 5.0MP(available for RT1052/ RT1062)
Audio	1	1x MIC, 1x Phone
USB Host	1	USB2.0(up to 480Mbps)
USB OTG	1	standard micro USB connector, USB2.0(up to 480Mbps)
Ethernet	2	10M/ 100Mbps, RJ45
RTC	1	RX8010SJ, CR1220
EEPROM	1	24C02, 256bytes
TF Card	1	compatible with SD, SDHC
LED	2	for users
POR_BUTTON	1	reset key
WAKE UP	1	wake up key
ON/ OFF	1	power switch, keep pressing to switch on or off
Boot	1	DIP switch, for booting mode options, presently only available for internal TF, QSPI NOR Flash booting mode
PWM	1	headers with pitch of 2.54mm
ADC	1	multiplexed with CAN, jumper cap turnt to left(21, 22) to choose ADC mode
IIC	1	Camera, WM8960, EEPROM, RTC, IIC address not conflict by default, and could be used together
CAN	1	CAN2.0B, DG128-2P connector, multiplexed with ADC, P14 turnt to right(22, 23) to choose CAN TX
CAN FD	1	CAN FD, multiplexed with CAN2, DG128-2P connector
SPI	1	10P header with pitch of 2.0mm, multiplexed with TF card
UART	1	3-wire serial, 3.3V, each up to 5.0Mbps, 10P header with pitch of 2.54mm
IIS	1	WM8960
UART Debug	1	RS232, DB9 connector
SWD	1	debug port, P13, 4P header with pitch of 2.54mm

LS1012A Single Board Computer OK1012A-C



Name: Single board computer
Model: OK1012A-C
CPU: NXP LS1012A
Architecture: Cortex-A53
RAM: 512MB DDR3L
Flash: 8GB eMMC+ 16MB SQPI NOR Flash
Main Frequency: 800MHz
OS: Ubuntu, Linux OpenWRT

OK1012A-C is a single board computer/ development board designed based on NXP Cortex-A53 featuring processor LS1012A@ 800MHz. It consists of carrier board and SoM and integrates with multiple high-speed peripherals include dual gigabit Ethernet PHYs with hardware packet acceleration engine, SATA3.0, PCIe2.0, USB3.0, TF card and other interfaces. It's specially supported with Ubuntu and OpenWRT and aiming at NAS, IoT gateway, broadband Ethernet gateway and industrial automation markets.



SoM FET1012A-C Basic Information

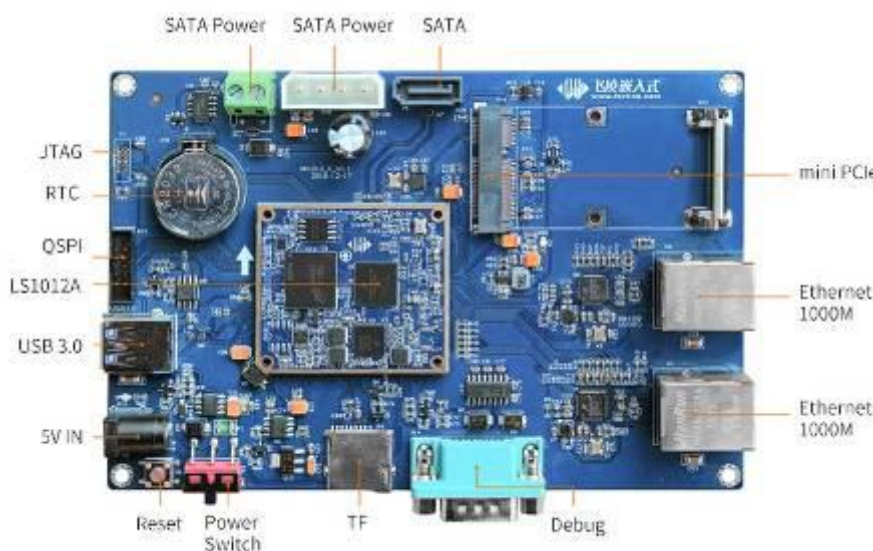
CPU	NXP Cortex-A53 processor LS1012A, frequency≤1GHz		
RAM	512MB DDR3L	Flash	8GB eMMC, 16MB QSPI NOR Flash
OS	Ubuntu/ OpenWRT	Voltage Input	4.2V
Package	board-to-board connectors		
Working Temp	-40°C to +85°C	Dimensions	45x 40mm

SoM FET1012A-C Hardware Features

Interface	QTY	Spec.
Ethernet	≤2	CPU can support one RGMII up to 1Gbps two 2.5Gbps SGMII could be expanded by SerDes dual gigabit Ethernet controllers are available
PCIe2.0	≤1	up to 5Gbps
SATA3.0	≤1	up to 6Gbps
USB3.0	1	up to 5Hbps
QSPI	1	for NOR Flash
SAI	≤5	synchronous audio interface
UART	≤2	
IIC	≤2	
SDHC	≤2	one is used by eMMC
JTAG	1	NXP CodeWarrior TAP is supported

Note: SerDes is configurable for SGMII, PCIe and SATA, Forlinx SoM FET1012A-C is configured with SGMII(1G)+ PCIe x 1+ SATA3.0, if you need change the configuration, you can refer to below sheet

SerDes		
1	2	3
Unused		PCI-express(x 1)
sg.m1(2.5G)	sg.m2(2.5G)	SATA
Unused		SATA
sg.m1(1G)	PCI-express(x 1)	SATA
sg.m1(1G)	sg.m2(1G)	PCI-express(x 1)
sg.m1(2.5G)	sg.m2(2.5G)	PCI-express(x 1)
sg.m1(2.5G)	sg.m2(1G)	PCI-express(x 1)
TX_CLK	PCI-express(x 1)	SATA
sg.m1(1G)	TX_CLK	PCI-express(x 1)
TX_CLK	sg.m2(1G)	PCI-express(x 1)



OK1012A-C Carrier Board Features		
Peripherals	QTY	Spec.
USB3.0	1	up to 5Gbps
Ethernet	2	SGMII/ RGMII, 10/ 100/ 1000M, RJ45
TF Card	1	compatible with SD, SDHC and SDXC(UHS-1)
SATA	1	up to 6Gbps
RTC	1	on-board RS2030 cell
PCIe	1	up to 5Gbps, RTL8111 and WLE900VX WIFI
UART Debug	1	debug port, RS232, DB9 connector
JTAG	1	NXP CodeWarrior TAP is supported

LS1043A Single Board Computer OK1043A-C



Name: Single board computer

Model: OK1043A-C

CPU: NXP LS1043A

Architecture: Cortex-A53

RAM: 2GB DDR4

Flash: 8GB eMMC+ 16MB SQPI NOR Flash

Main Frequency: 1.6GHz

OS: Ubuntu, Linux OpenWRT

OK1043A-C is a single board computer(also called development board or demo board) consists of SoM FET1043A-C and carrier board, and it's designed based NXP Cortex-A53 featuring quad-core processor LS1043A with frequency up to 1.6GHz has 7 native Ethernet interface(1x 10Gbps and 6x 1000Mbps), it has PCIe2.0, SATA3.0, USB3.0, UART, IIC and other peripherals ready-to-use and supports both Ubuntu and OpenWRT. It is applicable for router, IoT gateway, IP-PBX and other similar products, and fields such as edge computing, energy related gateway, smart city, industrial automation, video surveillance, etc.

Target Application



NAS



Industrial router



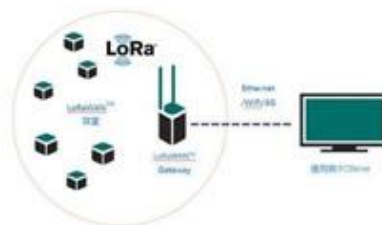
Industrial automation



Edge computing



Smart city



IoT gateway



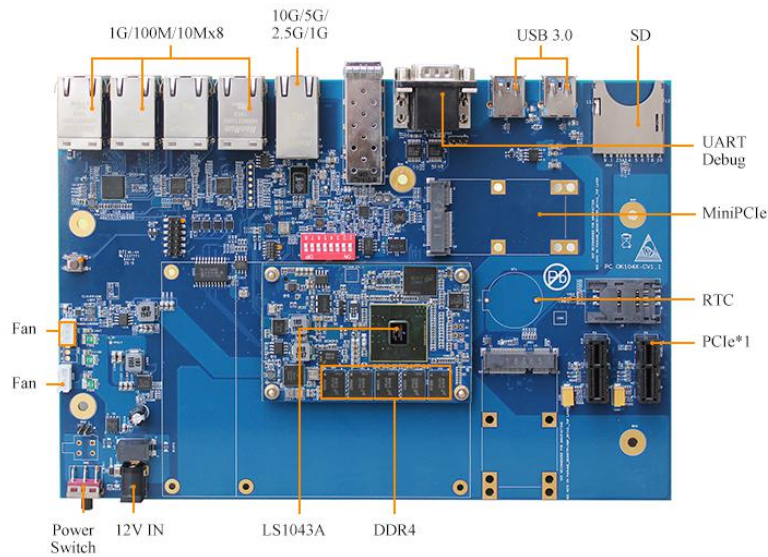
SoM 1043A-C

Basic information of SoM FET1043A-C

CPU	NXP LS1043A		
Architecture	Cortex-A53	Frequency	≤1.6GHz
RAM	2GB DDR4	Flash	8GB eMMC
OS	Ubuntu/ OpenWRT	Voltage Input	12V
Connection	COM Express		
Working Temp Width	-40℃ to +80℃	Dimensions	84x 55mm

SoM FET1043-A Features

Peripheral	QTY	Spec.
Ethernet	≤7	1x 10Gbps and 6x 1000Mbps, CPU supports 7 native Ethernet interfaces
PCIe2.0	≤3	supported by SerDes, up to 5Gbps
SATA3.0	≤1	supported by SerDes, up to 6Gbps
SerDes	4	Four SerDes lanes for high-speed peripheral interfaces Three PCI Express 2.0 controllers One Serial ATA (SATA 3.0) controller Up to four SGMII supporting 1000 Mbit/s Up to two SGMII supporting 2500 Mbit/s Up to one XFI (10 GbE) interface Up to one QSGMII
USB3.0	≤3	up to 5Gbps
UART	≤6	can support 2x DUART or 6x UART
IIC	≤3	
eSDHC	≤1	can support SD3.0 EMMC4.5, multiplexed with EMMC, can be used for SD card booting mode or OS image flashing, but could not be used for external memory expanding
JTAG	1	supports NXP CodeWarrior TAP



Carrier Board Features

Peripheral	QTY	Spec.
RGMII	2	10/ 100/ 1000M, RJ-45
QSGMII	1	4 lanes, RJ45, up nto 5Gbps
10GBASE-T	1	transfer rate up to 10G, supports 10G/ 5G/ 2.5G/ 1G/ 100M auto-negotiation
USB3.0	2	Up to 5G
SD Card	1	compatible with SD, SDHC and SDXC(UHS-I)
Mini PCIe	1	PCIe up to 5G and mSATA up to 6G
RTC	1	on-board CR2032
UART	2	RS232, contains one debug port
JTAG	1	supports NXP CodeWarrior TAP

S5Pxx18 Single Board Computer OKxx18-C



Name: Single board computer

Model: OK4418-C/ OK6818-C

CPU: S5P4418, S5P6818

Architecture: Cortex-A9

RAM: 1G DDR3

Flash: 8GB eMMC

Main Frequency: 1.4GHz

OS: Android5.1.1, Linux3.4.39

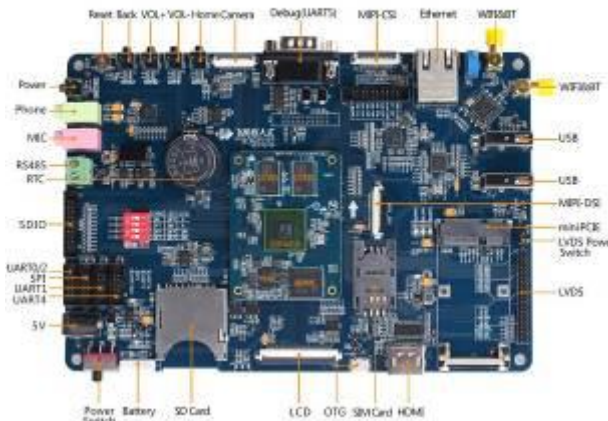
OK4418-C single board computer is a Cortex-A9 quad-core development kit with main frequency of 1.4GHz, 1G DDR3 and 8G eMMC, on-board SPI, RS485, CAN, UART, LVDS, HDMI, MIPI, Gigabit Ethernet are all ready-to-use for developers.



SoM FET4418-C / FET6818-C Features

CPU		S5P4418, S5P6818	Architecture	Cortex-A9/ A53, 1.4GHz
Working Temp		0-70℃	Working Humidity	10%-90% none condensing
SoM Parameters				
Function		QTY	Parameters	
Display	LCD	1	RGB 888, maximum resolution supporting: 2048*1280	
	LVDS	1	JEIDA and VESA output, 4x data channel, 1x clock channel, maximum resolution supporting: 2048*1280	
	HDMI	1	HDMI 1.4, maximum resolution supporting: 1080*1920	
	MIPI_DSI	1	MIPI DSI SPEC V1.01r11, up to 4x data channel, resolution up to 1920*1200	
Camera	MPEG	2	8-bit parallel interface, pixel up to 5-Megapixel	
	MIPI_CSI1	1	D-PHY spec V1.00, pixel up to 5-Megapixel	
SD/MMC/SDIO		2	3-ch supported by CPU, and 2x SD/MMC drawn out by SoM, while the eMMC channel was not drawn out	
USB Host		1	USB2.0 host (rate up to 480Mbps), integrated with HS USB Phy	
USB OTG		1	USB2.0 OTG (rate up to 480Mbps), integrated with HS USB Phy	
UART		6	each transferring rate up to 5.0Mbps	
IIS		3	Up to 3x IIS	
IIC		3	supporting 100kbit/s and 400kbit/s	
SPI		3	supporting up to 2x SPI	
Ethernet		1	10/100/1000Mbps adaptive	
PWM		4	4x PWM output	
SPDIF		1	SPDIF interface	
ADC		7	12-bit resolution, maximum input frequency 100KHz, power input range: 0-1.8V	
EBI		1	Maximum data bus width: 16-bit, maximum address bus: 14-bit	
JTAG		1	standard JTAG port	

Pin diagrams



OK4418-C/ OK6818-C Carrier board Features

Dimensions	130mm x 190mm	Thickness	1.6mm
PCB Layer	4-layer	Power Input	DC 5V/3A, with overvoltage protection
Working Temp	0-70℃	Working Humidity	10%-90% none condensing
OS	Android5.1.1, Linux3.4.39, QT4.8.6		

Single Board Computer Function Parameters

Function		QTY	Parameters
Display	LCD	1	RGB 888, maximum resolution supporting: 2048*1280
	LVDS	1	JEIDA and VESA output, 4x data channel, 1x clock channel, maximum resolution supporting: 2048*1280
	HDMI	1	HDMI 1.4, maximun resolution supporting: 1080*1920
	MIPI_DSI	1	MIPI DSI SPEC V1.01r11, up to 4x data channel, resolution up to 1920*1200
Camera	DVP	1	8-bit parallel interface, pixel up to 5-Megapixel
	MIPI_CSI1	1	D-PHY spec V1.00, pixel up to 5-Megapixel
Audio		1	1* MIC, 1*Phone
SD/MMC		1	1x SD, compatible with SDHC, SDXC (UHS-I)
SDIO		1	pitch of 2mm and drawn out by dual-row pins(20pin)
USB Host		2	USB2.0 host (rate up to 480Mbps), integrated with HS USB Phy
USB OTG		1	USB2.0 OTG (rate up to 480Mbps), integrated with HS USB Phy
UART		5	4x TTL, 1x RS232 (UART5), 5.0Mbps, 4x 3-wire, 1x 5-wire
IIC		3	IIC1 and IIC2 are CPU native IIC, IIC3 is an IO analogy IIC
SPI		1	
Ethernet		1	10/100/1000Mbps adaptive
WIFI		1	RL-UM02WBS-8723BU-V1.2 IEEE 802.11b/g/n 1T1R WLAN and Bluetooth
BT		1	RL-UM02WBS-8723BU-V1.2 IEEE 802.11b/g/n 1T1R WLAN and Bluetooth
RS485		1	with isolation desgin
Mini-PCIE		1	for 3G, 4G modules
IrDA		1	empty solderred
User Key		6	1x power switch, 1x reset, 4x user key. sleeping/waking up and powering off modes are supported by power key. screen scraping is supported by volume (power)key in OS Android

OKXX18-C2 Single Board Computer



OK4418-C2 Carrier Board Features

Function		QTY	Parameters
Display	LCD	1	RGB 888, support both resistive and capacitive touching
	LVDS	1	8-bit, dual-row pin connectors with pitch of 2.0mm, support capacitive touching
	HDMI	1	HDMI 1.4, HDMI-A
	MIPI	1	4 couples of differential pairs, support capacitive touching
Camera	MIPI	1	MIPI-OV5645, 5.0MP
Audio		1	1* MIC, 1*Phone
SD/MMC/ SDIO		1	1x SD, compatible with SD, SDHC, SDXC (UHS-I)
SDIO		1	pitch of 2mm and drawn out by dual-row pin connectors(20pin)
USB Host		2	USB2.0 host (rate up to 480Mbps), integrated with HS USB Phy
USB OTG		1	USB2.0 OTG (rate up to 480Mbps), integrated with HS USB Phy
UART		3	UART0 with RS232 and others with TTL, each up to 5.0Mbps, 2x 3-wire serial
IIC		2	IIC1 and IIC2 are CPU native IIC
Ethernet		1	10/100/1000Mbps adaptive
WIFI		1	model: RL-UM02WBS-8723BU-V1.2
BT		1	WIFI: IEEE 802.11b/g/n 2.4GHz; BT: BT V2.1/ BT V3.0/ BT V4.0
RS485		1	isolated
Mini-PCIE		1	for 3G, 4G
IrDA		1	empty soldered
ADC		1	CPU native ADC, with precise potentionmeter
User Key		6	1x power, 1x reset, 4x user key
Li-battery		1	support charging/ discharging management of a single battery
Address Bus		1	17-bit address bus, dual-row pin connectors with pitch of 2.0mm
Data Bus		1	16-bit data bus, dual-row pin connectors with pitch of 2.0mm
NOR Flash		1	32MB