

EBX-601-CG is a 3.5" SBC (Single Board Computer) with ARM Cortex-A9 NXP i.MX6 Dual Lite 1GHz processor and ARM Cortex™-M0 32-bit RISC core (MCU). The EBX-601-CG supports 2GB DDR3, 8MB NOR Flash and 4GB eMMC NAND Flash, 2 x LVDS, 1 x HDMI display, 1 x Gigabit LAN with IEEE 1588, 4 x USB 2.0, 1 x USB OTG, 4 x RS-232(8-wire), 2 x RS-232(4 wire), 2 x RS-485, 2 x CAN, 1 x SDIO and 1 x SD.

Integrated unique dual hardware structure and RTOS (Real Time Operating System) design, EBX-601-CG has outstanding crash free protection on both hardware reliability and software stability. With the special features, EBX-601-CG is a perfect device to meet customers' versatile needs.

The EBX-601-CG focuses on industrial application and it provides high performance and low power consumption from its ARM ® Cortex A9 architecture which is ready-to-run, compact, and easy-to-expand. With flexible I/O interfaces and complete hardware and software solutions, EBX-601-CG is a fast time-to-market platform for customers to develop their applications and products easily

EBX-601-CG platform. The platform is an embedded system with Linux kernel 3.10.53. It contains all system-required shell commands and drivers ready. User can develop under Linux environment. Such as Ubuntu, Debian, Fedora...etc. The purpose of this chapter is to introduce software development of EBX-601-CG and improve software development time and efficiency

System Hardware - CPU		
CPU		NXP i.MX6 Cortex-A9 Dual Lite
Memory	Technology	DDR3-800
	Capacity	Onboard 1GB
Storage	Flash	4GB eMMC NAND Flash 8MB NOR Flash
Graphic	HDMI	1 x HDMI connector
	LVDS	2 x 18/24 bits LVDS header (2x10 1.25mm Hirose DF13 series compatible)
Watchdog Timer		1~256 level (0.5 second / level)
RTC		EPSON RX8010SJ RTC chip
Indicator	LED	1 x configurable indicator controlled by i.MX6
I/O	LAN	1 x Microchip KSZ9031RNX Gigabit Ethernet
	USB	4 x USB 2.0
	USB OTG	1 x USB OTG (Micro USB Type AB connector)
	Serial Port	4 x RS-232 (8-wire) header 2 x RS-232 (4-wire) header 1 x RS-485 (3.5mm terminal block) 1 x RS-485 (miscellaneous header)
	CAN	2 x CAN (miscellaneous header)
	GPIO	8 x GPIO header

	Button	1 x power-on header 1 x reset button
	SD socket	1 x SD socket
	SDIO socket	1 x SDIO socket
System Hardware – MCU (For NEXCOM system product design only)		
MCU		STM32F051R8T6
Storage	Flash	8MB NOR Flash
I/O	NEXCOM X Port	1 x NEXCOM X Port (miscellaneous header-JMISC)
	I2C	1 x I2C interface (2x10 1.25mm Hirose DF13 series compatible, shared with SPI and GPIO) for Mainboard MCU to accessory (i.e. OLED module) connection purpose
	SPI	1 x SPI interface (2x10 1.25mm Hirose DF13 series compatible, shared with I2C and GPIO) for Mainboard MCU to accessory (i.e. OLED module) connection purpose
	GPIO	7-bit GPIO (2x10 1.25mm Hirose DF13 series compatible, shared with SPI and I2C) for Mainboard MCU to accessory (i.e. OLED module) connection purpose 2-bit GPIO (5x2 header, pitch 2.0mm-JFP)
System Software		
Operating System	Yocto	Daisy 1.6.2
	Android	Lollipop 5.0.2
	WinCE	Windows Embedded Compact 7
Environment & Mechanism		
Temperature	Operating temperature	-20~70° C
Humidity	Operating humidity	5%~95% Relative Humidity, non-condensing
Mechanism	Dimension	3.5" SBC (146mm X 102mm)
Power	DC-input	12V (10.8V~26.4V)
	Control	Power on by DC attached or via power button
	Consumption	~3.5W

Warning:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

NOTE: This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter

RF Exposure Statement

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance of 20cm the radiator your body. This device and its antenna(s) must not be co-located or operation in conjunction with any other antenna or transmitter