10.1" G3BNG PCAP Touchscreen Display Module

Part Number: 51-0601-062*

This module makes integration easy. The G3BNG multi-function processor controller board powers each unit with various input/output (I/O) ports, LCD, backlight driver, and touch sensor, which are completely integrated and ready to go. Different touchscreen and cover glass options are available. Get long-term availability with an industry-standard LCD form factor and 10+ year processor life.

Your applications run on a custom embedded Linux distribution built from the LTS Yocto toolset. Systems come with advanced field software upgrade capabilities, optimized boot speeds, customizable splash screens, and cloud infrastructure compatibility.

A best-in-class development environment allows you to design iPhone-like interfaces with video, audio, meters, slider wheels, and other modern controls and indicators. Develop on any platform – Windows, Linux, Mac using Virtual Box VM with complete pre-installed development tools. Develop in C, C++, Python or JavaScript/Node.js. Use common GUI toolkits like Qt/QML or GTK+.

Download mechanical drawings, panel specifications, manuals, and more at reachtech.com/51-0601-062.

Modules offer many interface options: CAN, Ethernet, USB, RS-232, RS-422/485, microSD, WiFi, Bluetooth and more. They are designed with low-profile headers and adapter cables for maximum flexibility.

Benefits

- Integrated, tested, single part to buy
- Long-term availability
- Industrial grade options
- Touchscreen and cover glass options
- Customized embedded operating system
- Range of sizes and resolutions
- Advanced features and user experience
- Choice of tools for interface design
- Full engineering and production support
- Additional engineering services available

Get Started with a Development Kit

Development kits include everything to start and implement the functionality you need: hardware, cables, firmware, development tools, documentation, and live technical support. Order part number 82-0601-062* at reachtech.com/devkit.

Contact sales@reachtech.com or call 503-675-6464 for pricing and availability.

* Production part numbers start with 81-0601-062 and vary based on the software programmed on the SD card.

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10.1" G3BNG PCAP Module PRODUCT SPECIFICATIONS

COMPUTING

PROCESSOR	NXP i.MX 6DualLite, 1.0GHz Dual-Core Arm Cortex-A9 processors including hardware video decoder and 3D graphics engine. Processor clock 792MHz.
STORAGE	8GB eMMC MicroSD flash card with push-push connector.
RAM	2GB DDR3 DRAM

DISPLAY/TOUCHSCREEN

SIZE/TYPE	10.1" Diagonal TFT Color LCD Contact us for additional display sizes.
RESOLUTION	1280 x 800 WXGA, 18-bit Color
ORIENTATION	Landscape
LUMINANCE	Typical 425 (cd/m²)
VIEWING ANGLES	85/85 left/right, 85/85 up/down
BACKLIGHT	LED
MANUFACTURER	Innolux
TOUCHSCREEN	Projected capacitive (PCAP) touch. Cover glass and resistive options available.

DIMENSIONS

SIZE	9.853" W x 6.85" H x 0.804" D
WEIGHT	830 grams
MOUNTING	Mounting brackets are available.

ENVIRONMENTAL SPECIFICATIONS

OPERATING TEMPERATURE	Maximum: -30 to 70° C The LCD primarily limits this specification.
STORAGE TEMPERATURE	-30 to 80° C
HUMIDITY	Max 90%RH at 60° C; No Condensation
RoHS 2 COMPLIANT	Yes

INTERFACES AND FEATURES

CAN	CAN bus with transceiver
USB	USB 2.0 (high speed) host port USB 2.0 (high speed) On-The-Go (OTG) port
NETWORKING	10/100/1000 Ethernet PHY Note: Maximum measured performance is 430 Mbps in an optimized environment. WiFi/Bluetooth via USB dongle
SERIAL	RS-232 RS-422/RS-485 3.3V CMOS serial port
ADDITIONAL I/O	I²C port 8-bit GPIO port 5V tolerant For SPI, contact us. Contact us for additional I/O.
AUDIO	Codec with 1-watt audio amplifier
INPUT POWER	11-13V 1.07mA Max
POWER CONSUMPTION	Increases when external I/O is used.
REAL-TIME CLOCK	RTC and 5-year battery backup.

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SOFTWARE FRAMEWORKS & TOOLS

TARGET

Embedded Linux with LTS kernel 5.4 and Qt 5.15.2.

Choice of UI toolkit: Qt LTS or GTK+.

Full support for secure web and IIoT interfaces:
FireHOL, NGINX, lighttpd, Node.js and Mosquitto.

Customizable boot splash screen.

Robust system updates with Mender client.

HOST

SDK including cross compiler and on target debugger.

Development options:

UI TOOLKIT	RAD TOOL
GTK+/PyGTK	Glade3
Qt5/PyQt5	Qt Creator

What You Get When You Work with Us

Integration Made Easy

Each module has an LCD, controller board, backlight driver, and touchscreen ready to go. It acts as a smart slave to your host processor.

Quick Start

Get up and running quickly with a development kit which includes hardware, software, documentation, and support. 3,500+ kits sold to date. 100% satisfaction guarantee.

Full Support

Get to market faster by leveraging our expertise in embedded touchscreen development. We understand our products are just one component of your final system and are here to help.

Long-Term Availability

Modules offer long-term availability with multi-sourced, industry-standard LCD form factor and a 10+ year processor life.

Move Smoothly to Production

Modules are designed especially for medical and advanced industrial equipment. More than 200K modules are in the field with 900+ customers.

Custom Modules

If our standard modules are not a fit, we can provide customized modules if you have sufficient production volumes.

Reach Technology has been designing and building specialized products for 30+ years. Put our experience and expertise on your team. Contact us at 503-675-6464 or sales@reachtech.com with any questions.

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