7” Display Module with Projected Capacitive Touch

Powered by the G2H2 controller, this general-purpose module incorporates a 7” WVGA industrial panel with an integrated touchscreen designed for applications that demand long-term availability. With an NXP i.MX 6Solo processor, the module offers a wealth of I/O interfaces for connecting to other sections of a medical or industrial product. ESD and EMC test results are provided to ease regulatory compliance testing. Like all Reach products, these modules are designed for long-term availability with a 10+ year processor life and a multi-sourced, industry standard LCD form factor.

Hardware Features

- WVGA (800 x 480) LCD with LED Backlight
- NXP i.MX 6Solo, 1.0 Ghz Processor with hardware video decoder and 3D graphics engine
- Wide range of input/output options including:
  - 10/100/1000 Mbps Base-T Ethernet: Features low profile Molex Pico-SPOX Connector (24 AWG Compatible)
  - One RS232 and One 3.3V CMOS Serial Port
  - One RS485
  - One USB 2.0 (High Speed) Host Port
  - One USB 2.0 (High Speed) OTG Host Port
  - One I2C Port
  - One CAN bus with Onboard Transceiver
  - 8-bit GPIO Port 5-V Tolerant
  - Dedicated Linux Console Port
  - 512 MB DDR3 DRAM Onboard
  - 512 MB NAND Flash / 16 MB NOR Flash
  - Micro SD Flash Card Socket
  - Projected Capacitive (PCAP) Touchscreen
  - Backlight Brightness Control
  - Audio Speaker with Audio Codec with 1 Watt Audio Amplifier and Onboard Speaker

Software Features

- Linux Kernel 3.10.17 with Qt 5.3.2 and QtCreator IDE 3.2.2
- Samba File Server for easy file access from Windows
- UBIFS NAND Flash file system for speed and reliability
- USB Hotplug for module Host Ports
- OpenSSH Server
- Interfaces for QML Applications: Serial, Ethernet*, and CAN*
- Custom Linux Kernel Build Supported and Maintained by Reach. Contact us for your specific requirements.

*See App Notes for details.
**Specifications**

**LCD**
- Display Type: 7” Diagonal TFT Color LCD
- Resolution: 800 x 480 WVGA, 18-bit Color
- Dot Pitch: 0.191mm x 0.191mm
- Luminance, with touchscreen: Typical 610 (cd/m²)
- Viewing Angles: 80/80 left/right, 80/80 up/down
- Viewing Direction: 6 o’clock
- Software controlled brightness
- Backlight: White LED, min 35,000 hours

**Projected Capacitive Touchscreen**
- Surface Hardness ≥ 7H

**Ethernet Interface**
- MAC / PHY: On-board
- Type: 10/100 Base-T
- Interface: Low Profile Molex Pico-SPOX (24AWG Compatible Crimps)

**Mechanical**
- Dimensions: 6.56” W x 4.87” H x 1.02” D
- Weight: 424 Grams

**Power Requirements**
- Power Supply Voltage: +5VDC (5.15V for 5V USB Host Port Power Out)
- Power Consumption: Max 970mA during boot with no devices attached

**Environmental/Regulatory**
- Operating Temperature: 0 to 70° C; Contact us for extended temperature.
- Storage Temperature: -30 to 80° C
- Humidity: Max 90%RH at 60° C; No Condensation
- EMI and ESD Test Results Available.
- Passes FCC Class B Emissions without an enclosure (8 layer fully shielded PCB)
- Thermal, Mechanical, Vibration: See Reliability Test section in panel specification.
- RoHS 2 Compliant: Yes

Mechanical Specifications, 3D Mechanical Views, 2D DXF Mechanical Drawings, 3D Step Files can be found for at [https://www.linuxtouchscreen.com/support/product-specific-documentation/51-0406-411/](https://www.linuxtouchscreen.com/support/product-specific-documentation/51-0406-411/).
Ordering Information

<table>
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<tr>
<th>Product</th>
<th>Part Number</th>
<th>Price</th>
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<tr>
<td>7” (Model G2H2-7P) Display Module with Projected Capacitive Touch</td>
<td>51-0406-411</td>
<td>Contact Reach Sales (510-770-1417, <a href="mailto:sales@reachtech.com">sales@reachtech.com</a>) for volume pricing.</td>
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<tr>
<td>Development Kit</td>
<td>52-0406-411</td>
<td>$639</td>
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To get started order a Development Kit which comes with all the hardware, software, and full support.

Order at LinuxTouchscreen.com, call Reach Sales at 510-770-1417, or email sales@reachtech.com.

Accessories

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tr>
<td>23-0144-10</td>
<td>Cable, GPIO, 11pin PicoBlade, Flying Lead</td>
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<tr>
<td>23-0146-10</td>
<td>Cable, 6pin PicoBlade, 10 in. Flying Lead</td>
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<td>23-0147-10</td>
<td>Cable, Power/Serial, 8pin Pico-SPOX, 10 in. Flying Lead</td>
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<td>23-0148-12</td>
<td>Cable, Ethernet, RJ-45 plug into 9pin Pico-SPOX</td>
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<tr>
<td>23-0149-10</td>
<td>Cable, 10pin PicoBlade, 10 in. Flying Lead</td>
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<td>23-0160-18</td>
<td>Cable, G2C/G2H, Power/RS232 Y</td>
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<td>23-0161-72</td>
<td>Cable, G2C/G2H, USB RS232 to 5pin PicoBlade</td>
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<td>23-0166-12</td>
<td>Cable, Pico-SPOX 5pin USB Type A Receptacle 12in</td>
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<tr>
<td>23-0167-12</td>
<td>Cable, Pico-SPOX 6pin USB Type 2.0 Type A Receptacle</td>
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<td>23-0172-12</td>
<td>Cable, Audio, G2H2 to CUI Headphone Jack</td>
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<td>30-0008-01</td>
<td>Power Supply; 5 Volt, 2.5A, 2.5mm</td>
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<td>37-0008-01</td>
<td>USB to RS232 Adapter with cable</td>
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<td>37-0011-01</td>
<td>USB 2.0 Flash Memory Card Reader/Writer</td>
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<td>37-0012-01</td>
<td>Cat5e Inline Female / Female Ethernet Coupler</td>
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<td>37-0014-01</td>
<td>USB WiFi, Panda Ultra 802.11n 802.11b/g compatible Adapter</td>
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</tbody>
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Custom versions are available to volume customers; please contact Reach Sales (sales@reachtech.com or 510-770-1417) for more information.