Lantronix Mobility Solutions M110 modems are designed to provide connectivity across a broad range of M2M and IoT applications. They allow Internet connectivity via serial port to PLCs, Meters, Vending Machines. They help transporting data from any industrial device to data control servers, allowing businesses to benefit from real-time data monitoring, management and control.

**AVAILABLE IN 2G, 3G, NB-IoT, LTE-M1, LTE CAT. 1**

**LAST GASP**
(factory option)

**TWO VERSATILE I/OS**

**MPACK SOFTWARE**
with Workbench configuration tool

**SNAP CAP™**
Snappily converts M110 series’ RS-232 port on a 9-pin sub-D connector into an isolated*, half- or full-duplex (user-selectable via a slide switch) RS-485 port on a 5-pin, 3.5 mm pitch, COMBICON connector.

*D e with integrated transformer, thus allowing for 1.5 km-long cabling

D2Sphere™ device management services let you monitor, diagnose, control and update your Lantronix Mobility Solutions devices. Information such as signal strength, geographic location, battery state, temperature, device firmware and software versions can be remotely monitored, stored and presented to help you to manage quality of service and prevent downtime.
M110 SERIES SPECIFICATIONS

**HARDWARE**

**Material:** Brushed aluminium alloy

**Dimensions (MM):** 60 x 66 x 21.7 without connectors

**Weight (G):** Approx. 95

**Operating Temperature Range:**
- -30°C ~ +70°C, class A
- -40°C ~ +85°C, class B

**MCU:** STM32 ARM Cortex™-M4 architecture; running at 168 MHz

**Built-in:** 256 KB *Flash memory* and 128 KB RAM

**SPI Flash Memory:** 2 MB

**Power-Off Timekeeping:** RTC with an approx. 100-day data retention period; courtesy of a 15 mWh lithium manganese battery (not functional below -20°C)

**All Figures worst-case (70°C, 32V, all subsystems fired on, etc.):**
- 6.4 (M111); 1.15 (M113); 1.38 (M114)
- Standby: 2.31 (M111); 2.67 (M113); 4.4 (M114)
- Communication (Tx max.): 5.14 (M111); 6.16 (M113); 6.16 (M114)

**POWER CONSUMPTION (W):**

**ENERGY EFFICIENT:**

**MCU:** Use of low power ARM Cortex™-M4

**USB Interface:** Low-power (5V/500mA)

**TIMEKEEPING:**

**IoT:** 62.15

**mWh lithium manganese battery (not functional below 32°C):**

**Operative Switch:**

**TAP:**

**TAP:**

**Connectivity:**

**TAP:**

**Miscellaneous Features:**

**Mpack Software Suite:**

**TAP:**

**Configurations:**

**Improved Connectivity:**

**Support for concatenated SMS:**

**Conversion between Modbus RTU and Modbus TCP:**

**Configurable text and recipient(s) upon Last Gasp:**

**M110 SERIES SPECIFICATIONS**

**POWER**

**8 V dc ~ 32 V dc with Slow Start:** via the upper row of a dual row, 4-pin, Micro-Fit™ 3.0 header

**One 2-way versatile I/Os, i.e. user-configurable, each one independently from the other, as either (i) analogue input or (ii) digital output:** via the lower row of the same header

**ANALOGUE INPUT:** 0 V dc ~ 48 V dc range; 12-bit resolution

**DIGITAL OUTPUT:** open collector; 200 mA max.; 50 V dc max.

**Reset Button:** Short / Long press for Reset / Reset to factory settings

**RS-232:** Full implementation; via a 9-pin sub-D header

**USB 2.0:** via a Type-C header

**One- or two-antenna models as:**

**Cellular (details in the table below):**

**M111:** 3G M113; via an SMA antenna connector;

**M113:** via two SMA antenna connectors (main and diversity)

**SIM:**

**mini-SIM held in a tray**

** Operating Status LEDs:**

**Two as Power / Cellular signal**

**Factory Options:** (subject to MOQ and other considerations)

**Last Gasp:**

**Allows for sending at least five 30-character SMS at one-second intervals:** courtesy of two industrial-grade super caps

**Flash Memory:**

**Doubled to 512 KB**

**3-way I/Os:**

**Third possible configuration as (iii) analogue input suited to current loop sensors (aka 4 mA ~ 20 mA sensors):**

**MFF SIM:**

**In lieu of, or for dual SIM operation, in addition of the mini-SIM tray**

**Snap Cap:**

**SC485, a 9-pin male sub-D plug that ‘snapsplit’ converts any M110 unit into an isolated, half- or full-duplex (user-selectable via a slide switch) RS-485 unit via a 5-pin, 3**

**mm pitch, COMBICON header**

**Essential Accessories**

**Power Cords:**

**KDC42 or KDC44 (the latter with two more stripped wires for 1/0s):**

**USB Cords:**

**0.6 meter-long, Type-C plug ~ Type-A plug**

**Remote, Adhesive, Antennas:**

**All IP67-rated, except for ACC-A31 (IP33) and ACC-A31H (N/A):**

**M111:**

**NorAm’s:**

**A31M0 or A31M0, LTE: M111, M115, M112, M113**

**M120:**

**M114:**

**2G:**

**NorAm’s:**

**2G, 3G, and 4G antennas**

**DIN Rail Clip:**

**BR350, 35 mm U**

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**Model Name | Territories or Operator(s) | Cellular Type | Bands | Fallback Mode | Band(s) | Location Services | Planned / Obtained Certifications | Planned / Made FCS | Order Code**

| M111 | World excl. Japan, Korea | 2G | 5/8/3/2 | x | N/A | CE | Aug ’18 | M111F00FS | TBD |
| M115 | World² | 3G | 5/8/3/1 | 2G² | 5/8/3/2 | | | | | |
| M112 | China | NB-IoT | 29/8/3/3 | | N/A | | | | | |
| M113 | World⁶ | Dual mode LTE-M1 / NB-IoT | 12/28/13/20 / 15/8/3/4/25 | x | N/A | | | | | |
| EMEA; South-East Asia; South Asia | 26/28 (roaming only) | 2G² | 5/8/3/2 | | | | | | |
| EMEA | 20/3/7 | 8/3 | | | | | | |
| Asia Pacific | 3G | 12/5/4/2 | 5/2 | | | | | | |
| NTT docomo* | 28/8/3 | 1 | | | | | | |
| **Model Name** | **Territories or Operator(s)** | **Cellular Type** | **Bands** | **Fallback Mode** | **Band(s)** | **Location Services** | **Planned / Obtained Certifications** | **Planned / Made FCS** | **Order Code**
| M114 | Asia Pacific | LTE cat. 1 | 13/4 | x | N/A | CE | May ’19 | M114F002S | TBD |
| AT&T Wireless, T-Mobile USA, Sprint | 28/8/3 | 1 | | | | | | |
| Asia Pacific | 19/1 | x | | | | | | |

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1. Uplink / Downlink maximum data rates
2. Ranked by Increasing Frequencies
3. Mode* North America’s “NorAm’s” B17
4. Includes “NorAm’s” B18
5. Includes KDDI’s B18 as well as NorAm’s B5, the latter incl. NTT docomo’s B19, itself incl. Japan’s B6 (3G)
6. includes Japan’s B9
7. Includes NorAm’s B2
8. Includes “NorAm’s” B18

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