Industrial Mobility Solutions

Mobile Gateway, IoT and Communication Solutions

Smart Retail, Logistics, and Warehouse
Internet of Vehicle
Public Safety IoT Solutions
Smart Healthcare
AMobile Intelligent established in 2013, a joint venture by Arbor Technology, MediaTek, and Wistron, is an expert in industrial mobile computers and solutions for industrial applications, including warehousing, logistics, manufacturing, and retail. AMobile Intelligent leverages group resources of manufacturing and services from Wistron, IPC know-how and distribution channels from Arbor, and mobility technology and support from MediaTek. We are dedicated to being a reliable partner with our customers around the world through outstanding technologies, sophisticated designs, superior services, and well-connected gateway for IoT.

AMobile is a Taiwan based company providing ODM & EMS services for wireless devices based on the Android operating system. Since 2013, AMobile has been working with companies in helping to design and build innovative products that incorporate embedded Android OS at their core. Our range of products includes industrial grade tablets and handhelds, while our services include wireless device design, development, and manufacturing. AMobile offers full-range R&D technical services, including system engineering, industrial design, system structure, PCB, hardware, firmware, software design, as well as system integration. By working closely with our customers and understanding their unique business needs, AMobile has developed customized solutions that drive product innovation, cost savings, supply chain efficiency, and improve time-to-market.

OEM/EMS
AMobile is a Taiwan based company providing ODM & EMS services for wireless devices based on the Android operating system. Since 2013, AMobile has been working with companies in helping to design and build innovative products that incorporate embedded Android OS at their core. Our range of products includes industrial grade tablets and handhelds, while our services include wireless device design, development, and manufacturing. AMobile offers full-range R&D technical services, including system engineering, industrial design, system structure, PCB, hardware, firmware, software design, as well as system integration. By working closely with our customers and understanding their unique business needs, AMobile has developed customized solutions that drive product innovation, cost savings, supply chain efficiency, and improve time-to-market.

AMobile ODM Capability

About AMobile
Mobile Gateway for IIoT

Dedicated to IIoT, AMobile develops mobile devices and gateways for data collection, wireless communications, local computing and processing, and connectivity between the field and the cloud. In addition, AMobile’s unified management platform both monitors and manages not only mobile devices, but also IoT equipment in real-time, to fully realize industrial IoT applications.

Uniformed Management Solution

Mobile Device Management

AMobile provides comprehensive mobile device management services, adopting the most popular standard protocols, through the user-friendly online dashboard, find, track and update your mobile devices, empowering your workforce and enhancing productivity.

Provisioning & Configuration
- Set privacy
- Security policies
- Enforce compliance
- OTA firmware upgrade

Security
- Remote lock & dynamic password
- Remote data wipe
- Tracking location on map
- Secured mail and web storage

Application Management
- Applications deployment
- View installed applications
- Remotely activate / deactivate applications
- Software policy setting
- Remotely uninstall unwanted applications

Group Management
- Hierarchical grouping of devices
- Execute task as a single device
- Tracking progress of group task
- Group task statistics

Flexible Architecture
- Multi-tenant
- REST API
- Extremely scalable
- Fault Tolerance
- Power BI embedded integration

Device Monitoring
- Device capabilities
- Battery status
- Memory usage
- Peripheral on/off
- Event setting
- Send notification while monitored events occurred

Mobile Gateway

Sensors

Pressure
Temperature
Velocity
Gyroscope
Image

AI
Big Data

NB-IoT
5G Network

IoT Application
Intelligent Retail

Manage Every Stage of the Inventory Lifecycle

AMobile IoT devices can guide warehouse workers where each product is located - aisle, rack, and shelf. While goods are picked or put away with RFID or barcode technology, the database is remotely updated via Bluetooth® or wireless LAN. With these devices, warehouse workers can get more done in less time.
G47 is an industrial-grade Android device, lightweight design for everyday use works perfectly in field applications, such as retail, healthcare, logistics, and more.

**G47-P as Mobile Ordering Terminal**

G47-P can be used as mobile ordering terminal, making customers’ orders right at their table. Attached thermal printer is available for receipts, so restaurant owners can now take care of ordering process and print out the receipts on the move.

In Europe, G47-P is operated as graphical ordering terminal at a restaurant. Waiters can easily take orders and transfer the orders to the kitchen. This is all set in one operation, allowing more efficient queues and less hassle for customers.

**Features**

- **Android 9.0 (PIE) Operating System with Play Store Support**
- **Embedded 1D/2D barcode reader and physical trigger button**
- **Ruggedized design with IP67 rating**
- **Implementing fingerprint sensor security authentication**
- **Precise GPS navigation with barometer integrated**
- **243g lightweight design for everyday use**

**Slim, Light & Durability Combined**

**Sleek, Clean & Versatile POS Terminal**

ALBA POS

**Designed for Versatile Retail POS Setup**

POS terminal needs to be reliable for long hours of operation. All areas of the POS terminal are accessible for cleaning without difficulty. If you remove the back cover, there is plenty of space available for cable management. With highly reliable touch display and an efficient Quad-core processor, ALBA POS is suitable for any kind of retail point-of-sale needs.

**Responsive and Reliable**

POS terminals are often stationary once installed. To reduce the hassle of repairs and updates, we designed its storage bay to be externally accessible with a removable hard drive bay that uses thumb screws.

**Features**

- **15" True-Flat PCAP Touch Display**
- **Fan-Less Design**
- **Easy Accessible 2.5" Storage Drive Bay**
- **Die-casting Aluminum Stand**
- **Rich I/O with 4x USB, 1x Gigabit LAN, 1x RJ11, 3x COM Ports**
Warehousing & Logistics
Streamlining Storage & Delivery Systems

Warehousing has to synchronize with logistics so that smooth delivery services can level up customer experience with the firm and the goods can be flawlessly received by the customers on time. Through AMobile’s warehousing and logistics management systems, integrated supply chain and customer satisfaction are guaranteed.

Internet of Vehicles
Improving Safety On The Move

Human error can be avoided by IoV technologies which allow vehicles to communicate, including with other vehicles, surroundings, pedestrians, and drivers. AMobile’s IoV rugged devices GT78-VN and IoT-800N can monitor drivers’ behaviors on the road and facilitate fleet management.
K430 supports tilt scanning, reading barcodes from any angles. Even if there are stains or scratches on the objects, it can still clearly and easily support barcode and DPM scanning. K430 streamlines the entire warehousing, inventory, and delivery operations.

K430’s easy-to-use touch screen with physical keypad and numeric keys is slim and lightweight, enabling users to fit in one hand for the operation and switch functions quickly. Two customized keys in the upper left corner are designed for more user-friendly applications.

- 20mm thick, equipped with a 4850mAh high capacity battery
- 12 hours work time & 3 hours fast charge
- Support continuous barcode scanning up to 5 hours
- Support up to 3GB RAM
- Support up to 32GB Storage
Engage Business Anytime, Anywhere

Vehicle Mount Tablet GT78-VN

Features
- MIL-STD-810 & IP-65 certified
- Integrated Wi-Fi 802.11 a/b/g/n & Bluetooth 4.1
- Dual SIM card for dual network access providing maximum coverage
- Replaceable battery with optimized battery life
- 2D Barcode scanner with physical trigger button
- NFC / RFID Reader

Real Work Needs Real Performance

GT78-VN is powered by MTK Octa-Core CPU, and supports Android 11 operating system. It’s built for Warehousing, Retail, Fleet Management, and Healthcare applications. As a single handheld device, GT78-VN can reliably capture images, scan barcodes, and collects payments.

Less Paper, More Actions

Through its built-in ultra slim 1D/2D barcode scanner and real-time system, GT78-VN can empower mobile workers to work better, faster, and smarter. Furthermore, GT78-VN enhances workers productivity and streamlines business process, especially by integrating barcode scanner into one single device.

Limitless Versatility

RISC-Based Panel PC IoT-800N

Features
- Rockchip PX30
- Built-in CAN BUS and OBD-II for fleet management applications
- 8M front camera for in-vehicle surveillance
- Multiple I/O including LAN, USB 2.0, and RS-232 support
- Global band LTE module; a single module for different countries and supporting positioning simultaneously

Rugged & Reliable

IoT-800N is an 8 inch HMI based on the powerful Quad-core ARM Cortex-A35. IoT-800N is integrated with a high resolution display, capacitive touchscreen, and computer into one easily deployable package. The terminal is engineered to operate in high shock, vibration, and wide temperature environments (-20°C ~ 70°C).

IoT-800N in ADAS

With the high performance and CAN Bus support, IoT-800N is suitable for vehicle applications, including Passenger Safety, Fleet Management and more.
Industrial, Public Safety & Smart City

Mobile Gateway, IoT and Communication Solutions

AMobile’s public safety and smart city IoT solutions enable users to collect, process, and analyze data. Better decisions can be made for assets and resources management.
**Thermal Imaging Solution for Electrical Switchboard**

**TIM-048**

**Features**
- Real time monitoring, preventive maintenance
- Contactless multi-point temperature monitoring
- Suitable for electrical switchboards, industrial Motors
- Suitable for field area with high voltage equipment

**Wide Coverage, Early Warnings for Industrial Safety**

TIM-048 is designed to monitor multiple heat points for equipment safety and operating condition. TIM-048 can also monitor surrounding environments at the same time.

**360 Degrees Mount with Magnets**

With easy deployment, setup, and installation, TIM-048 is easy to install with its 360 degree, strong magnet and screw mount.

**Setup Heat Points in Extreme Low Light**

The inside of a switchboard can be too dark for a thermal camera to recognize the shape of the objects. We fitted an RGB camera and LED to help draw out object outlines, or use an actual image to see the detection points.

**Support Multiple Thermal Cameras**

Connect via direct WiFi or via Wireless router network. Each HMI supports up to 4x Thermal Cameras and 40 Thermal Points for detection, maximizing area coverage.

**Application Scenario : High Voltage Electrical**

Conventional safety measures include point-to-point thermal sensors and smoke detectors. These solutions require additional systems to operate and are meant for detection after fires have already occurred.

TIM-048 is used in high voltage industrial electrical switchboards to monitor connection joints, live wires and internal environmental conditions.
Mobile Inspection Solution with Explosion Proof

Mobile Inspection Assistant G60

**Features**
- High performance with octa-core ARM Cortex-A53 1.3GHz CPU
- Rich wireless communication via WorldMode 4G LTE, PTT (Push-to-Talk), Bluetooth, WiFi, GPS
- Multi-data capture via thermal imaging, NFC, UHF (Optional)
- High resolution images with 13M camera and HD display
- Long time operation up to 10 hrs with a battery capacity of 5100mAh
- Robust design with waterproof of IP67 rating and 1.5m drop resistance

All-In-One Solution to Mobile Inspection Pain-Points

AMobile’s Handheld inspection solutions are suitable for factories and hazardous environments, its ruggedized and multi-purpose design with explosion proof certification eliminates the needs to carry multiple devices, as well as the digitize inspection process while remaining safe to use in a hazardous environment.

Past
- Walkie-Talkie
- Pen & Paper Notes
- Smartphone
- Thermal Detector

Now
- Smartphone
- Push-to-talk
- Thermal Imager
- Digitized Notes

Long Range Inspection Solution

Mobile Inspection Assistant GT-550 Pro

**Features**
- LoRa Sensor Data Collection
- Rugged Design for Industrial Use
- Long Range Barcode Scanner & RFID
- Push-to-Talk Function
- Factory Inspection

**IoT & Long Range Data Collection**

GT-550 Pro supports long range barcode scanning and RFID. Its data collector collects barcode and RFID data, and sends it to the main unit via Bluetooth connectivity. Users can pick up the data and go without operating on the touchscreen. GT-550 Pro is also able to collect LoRaWAN sensor data, making inspection more efficient.
Smart Healthcare
Smart Healthcare with IoT Solutions

AMobile provides series of Smart Healthcare IoT Solutions to improve lives with vital signs monitoring. The Smart Healthcare IoT Solutions can collect, process, and analyze users’ and care receivers’ health data for better management, treatment outcomes, and preventive care, enhancing care givers and receivers experience.
Unibody Fever & Mask Screening Solution
E-Guardian S409

Features
- Support Android 9.0
- Multiple connectivity including WLAN, WWAN, Bluetooth, and 2G/3G/LTE
- IP65 rated water and dust resistance
- Drop proof up to 1.2m
- Competitive size and easy to install
- Unibody device for the body temperature and face mask screening

Compact Epidemic Prevention Screening Solution
The unibody design integrates high performance ARM-Based system with thermal camera solution to provide a fast, compact, easy to deploy, highly stable and high accuracy device with its built-in calibration system, suitable for fever and mask screening at offices, entrances and on vehicle (buses).

Preliminary Fever Detection Solution
E-Guardian S408

Features
- High accuracy, error margin of ±0.5°C
- 8”inch tablet as HMI, easily viewable result
- Real-time thermal image
- Warning graphic and sounds

Health Monitor System
AMobile’s Fever Detection Solution provides real-time fever detection data, records, and offers fever screening trend and other analyses.
Continuous Health Monitoring Solution

E-Guardian S101

**Features**

- Monitor Temperature Change Patterns
- Multiple Health Monitoring features, including Heart rate Monitor, Steps, Distance, Calories
- Support Bluetooth, suitable for cloud integrations.

**Achieves Smart Healthcare**

Continuous monitoring for health data gives an insight into users’ health condition and healthcare management.

**Portable Medical Analyzer**

Mobile Computing Device G47

**Features**

- High accuracy, error margin of ±0.5°C
- 5” inch screen as HMI, easily viewable result
- Real-time thermal image
- Warning graphic and sounds

**Health Monitor System**

Light and slim G47 is suitable for portable solutions in the hospital, enabling staff members that have to stay mobile to bring services to patients that require on site examinations. G47 can be integrated with medical analyzer as management handheld to read analyzing results, display, and log results, and to send information to local servers or cloud services.

**In Health Care**

- Roaming support
- Antimicrobial (optional)
- Resistance to cleaning with Bleach: 5000x with 10% bleach
- 10000x cleaning with 70% IPA
- 5 seconds wet with 70% 75% alcohol, 2% Glutaraldehyde disinfectant

**Patient abnormality detected, pass to cloud**

**Cloud Determined Situation**

**Notification**

Collect test samples and send information securely to G47 to display result.

Medatek’s mobility platform allows data to be sent to server for storage and withdraw anytime.

**Sample Test Unit**

**Local Server**
<table>
<thead>
<tr>
<th>Model</th>
<th>K430</th>
<th>G47</th>
<th>G47-P</th>
<th>GT550</th>
<th>G60</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (WxHxD)</td>
<td>738x184x23/30 mm</td>
<td>77.5 x 158 x 22.5 mm</td>
<td>83 x 168 x 18.5 mm</td>
<td>83 x 168 x 18 mm</td>
<td>87 x 170 x 30 mm</td>
</tr>
<tr>
<td>CPU</td>
<td>Intel</td>
<td>Intel</td>
<td>Intel</td>
<td>ARM Cortex-A53</td>
<td>ARM Cortex-A53</td>
</tr>
<tr>
<td></td>
<td>1 x USB Type C</td>
<td>1 x 2.0 MP (Front)</td>
<td>1 x 2.0 MP (Front)</td>
<td>ARM Cortex-A53</td>
<td>ARM Cortex-A53</td>
</tr>
<tr>
<td></td>
<td>Bluetooth 5.0</td>
<td>Yes</td>
<td>Yes</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Operating System</td>
<td>Android 9</td>
<td>Android 9</td>
<td>Android 8</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Memory</td>
<td>5GB</td>
<td>5GB</td>
<td>8GB</td>
<td>8GB</td>
</tr>
<tr>
<td></td>
<td>Storage</td>
<td>32GB</td>
<td>32GB</td>
<td>128GB</td>
<td>128GB</td>
</tr>
<tr>
<td></td>
<td>Camera</td>
<td>1 x 5 MP (Front)</td>
<td>1 x 13 MP (Front)</td>
<td>1 x 8 MP FF (Front)</td>
<td>1 x 8 MP FF (Front)</td>
</tr>
<tr>
<td></td>
<td>Thermal Camera</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>WLAN</td>
<td>802.11 ac/a/b/g/n</td>
<td>Private network-4G</td>
<td>WCDMA / GSM / EDGE</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Bluetooth</td>
<td>5.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>GNSS</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LAN</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Audio &amp; Vibrator</td>
<td>1 x Speaker, 1 x Mic</td>
<td>1 x Speaker, 1 x Mic</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>SD Card Slot</td>
<td>1 x microSD</td>
<td>1 x microSD</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>USB Port</td>
<td>1 x Micro-5-pin USB cable</td>
<td>1 x USB Type C</td>
<td>1 x Usb Type C</td>
<td>1 x Micro USB 2.0</td>
</tr>
<tr>
<td></td>
<td>Display</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Max Resolution</td>
<td>1280 x 720</td>
<td>1280 x 720</td>
<td>1280 x 720</td>
<td>1280 x 720</td>
</tr>
<tr>
<td></td>
<td>Touch Screen</td>
<td>Projected Capacitive 5-point Multi-Touch</td>
<td>Projected Capacitive 5-point Multi-Touch</td>
<td>Projected Capacitive 5-point Multi-Touch</td>
<td>Projected Capacitive 5-point Multi-Touch</td>
</tr>
<tr>
<td></td>
<td>Power Adapter</td>
<td>100~240VAC</td>
<td>100~240VAC</td>
<td>100~240VAC</td>
<td>100~240VAC</td>
</tr>
<tr>
<td></td>
<td>Battery</td>
<td>1 x 4000mAh</td>
<td>1 x 4000mAh</td>
<td>1 x 15100mAh</td>
<td>1 x 15100mAh</td>
</tr>
<tr>
<td></td>
<td>Accessories</td>
<td>USB-Cable, Charger, Stand, USB-Cable, Hand Strap</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>GT78-VN</th>
<th>IsT-400HN</th>
<th>Gladius G930</th>
<th>PC1017</th>
<th>ALBA POS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (WxHxD)</td>
<td>147 x 220 x 15.8 mm</td>
<td>218.2 x 172 x 46.5 mm</td>
<td>258.5 x 150 x 27 mm</td>
<td>248.3 x 194 x 35.2 mm</td>
<td>381.6 x 312 7 x 205.7 mm</td>
</tr>
<tr>
<td>CPU</td>
<td>Core i7-6200U / Core i5-6200U</td>
<td>Quad-core i3-6100U</td>
<td>Intel Atom x5-Z8350 Processor</td>
<td>Intel Atom x5-Z8350 Processor</td>
<td>Intel® Atom™ x5-Z8350 Processor</td>
</tr>
<tr>
<td>Operating System</td>
<td>Android 7.1</td>
<td>Android 5.1</td>
<td>-</td>
<td>-</td>
<td>Windows 10</td>
</tr>
<tr>
<td></td>
<td>Graphics</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Memory</td>
<td>8GB</td>
<td>2GB DDR4</td>
<td>2GB DDR4</td>
<td>2GB DDR4</td>
</tr>
<tr>
<td></td>
<td>Storage</td>
<td>32GB</td>
<td>64GB</td>
<td>64GB</td>
<td>64GB</td>
</tr>
<tr>
<td></td>
<td>Camera</td>
<td>1 x 5 MP (Front)</td>
<td>1 x 13 MP AF (Front)</td>
<td>1 x 8 MP AF (Front)</td>
<td>1 x 8 MP AF (Front)</td>
</tr>
<tr>
<td></td>
<td>WLAN</td>
<td>802.11 ac/a/b/g/n</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Bluetooth</td>
<td>Bluetooth 4.2</td>
<td>Bluetooth 4.2</td>
<td>Bluetooth 4.2</td>
<td>Bluetooth 4.2</td>
</tr>
<tr>
<td></td>
<td>GPS</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LAN</td>
<td>1 x RJ-45 10/100/1000 Mbps</td>
<td>1 x RJ-45 10/100/1000 Mbps</td>
<td>1 x RJ-45 10/100/1000 Mbps</td>
<td>1 x RJ-45 10/100/1000 Mbps</td>
</tr>
<tr>
<td></td>
<td>Audio &amp; Vibrator</td>
<td>1 x Speaker, 1 x Mic, 1 x 3.5mm Headphone Jack</td>
<td>1 x Speaker, 1 x Mic</td>
<td>1 x Speaker, 1 x Mic</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>SD card slot</td>
<td>1 x microSD</td>
<td>1 x microSD</td>
<td>1 x microSD</td>
<td>1 x microSD</td>
</tr>
<tr>
<td></td>
<td>USB Port</td>
<td>1 x Micro-2.0 USB 2.0</td>
<td>1 x USB 2.0 Type-B</td>
<td>1 x Micro-2.0 USB 2.0</td>
<td>1 x Micro-2.0 USB 2.0</td>
</tr>
<tr>
<td></td>
<td>Display</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Max Resolution</td>
<td>1366 x 768</td>
<td>1280 x 800</td>
<td>1920 x 1080</td>
<td>1920 x 1080</td>
</tr>
<tr>
<td></td>
<td>Touch Screen</td>
<td>Projected Capacitive 5-point Multi-Touch</td>
<td>Projected Capacitive 5-point Multi-Touch</td>
<td>Projected Capacitive 5-point Multi-Touch</td>
<td>Projected Capacitive 5-point Multi-Touch</td>
</tr>
<tr>
<td></td>
<td>Power Adapter</td>
<td>100~240VAC</td>
<td>100~240VAC</td>
<td>100~240VAC</td>
<td>100~240VAC</td>
</tr>
<tr>
<td></td>
<td>Battery</td>
<td>1 x 5.0 MP (Front)</td>
<td>1 x 8 MP AF (Front)</td>
<td>1 x 8 MP AF (Front)</td>
<td>1 x 8 MP AF (Front)</td>
</tr>
<tr>
<td></td>
<td>Accessories</td>
<td>USB-Cable, Charger, Stand, Hand Strap</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>
## Selection Guide

### Thermal Imaging Solutions

<table>
<thead>
<tr>
<th>Model</th>
<th>TIM-048</th>
<th>S409</th>
<th>S408</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimensions</strong> (WxHxD)</td>
<td>62.4 x 83 x 27.7 mm</td>
<td>219.2 x 162.7 x 46.5 mm</td>
<td>154.6 x 105.8 x 25.3 mm</td>
</tr>
<tr>
<td><strong>CPU</strong></td>
<td>Quad-Core ARM Cortex A55</td>
<td>Quad-Core ARM Cortex A55</td>
<td>Octa-Core ARM Cortex A53, 2.5GHz</td>
</tr>
<tr>
<td><strong>Control HMI</strong></td>
<td>-</td>
<td>-</td>
<td>Quad-Core ARM Cortex A55, 1.0GHz</td>
</tr>
<tr>
<td><strong>Operating System</strong></td>
<td>Android 8.0</td>
<td>Android 8.1</td>
<td>Android 9.0</td>
</tr>
<tr>
<td><strong>Memory</strong></td>
<td>3GB DDR4</td>
<td>32GB eMMC</td>
<td>16GB eMMC</td>
</tr>
<tr>
<td><strong>Storage</strong></td>
<td>16GB</td>
<td>16GB eMMC</td>
<td>16GB eMMC</td>
</tr>
<tr>
<td><strong>Camera</strong></td>
<td>5 Mega Pixel FF</td>
<td>1 x 8MP AF (Front)</td>
<td>4 Mega pixel FF</td>
</tr>
<tr>
<td><strong>WLAN</strong></td>
<td>IEEE 802.11 a/b/g/n/ac</td>
<td>IEEE 802.11 a/b/g/n/ac</td>
<td>IEEE 802.11 a/b/g/n/ac</td>
</tr>
<tr>
<td><strong>GPS</strong></td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Audio &amp; Vibrator</strong></td>
<td>1 x Speaker, 1 x Mic</td>
<td>1 x Speaker, 1 x Mic</td>
<td>1 x Speaker, 1 x Mic</td>
</tr>
<tr>
<td><strong>SD card slot</strong></td>
<td>1 x microSD/microSDXC/microSDH</td>
<td>1 x microSD</td>
<td>1 x microSD</td>
</tr>
<tr>
<td><strong>USB Port</strong></td>
<td>Micro USB connector for Debug</td>
<td>2 x USB 2.0 Type-A port</td>
<td>1 x micro USB 2.0</td>
</tr>
<tr>
<td><strong>Display</strong></td>
<td>5”</td>
<td>8”</td>
<td>8”</td>
</tr>
<tr>
<td><strong>Touch Screen</strong></td>
<td>Projected Capacitive 9-Point Multi Touch</td>
<td>Projected Capacitive 9-Point Multi Touch</td>
<td>Projected Capacitive 9-Point Multi Touch</td>
</tr>
<tr>
<td><strong>Power Adapter Input</strong></td>
<td>3.3-4.2V</td>
<td>120V-250VAC</td>
<td>120V-250VAC</td>
</tr>
<tr>
<td><strong>Power Adapter Output</strong></td>
<td>5V/2A</td>
<td>Built-in, 5V/2A</td>
<td>5V/2A</td>
</tr>
<tr>
<td><strong>Battery</strong></td>
<td>-</td>
<td>7.0Wh</td>
<td>7.0Wh</td>
</tr>
<tr>
<td><strong>RFID &amp; NFC</strong></td>
<td>Yes</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Certification</strong></td>
<td>CE/CSA/UL</td>
<td>CE/CSA/UL</td>
<td>CE/CSA/UL</td>
</tr>
<tr>
<td><strong>Accessories</strong></td>
<td>GPS Antenna, Power Adapter (5V/2A), M8 Cable</td>
<td>Y Splitter 3M</td>
<td>GPS Antenna, Power Adapter (5V/2A), M8 Cable</td>
</tr>
</tbody>
</table>

*Optional

### Selection Guide

### IoT Devices

<table>
<thead>
<tr>
<th>Model</th>
<th>NB-IoT Development Board</th>
<th>BG002 Water Meter</th>
<th>BG003 Water Meter</th>
<th>S101</th>
<th>AIM-01</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU/MCU</td>
<td>ARM Cortex® M4 208MHz</td>
<td>MTK MT2635</td>
<td>ST micro</td>
<td>D14</td>
<td>MTK-6768</td>
</tr>
<tr>
<td>Memory</td>
<td>4GB</td>
<td>2GB</td>
<td>-</td>
<td>1GB Flash Memory</td>
<td>4GB</td>
</tr>
<tr>
<td>Storage</td>
<td>4GB</td>
<td>16GB</td>
<td>16GB</td>
<td>16GB</td>
<td>64GB</td>
</tr>
<tr>
<td>Operating System</td>
<td>FreeRTOS</td>
<td>FreeRTOS</td>
<td>Android 4.2</td>
<td>iOS 8</td>
<td>Android 9.0</td>
</tr>
<tr>
<td><strong>WLAN</strong></td>
<td>IEEE 802.11 a/b/g/n/2.4GHz</td>
<td>-</td>
<td>-</td>
<td>IEEE 802.11 a/b/g/n/2.4GHz</td>
<td>-</td>
</tr>
<tr>
<td><strong>Frequency Band</strong></td>
<td>Band 3,7,28</td>
<td>Band 3,7,28</td>
<td>Band 28</td>
<td>-</td>
<td>MTK (860,863) or EC25 Module</td>
</tr>
<tr>
<td><strong>LTE</strong></td>
<td>LTE CAT.4/4B</td>
<td>LTE CAT.4B</td>
<td>LTE CAT.4B</td>
<td>-</td>
<td>LTE</td>
</tr>
<tr>
<td><strong>Camera</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4K FHD</td>
<td>-</td>
</tr>
<tr>
<td><strong>Display</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>4.8” (PCT)</td>
<td>-</td>
</tr>
<tr>
<td><strong>NFC</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Bluetooth</strong></td>
<td>Bluetooth 4.2 BLE</td>
<td>Bluetooth 4.2</td>
<td>Bluetooth 4.2</td>
<td>Bluetooth 4.2</td>
<td>Bluetooth 4.2</td>
</tr>
<tr>
<td><strong>SIM</strong></td>
<td>1x Micro SIM</td>
<td>1x Micro SIM</td>
<td>1x Micro SIM</td>
<td>1x Micro SIM</td>
<td>1x Sim (MTK or 4G)</td>
</tr>
<tr>
<td><strong>USB</strong></td>
<td>1x Micro USB 2.0</td>
<td>-</td>
<td>-</td>
<td>POGO PIN USB</td>
<td>Micro USB Type-C</td>
</tr>
<tr>
<td><strong>Power Input</strong></td>
<td>DC 9V/2A</td>
<td>DC 9V/2A</td>
<td>DC 9V/2A</td>
<td>MP 12-24V (Adapter)</td>
<td>12V / 24V (POE)</td>
</tr>
<tr>
<td><strong>Software</strong></td>
<td>Built-in MQTT/HTTP Support</td>
<td>HTTP</td>
<td>HTTP</td>
<td>HTTP</td>
<td>HTTP</td>
</tr>
<tr>
<td><strong>Battery</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>250Wh</td>
<td>4800Wh or 770Wh</td>
</tr>
<tr>
<td><strong>Analog Level Output</strong></td>
<td>-</td>
<td>PB6</td>
<td>PB6</td>
<td>PB7</td>
<td>-</td>
</tr>
<tr>
<td><strong>Sensors</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>GSensor, Gyroscope, Heart Rate, Temperature, 3D Accelerometer</td>
<td>GSensor, M Sensor, Gyroscope</td>
</tr>
<tr>
<td><strong>Certification</strong></td>
<td>CE, BSMI</td>
<td>CE, BSMI</td>
<td>CE, BSMI</td>
<td>CE, BSMI</td>
<td>CE, BSMI</td>
</tr>
<tr>
<td><strong>Accessories</strong></td>
<td>-</td>
<td>Adapter PowerBank</td>
<td>Adapter PowerBank</td>
<td>Adapter Charging Base for 20 Devices</td>
<td>Adapter, M8 Cable</td>
</tr>
</tbody>
</table>

*Optional