# New Program Offers Low-Cost LTE-M Modules with Amazing Benefits.

IoT*Accelerator*

AT&T is working with Wistron NeWeb Corporation (WNC) to introduce a family of low-cost LTE-M modules that meet the needs of a broad range of Internet of Things (IoT) applications. These modules can simplify and lower the cost of IoT designs, as well as improve device performance in power consumption. The new modules support operation in multiple IoT markets and run on the AT&T 4G LTE-M network, enhancing device coverage underground and deep inside buildings, and providing customers with a cost-effective option for hardware integration.
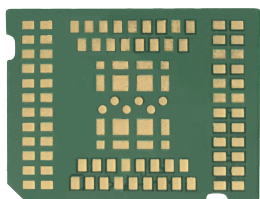
IMS2 module in ETSI
SMT1915 footprint
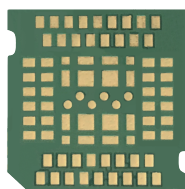
IMA2 module in ETSI
SMT1315 footprint

Key benefits for developers

- A nested SMT design allowing to design once and use IMS2 or IMA2 modules
- Designed to meet ETSI SMT Specifications
- Efficient cost structure
- Multiple GPIO interfaces for greater flexibility in system design
- Supports key LTE-M features such as Coverage Enhancement, PSM and eDRX
- Functions within –40 °C to +85 °C ambient operating temperatures

Optimize your connection to the Internet of Things

The WNC IMS2 and IMA2 LTE-M modules are the perfect solutions for connecting to the Internet of Things (IoT). The multi-design capability offers great flexibility in a very compact size at an industry-leading price point including a SIM card.

The compact IMS2 and IMA2 modules are based on the European Telecommunications Standards Institute (ETSI) industrial-standard Land Grid Array package. This means they meet the quality requirements of high-volume, automated manufacturing processes for IoT devices. Both modules are designed with IoT product solutions in mind, supporting small form factor, low power consumption and key LTE-M features such as PSM and Coverage Enhancement — all at an industry- leading price.

Utilities   Supply chain   Vehicles   Homes   Metering   Health   Security   Equipment
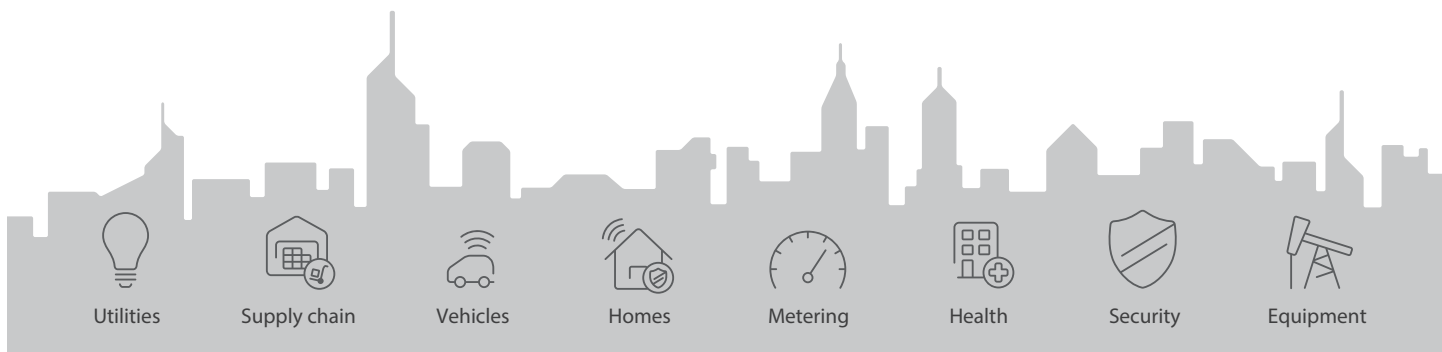
WNC
Wistron NeWeb Corp.

An industry standard footprint

The WNC module family utilizes an industry standard mechanical and electrical implementation as defined in the ETSI Surface Mount Technology (SMT) specification. These requirements specify form factors for SMT-based communication modules and for devices supporting services across multiple vertical markets. The ETSI SMT specification increases the integrators' abilities to adapt modules to a common device design — potentially across multiple technologies. WNC IMS2 is based on the ETSI SMT1915 form factor. The new designs also support compatibility with future modules, utilizing a new, smaller ETSI SMT1315 form factor which will allow an integrator to support multiple ETSI SMT form factors. It is designed to accommodate a nested footprint with the new ETSI SMT1315 form factor of the IMA2. This nested solution enables device makers to design today, with the knowledge it will fit seamlessly with the next generation module in the LTE-M family.

Modules backed by development know-how

With these modules WNC is able to offer device integration, engineering support, and radio frequency (RF) design support for a complete module-based product development solution. WNC is a vertically-integrated supplier, and is therefore able to simplify the development process for IoT product integrators. In addition, WNC is able to supply a family of industry-leading 4G LTE modules, along with IoT device development, design, and manufacturing for complete turnkey solutions.

Why should new implementations move to LTE-M?

1. **Longevity**
   Based on LTE technology, LTE-M enables long life solutions, guaranteeing best-in-class longevity for IoT solutions

2. **Power Saving Mode**
   LTE-M supports new power-saving modes (PSM), enabling an extended battery life of over 10 years in some IoT applications.

3. **Extended Coverage**
   LTE-M also supports the Coverage Enhancement (CE) feature for improving coverage levels in hard-to-reach places.

Why choose WNC's IMS2 and IMA2 LTE-M Modules?

1. **Low-power solution**
   Helpful for applications, where multi-year battery life is required

2. **Cost/value proposition**
   A low-cost option with industrial-grade quality

3. **Small form factor**
   Suitable for most portable, wearable IoT applications

LTE–M Modules

	IMS2	IMA2
Chipset	SEQUANS SQN3330 Soc + FEM Sky68001	ALTAIR ALT1250/ALT1910
LTE Bands	2/4/12	2/4/12
LTE Category	Cat. - M1	Cat. - M1
UART	✓	✓
USB 2.0	✗	✓
GPIO (max.)	3	5
TCP/IP Stack	✓	✓
UIM Interface	Dual voltages: 1.8 V and 3 V	1.8 V only
GPS/GNSS	✗	Optional
VoLTE	NA	Optional
LwM2M	✓	✓
SMT Footprint	ETSI 1915	ETSI 1315
Supply Voltage	3.3 V–4.2 V	3.3 V–4.2 V
Tx Power	23 dBm	20 dBm
Ambient Operating Temp.	−40 °C to +85 °C	−40 °C to +85 °C
Dimensions (L × W × H)	21.5 × 16.5× 2.3 mm	15 x 15 x 2.0 mm
RTOS	✓	✓
Availability	August 2017	1Q 2018*

Specifications and technical information contained herein have been provided by WNC and are subject to change prior to launch.
*Date Subject to Change

To contact the AT&T Internet of Things Solutions (IoTS) Device team and learn more about one or more of the WNC modules, we invite you to visit: www.att.com/iotaccelerator