

» Preintegrated M2M platform «

M2M Smart Services Developer Kit

In the years to come most electronic devices will connect to the Internet. M2M devices will help companies improve logistics and save time while reducing costs and improving productivity. By deploying smart services on the machine-to-machine (M2M) devices OEMs will be able to expand their solutions to meet these new market opportunities.

Developers of emerging smart services need a simple, yet powerful M2M device to test and deploy their application's connected performance. OEMs can reduce time-to-market by using Kontron's M2M Smart Services Developer Kit, which was developed in collaboration with Intel and is cost optimized for mass production. The Kontron M2M System is Wi-Fi and 802.15.4 ready. 3G WWAN is either also installed or can be easily added. Dual HDMI ports support the video intensive functionality needed by many emerging transportation, medical, energy and factory automation applications.



Technical Information

Product	Kontron M2M Smart Services Developer Kit
Chassis Dimensions (H x W x D)	67mm x 100mm x 27mm (92mm x 100mm x 62mm with mounting brackets)
Interfaces Top	SIM slot
Interfaces Left	USB 2.0 (Type A), MicroUSB 2.0 (Type B), Power, RJ-45 Ethernet, 2x antenna connectors
Interfaces Right	Microphone, Headphone/Line Out, 2x MicroHDMI, MicroSD slot, MicroUSB 2.0, 2x antenna connectors
Controls on top	Reset button, user input button/software enabled, LED status indicators
Internal Data Storage capacity	4 GB via internal MicroSD card
External Power Supply	100-240 VAC, 50/60 Hz input/rating, 12 VDC, 2A operating input/rating (US and Continental Europe power cords included)
Processor/Chipset	Intel® Atom™ processor E640T 1 GHz/Intel® Platform Controller Hub EG20T
Cache	32 KB instruction cache + 24 KB L1 cache, 512 KB L2 cache
Memory	1 GB DDR2
Wi-Fi WLAN (802.11a/b/g/n)	Intel® Centrino® Advanced N 6205 Wi-Fi module installed
WPAN (802.15.4)	TI CC2531 SOC; ready for ZigBee® certification or for 6LoPAN or Wireless HART WPAN use
3G/4G WWAN	Ericsson 5521gw 3Gmodule installed or option to drop-in other PCI Express 3G/4G broadband module
Expansion (for non-3G option SKU)	1 PCIe MiniCard slot for WWAN 3G/4G broadband module (certification/drivers needed) or solid state disk addition
Accelerometer	Ultra low-power high performance three axis linear accelerometer
Weight	0.8 lb/0.36 kg system; 2.35 lb/1.1 kg packaged kit
Temperature	Operating: -0°C to +50°C Storage: -25°C to +70°C (-13°F to 158°F)
Humidity	Operating: 5 to 95 % RH @ 25-35°C non condensing
Shock	Operating: 2G 11ms duration, 6 directions (half-sine) Non-operating: 25G 11ms duration, 6 directions (half-sine)
Vibration	Packaged: 2G 5-40 Hz: sloping to 0.00015 g2/Hz@500 Hz Unpackaged system: 5-500 Hz: 0.5G sine / 3 axis
Approvals	Nemko NRTL 60950-1, FCC Class B, CE
OS	Wind River Linux 4.1 – 90 day trial; driver support enabled for Ericsson 5521gw module, 2x 3G antennas (option)
Also in the box	2x 802.11/802.15.4 antennas, 16 GB USB Memory stick with Wind River Linux LiveUSB and USB adapter

M2M Smart Services Applications

Transportation entertainment, security and control

Public-transit busses and trains are being equipped with up to date information and entertainment technology allowing the operator to focus on the environment. In addition to providing comfort features, M2M platforms also offer electronic payment capabilities to further save operator time and video surveillance to enhance security. Fleet management systems and telematics help with equipment monitoring and management, improving the transportation system's overall productivity.



Remote maintenance and control for medical equipment

Calibration is crucial to successful operation of advanced medical equipment and down-time can risk lives if backup systems are unavailable. Smart services delivered via an M2M gateway can signal alerts if the equipment isn't functioning properly; track consumable supplies, order replenishments; and schedule routine maintenance without operator involvement. Security and privacy protection functionality can also be implemented to further protect the patient.



Energy asset control and usage monitoring

Energy companies must carefully control their assets from the point of creation through usage. M2M gateways with smart services help aggregate sensor data for energy assets. Fleet and asset management smart services help control assets and manage logistical delivery from initial mining, or creation, through transport to users. M2M smart meters monitor energy consumption and can shift available supply based on prioritization, geographic and time of day needs to reduce costs and carbon footprints.



Ordering Information

Article	Description
KM2M810-01	Kontron M2M Smart Services Developer Kit, 1 GHz (no WWAN installed)
KM2M810-02	Kontron M2M Smart Services Developer Kit, 1 GHz (with Ericsson 3G module installed and 3G antennas)