

# M2M Control CX360

## Advanced M2M and IoT Platform

The perfect balance of quality, performance, flexibility and affordability

### For Professional M2M and IoT Applications

The M2M Control CX360 has been designed for the most demanding M2M and Internet of Things applications, which cannot be solved with simpler non-programmable devices.

The CX360 combines a freely programmable PLC controller, a data logger with an integrated **LTE Cat. 4 Multiband Worldwide** modem. This makes the CX360 to a very powerful solution for professional industrial wireless applications.

The **M2M Control RTCU Platform** brings all the necessary tools together to develop, implement and maintain today's sophisticated M2M and industrial IoT applications.

The development task is supported by the **M2M Control IDE development environment** (IEC 61131-3) complemented by a large and comprehensive documentation and application example library.

The CX360 is fully supported by the **M2M Control GPRS Gateway**. The cornerstone of the communication infrastructure ensuring reliable two-way device communication in any network environment. Deploying and maintaining new application and firmware versions for devices in the field are handled by the powerful **M2M Control Upgrade & Deployment Server** (FOTA).

*10 years of experience and know-how in one product!*

### Experience and Know-how

For 10 years Infranet Technologies has been committed to offer the most sophisticated platform for advanced and highly demanding M2M / IoT applications. We supply our products under the brand "**M2M Control**".

The M2M Control CX360 is the result of this accumulated experience combined with valuable feedback from hundreds of professional and mission critical applications by major organizations around the world.

M2M Control products are deployed all over the world - In any imaginable application and environment.



### Device Advantages

- LTE Cat. 4 Multi-Band cellular engine.
- **New: Worldwide LTE**, UMTS/HSPA+ and GSM/GPRS/EDGE coverage
- On-Board Ethernet interface
- Internal and external SIM reader.
- Digital and analog inputs and outputs
- MODBUS expandable I/O
- Graphical Touch Display
- Multiple RS232 / RS485
- Full CAN 2.0B support.
- 1-Wire Bus
- Large memory capacity.
- FAT32 file-system.
- High-capacity battery.
- State of the art power-management.

### Platform Advantages

- NX32 execution architecture.
- Linux operating system (protected)
- RTCU IDE development tool.
- Programmable in IEC61131-3 (ST)
- Huge standard API.
- Comprehensive protocol support: TCP/IP, FTP, SMTP, HTTP, SNMP, MQTT
- Security: VPN, TLS, AES Encryption
- Full featured Device Simulator.
- Sophisticated deployment tools.
- Fast and free email support.
- Backward and forward compatible.

# M2M Control CX360 Specifications

## Processor and Main-memory

- Cortex-A5 32-bit ARM processor.
- Hardware floatingpoint and DSP
- 128 MB fast execution RAM.
- 512 MB Flash for firmware/application.
- Real-Time clock with battery backup

## Storage

- 128 KB SRAM with battery backup
- 16 MB NOR flash persistent data flash.
- 8 MB data flash
- Circular datalogger
- Internal flash drive (up to 5 12 MB)
- SD-CARD reader with up to 32 GB.

## Cellular Engine

- **Multi-band LTE Cat. 4 (Worldwide)**  
LTE FDD: B1/B3/B7/B8/B20/B28A  
WCDMA: B1/B8
- Penta-band UMTS/HSPA+  
UMTS: 800/850/900/1900/2100 MHz.
- GSM: 850/900/1800/1900 MHz.
- CSD with up to 14.4 Kbps.
- SMS / PDU.
- Digitized Voice / DTMF decoding
- SIM card-reader (1.8/3V)
- SIM Chip, Optional eSIM Chip.

## User Interface

- Graphical touch display. With 260x160 px
- Piezo Buzzer for user attention.
- 4 x bi-colour LED.

## Electrical Specification.

- Operating voltage is 8 to 36 VDC.
- Short and reverse power protected.

## Power Management

- Low power modes.
- Wait for Event: Timer, Digital input, RS232, CAN, GSM, and power change state.
- Supervision of supply voltage.
- On-board 2Ah (nominal) Li-Ion battery.
- Intelligent charger with temperature throttle and sub-zero degrees support.
- On-board temperature sensor.
- Support for larger external battery

## Digital/Analog Interface

- 8x digital solid-state digital output.  
Max. 36 volt / 1.5 A per. channel.  
Short-circuit, ESD, Inductive kick-back protected up to 20 mH.
- 8 x digital inputs.  
Logic high: 8 to 40 VDC.  
Logic low: -5 to 3 VDC.
- 4 configurable as IEC62053-31 Class A input
- Digital input #5 can be used as ignition.
- 4x analog inputs.  
Range is 0..10V or 0..20mA  
Resolution: 10/ 12 bit  
Precision:  $\pm 1.5\%$  FSR @ 25°C
- 4x analog outputs.  
Range is 0..10V or 0..20mA  
Resolution: 10 bit  
Precision:  $\pm 1.5\%$  FSR @ 25°C
- Protected against transients and low-pass filtered.
- Expandable I/O with MODBUS.

## Wired Communication

- 10BASE-T Ethernet Interface
- Full CAN2.0B with hardware filtering and multi-speed support.
- 2x RS232 (one with control signals)
- 2x RS485 with MODBUS support.
- 1-Wire bus.
- USB host port.

## Wireless Communication

- WiFi at 2,4 GHz ISM bands.
- IEEE 801.11b/g/n/d/e/h/i.
- WPA/WPA2 certification.
- Up-to 150 Mbps
- Bluetooth Classic and Low Energy (LE).
- Bluetooth 2.1 + EDR up-to 3 Mbps
- Bluetooth 3.0 and 4.0 Dual mode.

## Security

- Embedded firewall.
- TLS/SSL support with certificate management.
- TLS/SSL support for SMTP, MQTT, FTP, HTTP, RTCU Gateway and TCP/IP sockets.
- Hardware assisted strong encryption / authentication: AES-128, , AES 256, DESAES-192, TripleDES, HASH, RND and RSA signature.

## External Interfaces.

- SIM-card slot for micro-SIM with lock and presence detection.
- SD-CARD slot with presence and write protect detection.
- Audio out for digitized voice playback.
- 4 x LED indicators and 4 x DIP switches.
- Reset/recovery switch,
- Pluggable Connectors for: power, I/O, RS485, 1Wire, CAN
- RS232 with TYCO "Mate'n'Lock' connector
- RJ45 for RS232 with full control signals.
- SMA Female connector for GSM.
- RP-SMA connector for WiFi / Bluetooth
- Mini USB-B as service port
- USB host port (USB-A receptable)

## Physical Characteristics

- Encapsulation: M36 DIN Rail (9 Module)
- Approx. 470 gram without accessories.
- W 160 x H 89 x D 54 mm.

## Environmental Specification

- Operating temperature: -30 to 60°C.
- Battery charge temperature: -10 to 45 °C
- Storage temperature: 0 to 45°C.
- Humidity: 5..90% (non condensing).
- Ingress Protection: IP20

## Approvals

- 2014/53/EU Radio Equipment Directive
- 2014/30/EU EMC Directive
- 2011/65/EU RoHS Directive.
- Cellular engine: CE/GCF/FCC/PTCRB.

## Warranty

- Two-years return to factory parts and labor.
- Optional warranty up to 5 years. (restrictions apply).

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