

M2M Control CX320

Advanced M2M and IoT Platform

The perfect balance of quality, performance, flexibility and affordability

For Professional M2M and IoT Applications

The M2M Control CX320 has been designed for the most demanding M2M and Internet of Things applications, which cannot be solved with simpler non-programmable devices.

The CX320 combines a freely programmable PLC controller, a data logger with an integrated **LTE Cat. 4 Multiband** modem. This makes the CX320 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 CX320 is fully supported by the **M2M Control Communication Hub**. 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).

15 years of experience and know-how in one product!

Experience and Know-how

For more than 15 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 CX320 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.
- 3G (UMTS,HSPA), 2G Fallback (GSM/GPRS)
- **Ethernet interface**
- Internal SIM reader—eSIM ready
- Digital and analog inputs and outputs
- MODBUS expandable I/O
- Graphical Display with Keypad
- Multiple RS232 / RS485
- **M-Bus interface** (20 M-Bus loads)
- 1-Wire Bus with LED support
- Large memory capacity.
- Flash Drive with FAT32 file-system.
- High-capacity back-up battery.

Platform Advantages

- NX32L 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.
- C350 / C360 replacement

M2M Control CX320 Specifications

Processor and Main-memory

- Cortex A7 @800 Mhz 32-bit ARM processor.
- Cortex-M4 32-bit co-processor
- Hardware floatingpoint and DSP
- 128 MB fast execution RAM.
- 512 MB Flash for firmware/application.

Storage

- 64 MB Internal flash drive (Up to 128 MB)
- 7.5 MB Persistent data Flash
- 32 MB Multiple circular dataloggers.
- SD-CARD reader with up to 32 GB.

Cellular Engine

- LTE Cat.4 Engine (EMEA).
Max 150 Mbps(DL)/Max 50 Mbps(UL).
LTE FDD: B1/B3/B5/B7/B8/B20
LTE-TDD: B38/B40/B41
WCDMA: B1/B5/B8
GSM: B3/B8
- DTMF decoding / transmission.
- Digitized voice playback / IVR.
- Internal mini SIM-card reader.
- Optional eSIM.

User Interface

- 144x32 pixels graphical/text display.
Black-on-green back-lit.
- Keypad with 8 user defined keys.
- Piezo Buzzer for user attention.
- 4 x bi-colour LED.
- DIP-switches.
- Reset / recovery switch.

Power Management

- Low power modes.
- Wait for Event: Timer, Digital input, RS232, 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.

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: ±0.5% FSR @ 25°C
- 2x analog outputs.
Range is 0..10V or 0..20mA
Resolution: 12 bit
Precision: ±0.5% FSR @ 25°C
- Protected against transients and low-pass filtered.
- Expandable I/O with MODBUS.

Communication Interfaces

- 10BASE-T Ethernet Interface
- 1x RS232 (one with control signals)
- 2x RS485 with MODBUS support.
- 1-Wire bus with LED support.
- M-Bus Master with 20 standard loads
Compliant with EN13757 2/3.
- Optional: Wireless M-Bus interface
Mode S, T, C, R2. Compliant with EN13757 4/7

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.

- Internal SIM card reader 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, RS232, RS485, M-Bus, 1Wire.
- SMA Female connector for GSM.
- Mini USB-B as service port
- USB host port (USB-A receptable)

Electrical Specification.

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

Physical Characteristics

- Encapsulation: M36 DIN Rail (9 Module)
- Approx. 470 gram without accessories.
- W 157x H 86 x D 56 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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