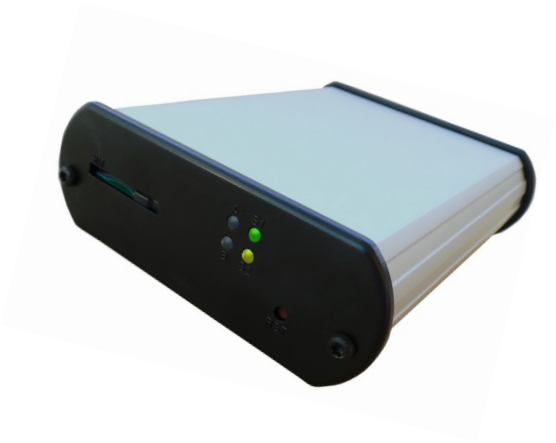
M2MCONTROL
by Infranet Technologies

M2M Control CX630

Advanced Telematics and Telemetry Platform

The perfect balance of quality, performance, flexibility and affordability



For Professional Telematics and Telemetry Applications

The M2M Control CX630 has been designed for the most demanding Telematics and Telemetry applications, which cannot be solved with simpler non-programmable devices.

The CX630 combines a freely programmable PLC controller, a data logger with an integrated **LTE Cat.4** Celluar Engine . This makes the CX630 to a very powerful solution for professional automotive and industrial wireless applications.

The **M2M Control RTCU Platform** brings all the necessary tools together to develop, implement and maintain the most sophisticated M2M / IoT applications.

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

The CX630 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 15 more than 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 CX630 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 Celluar Engine (World Wide)
- Dual SIM card readers
- GSM / GPRS (2G) / EDGE (2.5G) fallback
- High-precision Dual-band GNSS (GPS)
- Optional Dead Reckoning and RTK support
- 3-axis accelerometer, and Gyroscope
- 2 x Full CAN 2.0B (FMI, J1939) support
- Bluetooth low energy (LE 5.3)
- Digital and analog inputs and outputs
- Multiple RS232 / RS485 and 1-Wire Bus
- Large memory capacity
- Internal data logger
- 4GB Flash Drive
- High-capacity battery backup
- State of the art power-management.
- Plug compatible with C6xx Series porducts

Platform Advantages

- NX32L (Linux) execution architecture.
- Secure platform (hardware support)
- RTCU IDE development tool.
- Programmable in IEC61131-3 (ST)
- Huge standard API.
- Open platform SDK
- Comprehensive protocol support: TCP/IP,,FTP, SMTP, HTTP, SNMP, MQTT
- Security: VPN, TLS, AES Encryption
- Full featured Device Simulator.
- Sophisticated deployment tools.

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M2M Control CX630 Specifications

Processor and Main-memory

- Cortex-A7 @800 Mhz 32-bit ARM processor.
- Hardware floatingpoint and DSP
- 128 MB LP-DDR RAM.
- 512 MB Flash for firmware/application.
- Real-Time clock with battery backup

Storage

- 4G Internal Flash Drive
- Persistent data flash.
- Multiple Circular dataloggers

Cellular

- LTE Cat. 4 Celluar Engine (World wide)
  Max 150 Mbps (DL) / Max 50 Mbps (UL)
  LTE FDD: 15 bands, LTE TDD: 4 bands,
  WCDMA: 7 bands
- GSM: Ouad band.
- SMS / PDU.
- Digitized Voice / DTMF decoding
- Dual SIM card-reader (Mini SIM 1.8/3V)
- Optional eSIM Chip.

GNSS / GPS

- Multi GNSS: GPS, GLONASS and GALILEO
- Dual-Band using L1 / L5 bands.
- SBAS (WASS, EGNOS, MSAS, GAGAN)
- A-GPS capable; RTCM v2.3 and v3.3.
- Anti-jamming, Noise cancellation
- Accuracy: < 1m CEP (@-130 dBm).
- Active 3 volt GNSS antenna support
- RTK with sub-centimeter accuracy optional) .
- Dead Reckoning with IMU (optional).

Internal Sensors

- On-board temperature Sensor
- 3-axis Accelerometer. ±16g@16b.
- 3-axis Gyroscope. ±2000dps @16b.

Power Management

- Low power modes.
- Wait for Event:
  Timer, Digital input, Accelerometer, RS232, RS485, CAN, Cellular, and Power change state.
- Wait for event, from: 0.4 mA@12V.
- Supervision of supply voltage and type.

Digital/Analog Interface

- 4x digital solid-state digital output.
  Max. 36 volt / 1.5 A per. channel.
  Short-circuit, ESD, Inductive kick-back protected up to 20 mH.
- 6 x digital inputs. (with ignition)
  Logic high: 8 to 40 VDC.
  Logic low: -5 to 3 VDC.
  Impedance: 14 kohm @ 12V
- 2x analog inputs.
  Range is 0..10V
  Resolution: 12bit
  Precision: ±0.6% FSR @ 25°C
- Protected against transients and low-pass filtered.

Wired Communication

- 2 x Full CAN2.0B with hardware filtering and multi-speed support.
- 2x RS232 (one with control signals)
- 1x RS485 with MODBUS support.
- 1-Wire bus.
- USB service / programming port.

Wireless Communication

- Bluetooth Low Energy (LE 5.3).
- IEEE 802.15.4-2011 PHY
- Optional: Zigbee and OpenThread.

Security

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

Battery and Charger

- On-board 2 Ah (nominal) Li-Ion battery.
- Intelligent charger with temperature throttle and sub-zero degrees support.

External Interfaces.

- Plug compatible with C6xx Series porducts
- TE-Connectivity "Mate'n'Lock':
  RS232, RS485, I/O, CAN,Power, Communicaton.
- RJ45 for RS232 with full control signals.
- SIM-card slot for mini-SIM card
- Mini-jack for audio in/out
- 4 x LED indicators and 2 x DIP switches.
- Dip-switch under frontplate:
  - ◊ CAN/RS485 termination.
  - ◊ CAN write enable.
- Reset/recovery switch,
- SMA female connector for Cellular (LTE)
- SMA –RP connector for Bluetooth
- SMA female connector for GNSS
- Mini USB 2.0 Slave as service port

Electrical Specification.

- Operating voltage is 8 to 36 VDC.
- Short and reverse power protected
- 5VDC out @500 mA

Physical Characteristics

- Encapsulation: Aluminum/plastic.
- Approx. 300 gram without accessories.
- W 97 x H 35 x D 132 mm
  (without antenna connectors).

Environmental Specification

- Operating temperature: -40 to 65°C.
- Battery charge temperature: -10 to 45 °C
- Storage temperature: 0 to 45°C.
- Humidity: 5..90% (non condensing).
- IP20 with SIM/SD/Connectors in use.

Approvals

- 2007/46/EC UN ECE R10 Rev. 05 (E1).
- 2014/53/EU Radio Equipment Directive.
- 2011/65/EU RoHS Directive.
- Cellular:
  GCF/CE/FCC/PTCRB/IC/Anatel/SRRC/NAL/ CCC/KC/NCC/JATE/TELEC/RCM/IFETEL/FAC/ NBTC/ICASA.

Warranty

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

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