# PRODUCT CATALOGUE

Antennas | M2M Modules | Components | Systems

www.giga-concept.fr

2018

Giga-concept
*Electronic components*

# OUR PARTNERS...



## CHOOSE YOUR NETWORKS !



### You can choose one or all of them...

This all depends on the final application, no matter if you use a mobile phone or an industrial platform, we have the module for you.

Our disruptive approach allows us to bring our radio frequency knowledge to your custom applications.

The module spectrum covering is very large and adaptative.

**Our IoT platforms support all the industry standards and are market oriented.**

## Processing depending on the choosen module :

• Espressif ESP32 Chipset :
  - MicroPython enabled, the Linux of IoT for fast deployment
• ARM core application processor with dedicated Flash and RAM running Legato®
• STM32 L0 ( ultra low power ) or F0

## Interfaces :

- UART / SPI / I2C
- Micro SD
- Analog channels :
  8*12 bits ADCS Times
  DMA on all peripherals
- GPIO : Up to 24

# **OPTION** Clougate

## CONNECTING THINGS TO THE CLOUD

**The CloudGate M2M Gateway provides competitively priced LAN to 2G/3G, 4G/LTE WWAN routing and GPS functionality. The CloudGate gateway is simple to configure locally or remotely from your PC, tablet or smartphone.**

### RELIABLE AND SECURE

CloudGate automatically resolves common problems associated with wireless M2M connectivity.

Built in software and hardware watchdogs continuously monitor each component of the product and the product's connectivity to home servers.

All software and configuration images are protected with digital signatures and have dual rollback images that allow the product to revert to previous working settings if an issue is detected.

### FLEXIBLE AND COST EFFECTIVE TO INTEGRATE AND DEPLOY

CloudGate provides unique flexibility that allows customers and system integrators to tailor the product to their solution.

**1.** Select a CloudGate model with expansion cards and/or accessories to suit your needs.

**2.** Config and any middleware are automatically installed.

**3.** Device is ready to connect things to the Cloud.

## HARDWARE EXPANSION SLOTS

CloudGate incorporates two hardware expansion slots that allow the CloudGate to be enhanced with additioal radio and/or Wired interfaces.

The expansion cards are simple and quick to instal, allowing the field upgrade of the device when new functionality is required.

### ADVANTAGES

- Simple, value priced LTE WWAN M2M IP connectivity
- Automatic connection monitoring and error recovery
- Secure, redundant firmware and configuration images
- Unique software and hardware configuration flexibility
- Automatic provisioning of custom middleware

| Features | SubFeatures | Description |
|---|---|---|
| WWAN Modem LTE | Supported freq. bands | 700/800/850/900/1800/1900/2100/2600/AWS |
| WWAN Modem 2G/3G | Supported freq bands | UMTS/HSDPA/HSUPA/HSPA+ 850/900/1900/2100MHz AWS band (1700/2100) GSM/GPRS/EDGE: 850/900/1800/1900 |
| | RX Diversity | Simultaneaous Equalization Rx Diversity on all bands |
| WWAN Antenna | Antenna connector | 1x SMA : WWAN Main 1x SMA : WWAN Div/GPS |
| Ethernet | | 10/100Mb/s RJ45 Connector |
| GPS | | High sensitivity A-GPS / A-GLONASS receiver (SUPL1.0 & SUPL2.0) |
| SIM | USIM/SIM connection | Class B and Class C |
| OS | | Linux Kernel 2.6.35 version |
| CPU | | ARM926EJ-S @ 450 MHz |
| RAM | | 512MB Flash (available : 20MB for data, 30MB for application, 372MB extra data partition) 128MB RAM (available : 85 MB) |
| microSD card holder | | For additional storage (FAT32) |
| Power control | | Timed wakeup |
| CloudGate Universe | | Device can be configured OTA using CloudGate Universe |
| Power | DC Power in | 9-33 V DC |
| Case | Dimension | 115 × 105 × 45 mm |
| | Weight | 304 g |
| Enviromentals | Storage temperature | -40°C to +70°C |
| | Humidity operational | 5% - 95% |
| Certification | | CE, FCC, IC, PTCRB, ROHS, Reach |

*"One control interface for all your cloudgates."*

# CloudGate
## UNIVERSE

4G LTE | VPN | RFID

LuvitRED | LoRa

# OPTION Clougate Cards

## Industrial Serial card



| One RS-232 serial port. 921,6 Kbaud maximum speed |
|---|
| One 2KV isolated RS-485 serial port / 921,6 Kbaud maximum speed |
| Full duplex or half duplex, 2 wire or 4 wire |
| Switchable termination |

## WIFI expansion card



| 802.11 a/b/g/n |
|---|
| Simultaneous access point and client mode |
| Failover to Wireless LAN client for WAN connectivity |
| Dual SSID |

## LoRa expansion card



| 28-bit AES encryption (send/receive ) WPA-PSK, WPA2-PSK, mixed WPA/WPA2-PSK |
|---|
| Simultaneous client & access point |
| Packet forwarder node to communicate with a public or private LoRaWAN server |

## Telematics card



| Adds flexible I/O and connectivity for industrial telematics applications to CloudGate |
|---|
| Built in 3 axis accelerometer |
| Dual SIM card reader for back-up or roaming SIM |
| Built in microcontroller off-loads all I/O from CloudGate |

## RFID uhf card



| UHF 868 or 915 MHz |
|---|
| External antenna SMA female, RED5 powered board, read and write functions |
| Reading distance : ideal use 3 to 5 m but can match up to 10 meters |

# **GIGA-CONCEPT** Navigation Devices

## IMPLEMENT YOUR OWN SOFTWARE SOLUTION ON OUR NAVIGATION DEVICES

Giga-concept offers an efficient range of PND (personal navigation devices) to develop your system and softwares facilitating fleet management.

Our PNDs running on Windows CE or Android, offer conectivities options improving the user experience :

Bluetooth, GSM/GPRS/3G/4G, USB, RS232, NFC and more. Giga-concept also offers  support in your developments with our PND.

## PROFESSIONAL NAVIGATION DEVICES RANGE TO MEET YOUR SPECIFIC NEEDS !

- Real-time vehicle monitoring and tracking
- Automatic vehicle location & fleet management
- SMS messaging and mobile communication
- Internet connectivity and more...

**GPS 2G 3G 4G LTE**  **Wi-Fi**  **BLE**  **NFC**

### FEATURES

**Multi OS** available : **Android or Windows** to meet your development needs.

Rechargeable **Li-polymer battery**, easy to use and provides long lasting battery life.

Connect your vehicle **rear view camera** to our navigation devices thanks **to AV-in support**

**All-in one device** : Navigation (GPS) and Communication (GSM/GPRS/3G). Never get lost again !

**Many accessories** available : 12-24 V on cradle, car charger, AC Home charger, anti-theft systems

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## ACCESSORIES AND CRADLES

For each activities, many accessories are available to extand your effiency and productivity.

Simple Cradle, Active Cradle, Anti-theft Cradle, Suction Mount, Fixed Mount, Car Charger, AC Home Charger, USB Cable, Headphone and more....
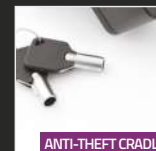
## GIGA-CONCEPT ACCESSORIES



**ACTIVE CRADLE**



**ACTIVE CRADLE**







**SUCTION MOUNT**



**ANTI-THEFT CRADLE**

| OVERVIEW | PN8010 | PN7041 | PN7050 | PN7060 | PN7010 | PN5030 |
|---|---|---|---|---|---|---|
| Microprocessor | Qualcomm MSM8940 Octa-core 4GHz | 1.2GHz Quad-core | ARM Cortex 9 - Dual Core 1GHz | ARM Cortex-A8 1.12 GHz | ARM A8 - 2.12 GHz | DUAL Core - 1.5 GHz |
| RAM | 2GB | 2GB DDR3 | LDP 1GB DDR3 | 256 MB DDR2 | 256 MB DDR2 | 1 GB DDR3 |
| ROM | 16 GB (optional 32GB) | 16 Gb eMMc Flash | 8 GB (optional up to 16 GB) | 512 MB ROM NAND Flash | 512 MB up to 16GB (SD) | 8 GB NAND FLASH |
| **OS** | | | | | | |
| Windows | - | - | Microsoft WEC7 | Windows Embedded CE 6.0 | Windows Embedded CE 6.0 | - |
| Android | Android 7.0 Nougat | Android 7.0 Nougat | Android Kitkat 4.4.2 | | | Android 4.4 |
| **CONNECTIVITY** | | | | | | |
| WWAN | 2G / 3G / 4G | 2G / 3G | | | | 2G / 3G |
| WLAN 802.11 | IEEE 802.11 a/b/g/n/ac | IEEE 802.11 b/g/n | Wi-Fi 802.11b/g/n, AP | - | Wi-FI 802.11 b/g/n | Wi-Fi 802.11 b/g/n |
| BLUETOOTH | Bluetooth 4.0 | Bluetooth 2.1 & 4.0 (OPP) | Class 2, 4.0 (GAP / SPP) | - | - | Bluetooth 2.1 & 4.0 (data) |
| NFC | Passive NFC 13.56MHz | 13.56MHz (ISO14443/15693) | - | - | - | - |
| GPS | High sensitivity - 64 channels | High sensitivity - 64 channels | High sensitivity - 66 channels | High sensitivity - 64 channels | High Sensitivity - 64 channels | High sensitivity - 64 channels |
| **DISPLAY** | | | | | | |
| Size | 8" LVDS IPS 1280 x 800 px | 7" TFT LCD 1024 x 600 px | 7" VGA - 165 x 104.5 x 3.3 | 7" TFT LCD 800 x 480 pixels | 7" TFT LCD  800 x 480px | 5" TFT LCD - 800 x 480 px |
| Type | Capacitive touch panel | Capacitive touch panel | - | Capacitive touch panel | Capacitive touch panel | Capacitive touch panel |
| **CAMERA** | | | | | | |
| Front | 5M pixel | 2M pixel & infrared LED | - | - | - | - |
| Rear | 8M pixel with Flash & Auto-Focus | 5M pixel Autofocus & flash light | - | 5646584 | - | 5M pixel autofocus camera |
| **OTHER** | | | | | | |
| Port | USB 2.0 OTG Connectivity | Micro SD, Sim card, Mini USB RS232 | USB 2.0 | SD Card slot, Ethernet Port | USB 2.0 (host & slave), R-cam, AV-out, 2x RS232/TTL, Jack, SD, EXT GPS | SIM Card, Micro SD, Mini USB 2.0,  Jack |
| Battery | Replaceable 8400 mAh battery | built-in Rechargeable 4300 mAh | - | - | optional | 2600 mAh built-in battery |
| **OPTIONAL** | | | | | | |
| Cradle | Active Cradle | Active Cradle | RS232 | RS232 / TTL / 12-24V | Only suction mount | Charging / RS232 / 12-24V |
| Accessories | RAM Mount, USB Cable, 1D or 2D Barcode Scanner | Windshield suction mounting , AC Home charger, USB cable | - | Suction cup | Car, AC Home charger, Power Input on SIO Port | Suction, HR suction,RAM Mount Car, AC Home charger |

## Headquarters, global innovation and development center

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