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*Congatec’s new Cloud API for IoT gateways simplifies the development of individual IoT solutions*

*Text and photograph available at:* [*http://www.congatec.com/press*](http://www.congatec.com/press)

**Press release**

congatec premiers Cloud API for IoT gateways and IoT edge servers

**congatec simplifies orchestration of wireless sensor networks**

**Deggendorf/Nuremberg, Germany, March 14, 2017 \* \* \*** congatec – a leading technology company for embedded computer modules, single board computers and embedded design and manufacturing services – showcases a best practice design solution for the simplified orchestration of wireless sensor networks at Embedded World (hall 1, stand 358). It is based on the new, application ready congatec Cloud API (Application Programming Interface) for IoT Gateways that is capable of integrating any local sensor networks into any cloud solution.

congatec’s new Cloud API for IoT Gateways communicates with local smart sensors, processes and converts the acquired data and executes automated actions based on a local rule engine, reducing traffic to the IoT cloud and enabling fast local actions. Secure bidirectional data exchange with any suitable clouds is achieved by using the TLS secured MQTT protocol. The best practice design solution utilizes the Microsoft Azure cloud. Clients can access this cloud via https in client or administrator mode. All these features make the new congatec Cloud API for IoT Gateways an ideal starting point for OEMs that need to access smart sensor networks via IoT gateways and IoT edge servers. Typical application areas can be found in various IoT segments, from industrial production and machinery to smart cities, smart facilities, smart homes, smart energy grids, medical IoT, the transportation sector and digital signage.

The new Cloud API from congatec impresses with its application readiness and built-in openness to integrate a broad range of wireless sensor interconnects, including Bluetooth LE, ZigBee, LoRa and other LPWANs, as well as wired protocols for building or factory automation via one single Cloud API. Even heterogeneous protocol configurations and communication with other gateways are possible. Typical applications for the latter scenario are Industry 4.0 connected machines and intra-logistic systems.

“Each smart sensor network has its own demands. Often, heterogeneous sensor networks are required and various different database implementations can be found in IoT clouds as well. At the edge of the IoT we are able to manage these heterogeneous, bidirectional demands by centrally orchestrating local smart sensor networks including the IoT edge gateways themselves. Our application ready congatec Cloud API for IoT Gateways meets this demand. Its freely programmable software modules can be instantly utilized to get access to our boards and their data as well as connected sensor networks. They are available in C++ and can be used as a blueprint for any custom specific implementations. which highly simplifies the development of individual IoT solutions,” explains Christian Eder, director of marketing at congatec.

**The feature set in detail**

The main software components of congatec’s best practice solution are the different Cloud API function modules as well as the demo and test modules for provider independent IoT clouds. The sensor engine of the congatec Cloud API for IoT Gateways makes the communication with the local sensor and actuators independent from any protocol. Additionally, it normalizes the data records to freely definable physical units and checks for consistency. The congatec operating system (CGOS) library integrates relevant gateway system parameters, such as system temperatures, CPU workload and intrusion detection. The rule engine enables the gateway to locally initiate warnings and automated actions if certain values exceed or threaten to exceed a defined threshold. Finally, the communication engine takes care of encrypted and provider independent data cloud communication via wired or wireless internet connections. The IoT cloud evaluation software provides the required tools for consolidating the sensor data in the cloud. Additionally, they can establish central messaging and control rules for the connected IoT applications, define further escalation scenarios and provide dashboards for remote clients.

congatec provides OEMs on request with all required software modules in the C++ source code, which simplifies the development of own IoT applications for Linux and Windows based on this application ready reference design. On demand, congatec also provides additional software services for the Cloud API and its cloud connection.

**About congatec AG**Headquartered in Deggendorf, Germany, congatec AG is a leading supplier of industrial computer modules using the standard form factors COM Express, Qseven and SMARC as well as single board computers and EDM services. congatec’s products can be used in a variety of industries and applications, such as industrial automation, medical, entertainment, transportation, telecommunication, test & measurement and point-of-sale. Core knowledge and technical know-how includes unique extended BIOS features as well as comprehensive driver and board support packages. Following the design-in phase, customers are given support via extensive product lifecycle management. The company’s products are manufactured by specialist service providers in accordance with modern quality standards. Currently congatec has entities in USA, Taiwan, China, Japan and Australia as well as United Kingdom, France, and the Czech Republic. More information is available on our website at [www.congatec.com](http://www.congatec.com) or via [Facebook](http://www.facebook.com/Congatec), [Twitter](https://mobile.twitter.com/congatecAG) and [YouTube](http://www.youtube.com/congatecAE).

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