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   Descrizione fisica 1 online resource (XI, 309 p. 238 illus.)

   Collana   Technology in action

   Disciplina   004

   Soggetti   Computer input-output equipment
                       Computer communication systems
                       Hardware and Maker
                       Computer Communication Networks

   Lingua di pubblicazione   Inglese

   Formato   Materiale a stampa

   Livello bibliografico   Monografia

   Nota di bibliografia   Includes bibliographical references.

   Nota di contenuto   Chapter 1: Introduction to LoRa and LoRaWAN -- Chapter 2: Obtaining and Preparing Hardware -- Chapter 3: Setting Up Software Development Environment -- Chapter 4: Building a Peer-to-Peer Channel -- Chapter 5: Building a LoRa Gateway -- Chapter 6: Connecting with IoT Servers Using RESTful API -- Chapter 7: Connecting with IoT Servers Using MQTT -- Chapter 8: GPS Tracking -- Appendix: LoRaWAN Channel Plans.

   Sommario/riassunto LoRa and LoRaWAN permit inexpensive, long-range connectivity for Internet of Things (IoT) devices in rural, remote and offshore industries. With LoRa wireless and LoRaWAN, you can build wide array of applications in the area of smart agriculture, smart cities, smart environment, smart healthcare, smart homes & buildings, smart industrial control, smart metering, smart supply chain & logistics, and many more. Learn the basics of LoRa wireless and LoRaWAN. Build LoRa end devices and gateways with LoRa radio transceiver modules, Arduino and Raspberry Pi. Start your journey by building a simple peer-to-peer communication channel with two LoRa end devices. Next, build a simple single channel LoRa gateway with Raspberry Pi and forward uplink data to The Things Network. Also, write simple JavaScript functions to decode payloads to extract sensor data. Then, use RESTful

API and MQTT protocol to send data to the ThingSpeak IoT platform. Finally, as a unique and useful project, build a real-time GPS tracker with The Things Network, IFTTT Maker Channel, IFTTT Webhooks, and Traccar.