physical made digital

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SkyeModule M10

SkyeModule M10

FEATURES

» UHF Band, 860-960 MHz

» 30 dBm max output power

» Broad support for EPC C1G2 tag vendors

» Compact size

» Field upgradeable firmware

» Variety of host interfaces: UART (TTL), USB, SPI & I2C

» API support in ANSI-C, .NET, ASCII, and binary

BENEFITS

» Industry-leading price performance

» Designed for tem-level inventory / asset management applications

» Simple integration for fast time-to-market

» Common software interface with other SkyeModules for maximum design flexibility

» Designed for technology investment protection

Product Overview

The SkyeModule™ M10 leads the industry in embedded UHF reader price-performance. Offering a one-of-a-kind combination of high performance, low cost, and compact footprint, the M10 delivers the following benefits:

- **Price-performance** through read performance that reaches up to 5 meters.
- **Inventory reliability** through anti-collision that allows up to 50 tags to be read in a single read operation.
- **Compact size**, with approximately 40% smaller footprint than most other 1 watt reader modules.
- **Ease of integration** by using SkyeAPI, a single library that abstracts, simplifies, and automates tag and protocol-specific functions from the host system.
- **Investment protection** through SkyeOS permitting field firmware upgradest that allow for future tag introductions and protocol enhancements.
- **Tagnostic®** support for a broad array of EPC Class 1 Gen 2 tags allowing for maximum application flexibility and optimization.
- **TagIQ™** that accounts for tag-specific characteristics so as to optimize read/write performance for individual tag types.
- **Performance optimization** achieved through power control (10 – 30 dBm), noise reduction technology, and power management.

Applications

The SkyeModule M10 has been created specifically for several applications and use cases that share common requirements for tag support, protocol and performance. The M10 is an ideal solution for:

- **Applications**
  - Inventory Management
  - Asset Tracking
  - Patron Management
  - Worker Tracking
- **Use Cases**
  - Handheld / Mobile Readers
  - Doorway Readers
  - Printers / Encoders
  - Smart-Cabinets / -Shelves

» www.skyetek.com

About SkyeTek:

SkyeTek transforms traditional RFID into a networking technology enabling goods and assets to participate in a connected world.

SkyeTek develops readers that serve as intelligent edge devices and software that binds policies to tagged items. By extending networks to the physical world, our customers increase revenue through their ability to predict demand, prevent counterfeiting, and personalize user interactions.

SkyeTek combines intelligent software with an inexpensive hardware platform to provide a modern RFID security model, distributed policy management engine, and network-ready readers. Enterprises deploy SkyeTek's solutions to deliver a seamless RFID edge network capable of centralized management and real-time response for applications in item tracking, product authentication, access control, and patron management.

For more information:

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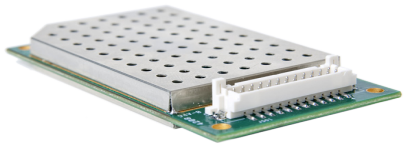

SkyeModule M10

Software

SkyeAPI C/.NET
SkyeTek Protocol v3
SkyeWare 4 Developer/Demo Enviroment

SkyeOS™ firmware with Fast Inventory anti-collision, secure key store and bootloader for field upgrades.

Tag Support

Protocol	Verified Manufacturers
EPC C1G2 / ISO18000-6C	Alien, Atmel, Avery Dennison, Hitachi, Impinj, NXP, Omron, TI, UPM Raflatac/Rafsec
Planned*:	
IPX, EM4122, EM4444	EM Microelectronics
ISO18000-6B	Fujitsu, NXP, UPM Raflatac/Rafsec

Specifications

Frequency
860-960 MHz

Physical
Length: 1.69 inches; 42.8 mm
Width: 3.01 inches; 76.5 mm
Height: 0.44 inches; 11.2 mm
Weight: 0.9 oz; 25 grams

Environment
Storage Temperature: -30°C to 85°C
Operating Temperature: -20°C to 70°C

Host Communication
UART(TTL): 9.6-115.2 Kbps
USB 2.0 Full Speed: 12 Mbps
4 programmable GPIO pins

Regulatory Support
FCC 15.247, RoHS
Planned*:
ETIS 302-208, China, Japan

Air Interface Protocols
EPC C1G2 / ISO 18000-6C: 40, 80, 160 kbps
Planned*:
ISO 18000-6B: 40 kbps
IPX EM EM4122, EM4444: 64, 256 kbps

Antenna Connection
50 Ω port with MMCX (female)
VSWR 1.5:1 or lower for best performance

Current Consumption
Idle/Sleep Mode: 462 mA
Scan Mode: 1.5 A @ 30 dBm

Supply Voltage
3.3 V, regulated 1%

Output Power
Adjustable 10-30 dBm with 0.1 dB steps
Power Accuracy: ±1 dBm

Read Performance
Read range up to 5 meters for a single tag.
Anti-collision performance up to 50 tags/second.
Performance assumes 6 dBi linearly-polarized antenna and is dependent on tag type, configuration, and other environmental conditions.

** Additional support for regulatory regions, tag protocols, and communication rates will be supported soon after initial release – please contact your sales representative for more information.*

DKM10 - SkyeModule M10 Developer Kit

The developer kit for the SkyeModule M10 includes all hardware and software components required to integrate UHF RFID technology quickly and easily into an application:

Hardware
1 M10 SkyeModule
1 Host Interface Board
1 860-960MHz External Antenna
1 6V Power Supply
1 RS-232 Cable
1 USB Cable
SkyeTek sample tag kit

Software
SkyeWare 4
SkyAPI: C/.NET
SkyeTek Protocol v3

Service
Technical Support

SkyeTek Reader Technology SkyeTek provides a variety of reader technology at both 13.56 MHz (HF) and 860 - 960 MHz (UHF). ReaderDNA, a comprehensive reference design, is available for component level integration of the technology including complete design files, BOM, and test fixture. All SkyeTek readers leverage powerful firmware that drastically reduce hardware costs and are delivered in conjunction with ReaderDNA. SkyeModules are controlled via the SkyeTek Protocol, a powerful but simple communication protocol that grants the user access to all features of an RFID transponder. Further, they have been designed with flexible and modular embedded software that allows one to select only the features desired.

RoHS compliant
Member AIM GLOBAL
Member EPCglobal