rfid as a feature

skyetek

SkyeModule Nova

BENEFITS:

» Fast integration and time-to-market

» Unparalleled investment protection

» Cost-effective and highly scalable

» Common Blade technology: common size, connection method, and software interface with the SkyeModule™ M2, M7, M9 and M10 readers for maximum design and solution flexibility

FEATURES:

» Miniscule footprint – about the size of a matchbook

» Greatest tag compatibility with Tagnostic® and TagIQ™

» Minimal power consumption and maximum read range

» Software Adjustable Host Interfaces: UART (TTL), SPI, USB, I2C

» 4 General Purpose I/O Pins

» Simple and intuitive API

Product Overview

The **SkyeModule™ Nova** marks the next generation of SkyeTek UHF reader modules. The Nova is an ultra-small, power efficient, EPC Class 1 Gen 2 reader/writer module. A cutting edge ARM Cortex microcontroller and latest UHF transceiver technology coupled with the reader's intelligent operating system make this module the most feature rich UHF reader module Manufactured in accordance with ISO 9001 and ISO 13485, quality is a top priority for all SkyeTek modules.

The SkyeModule Nova adheres to the PCI Express Mini half card form factor, a widely popular format which allows the Nova to be used quickly and easily in mobile computing applications, such as tablets and handhelds. At about the size of a matchbook, this module can also be fit into almost any new or existing OEM design. The Nova module is also well suited for battery powered and other power sensitive applications because of the low power features including software stand-by mode and deep sleep mode. In addition, the wide input voltage range and highly efficient switching power design make this module perfect for battery powered applications right off the shelf.

The Nova utilizes 2 antenna ports that can be selected via software control, making this module suited for mobile or fixed applications. It is also the first product to use SkyeTek's Adaptive Antenna Tuning, meaning the Nova can automatically detect and correct for impedance mismatches between the reader and antenna. Using this technology, the Nova will always deliver the maximum power to the antenna while reducing noise in the system.

The Nova uses the same SkyeTek Protocol as the M7, M9 and M10, so existing users can easily migrate to the next generation product without needed to rewrite communication software. SkyeTek also provides an interface board in the same form factor as the M9-MH, providing the absolute shortest path for integration into existing applications.

Features:

- 860-960MHz UHF RFID
- Reads and writes to transponders based on EPC Class 1 Gen 2
- Wide and efficient power supply with input from 2.0 – 5.5V
- 2 antenna ports with SkyeTek Adaptive Antenna Tuning
- 500mW output power, up to 10m read range
- RSSI and DRM (coming soon!)
- Sleep mode current down to 10uA
- Easy migration from M7, M9 and M10
- Supported host interfaces include USB, TTL level RS232, SPI, I2C
- Modularly certified (coming soon!)

» www.skyetek.com

SkyeModule Nova

Software and Security

Software
SkyeAPI C/.NET API
SkyeTek Protocol v3
SkyeWare 4 developer interface
Demonstration applications

SkyeOS™ Embedded
TagIQ™
Field upgradeable firmware bootloader

Tag Support

Air Interface	Manufacturer	Product Family	Tags
ISO 18000-6C	NXP	UCODE	G2XM, G2XL, G2iM, G2iL
ISO 18000-6C	Impinj	Monza	Monza3, Monza4, Monza5
ISO 18000-6C	Alien	Higgs	Higgs3, Higgs4

† Select Only

Specifications

Frequency
860-960MHz

Peripheral I/O Connection
4 programmable GPIO pins

Current Consumption
Sleep Mode: 10µA
Idle Mode: 150 mA
Scan Mode: 500 mA

Physical
Length: 30mm
Width: 25mm
Height: 5 mm

Supply Voltage
2.0-5.5V

Antenna Options
2 antenna ports, 50 Ω impedance

Host Interfaces/Data Rates
UART (TTL): 9.6-115.2 kbps
SPI: Mode 1 up to 4 Mb/s
USB: 2.0 Full Speed 12 Mb/s
I²C: 100/400 kHz

Transponder Communication Rate
ISO 18000-6C
FM0
Miller 4
Miller 8

Effective Range
Passive Tags: up to 6m
Battery Assisted Passive tags: up to 10m

Environment
Storage Temperature: -20°C to 85°C Operating Temperature: -10°C to 70°C

Air-interface Protocols
ISO 18000-6C (EPC Class 1 Gen 2)

Compliance
FCC Part 15.247[1]
FCC Part 15 Modular Approval[1]
EN 302-208[1]

[1] Planned, pending final testing

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.

About SkyeTek:

SkyeTek, Inc continually strives to enable the pervasive adoption of RFID technology. SkyeTek's Tagnostic™ RFID readers work with most industry standard tags and smart labels; their low power requirements and small form factor make them the optimal choice for embedding into new or existing products. SkyeTek's RFID reader technology is available in several formats including reader modules, finished readers and hardware reference designs. SkyeTek markets to OEM customers in targeted vertical markets with several high-volume licensing options available.

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