DNT90 APP FACTS

Like most wireless-enabled devices, wireless outdoor scoreboards and signage eliminate the need for cables to transmit data to and from the signage. However in the case of outdoor scoreboards and signage, wireless transmission eliminates the time and expense of digging trenches to install control cables, making the installation of signage and score / data transmission hassle-free.

Commercial:

Outdoor Scoreboards / Signage

The DNT90 is an ideal certified radio module for outdoor signage due its frequency hopping spread spectrum (FHSS) technology that ensures reliable data transmission even in when largest stadiums are filled with fans all using their smart phones watching every replay.

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OTHER TOP DNT90 APPLICATIONS

Monitor and control applications

Industrial automation and control applications

Applications requiring reporting of sensor data

APPLICATION OVERVIEW

Outdoor notification signs have grown into a huge advertisement medium for businesses, schools, stadiums and other industrial and commercial facilities worldwide. A major manufacturer of electronic signage display systems needed to develop a cost effective wireless based signage system and after trials of several different radio modules decided to use the DNT90 radio modules.

The key requirements of avoiding wired or cellular connections, reliable outdoor operation and ease of installation and system development were met by using a pair of DNT90 radios and using them to deliver the signage content to the outdoor signs wirelessly.

A DNT90 radio module was designed into the display circuitry located outdoors at the signage post. This radio module received content updates form the base controller containing another DNT90 radio embedded into the circuitry and connected to a controlling PC.

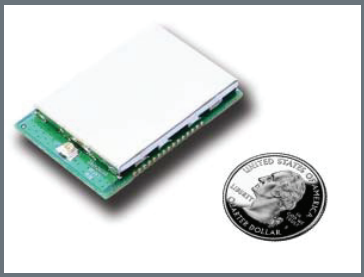
APPLICABLE PRODUCT FEATURES

Fast data transmission rate is key for outdoor signage applications

The DNT90's high power output, fast data transmission rates, a unique blend of receiver sensitivity and out-of-band interference rejection, over-the-air programming and configuration were some of the key factors in the choice of this radio module. The low cost allows systems to be economically priced.

HOW IT WORKS

Very small footprint, the DNT90 module is slightly larger than a quarter



SPECIFICATIONS

The DNT24 has the same form factor and pin out as the DNT90, and can be used for this application in the 2.4 GHz band

Radio Characteristics:	FHSS (Frequency Hopping spread Spectrum)
Frequency:	902.76 – 927.24 MHz
Transmit Power:	40 or 158 mW
RF Data Rates:	100 kb/s
Receiver Sensitivity:	-100 dBm 10-5 BER
Data Encryptions:	AES-128
Network:	Point to Point, Point to Multipoint, Peer-to-Peer and Store & Forward Repeating
Environmental:	-40 °C to + 85 °C 10 - 90% humidity, non-condensing
Power Supply:	3.3 to 5.5 VDC
Dimensions:	1.45 x 0.98 inches (36.8 x 27.9mm) for DNT90C 1.45 x 1.04 inches (36.8 x 27.9 mm) for DNT90P
Mounting Option:	Pinned and Surface Mount Versions
RF Connection:	U.FL Coaxial (Chip Antenna version available in 2H 2012)
Input / Outputs:	4 GPIO, 3 ADC and 2 DAC outputs
Interface:	UART, SPI
Certification:	FCC and Canadian IC certified

PART NUMBERS

Part Number	Description
DNT90P	DNT90 FHSS Module - Pinned Version
DNT90C	DNT90 FHSS Module - Pinned Version
DNT90DK	DNT90P FHSS Developer's Kit

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