

New Product Bulletin



SAFETRAN
systems

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Subject: A53324 Ethernet Radio

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Reliable, License-Free, Wireless Links for Ethernet connection of Data, Voice, or Video Communications

- No license required
- Data rates up to 11 Mbits/s
- Single hop ranges in excess of 20 km
- "Anypoint-to-Multipoint" network topology covers large geographic areas
- Seamless access to "hidden nodes" through multiple hops
- Configurable Quality of Service parameters for each node



The Safetran A53324 spread spectrum transceivers provide an off-the-shelf, ready-to-install solution for most wireless network applications. Spread spectrum technology allows the immediate deployment of a network without the need for a license. Additionally, the A53324 performance and capabilities provide a high degree of reliability rarely available with license -exempt equipment.

ETHERNET BRIDGING

The A53324 is configured to operate as an Ethernet bridge independent of the network layer protocol being used. Since each A53324 supports telnet and SNMP protocols, any unit can then be managed over RF, from anywhere in the network.

BUILDING OUT A NETWORK

Wireless networks based on the A53324 can be deployed one node at a time without an expensive underlying infrastructure. Each unit contains complete functionality to operate as a hub, repeater or end node. The network is configured in a free form tree topology allowing units originally deployed as end nodes to become repeaters. As more nodes are added, the network coverage is automatically extended allowing easy reach of "hidden" locations.

RELIABLE OUTDOOR LONG RANGE LINKS

The Safetran A53324 Ethernet radio was specifically designed to operate over long range distances and yet provide reliable links in the 2.4 GHz license exempt band. All the electronics are enclosed in an environmentally sealed Outdoor Units which can then be mounted in close proximity to the Antennae. For long range links, where the antennae need to be mounted on towers and rooftops, this configuration reduces costly RF cables and improves RF system performance. A standard CAT5 cable carries both Ethernet signals and DC power to the Outdoor Unit. This cable can be up to 300 ft (100m) in length.

Firm of assessed capability ISO9001

The A53324 uses direct sequence spread spectrum technology with selectable data rates on 1, 2, 5.5 or 11 Mbit/s. The VINE™ protocol (patent pending) supports setting of the data rates, transmit power, and other parameters for each individual link. In case of interference or weak signals, the unit can be switched to a lower data rate to insure an error free connection.

For ease of installation and maintenance, and to combat interference, the A53324 also includes the following features:

- Accurate measurement of Receive Signal Strength (RSSI)
- Antenna Alignment Aid output, at the Outdoor Unit, with an audio pitch proportional to the RSSI.
- Spectrum Analysis with graphical display of in-band RF energy.

The A53324 has the capability of synthesizing any frequency in the band, allowing it to dynamically adapt to the environment by shifting its operating channel to that portion of the band currently free from interference.

SPECIFICATIONS

RF

Frequency Range 2.400 - 2.4835 GHz (U.S.A.)
(Extended frequency range can be optionally supported where the regulatory environment permits)

Modulation Direct Sequence Spread Spectrum
Transmit Power 0 to 23 dBm
Transmit Bandwidth (at -20dBc) 18 MHz
Number of channels 31 (4 non-overlapping)
Data Rates 1, 2, 5.5, 11 Mbits/s
Sensitivity (1E106 BER) -90 dBm @ 1 Mbits/s
-87 dBm @ 2 Mbits/s
-85 dBm @ 5.5 Mbits/s
-82 dBm @ 11 Mbits/s

INPUT POWER

Voltage 115 or 230 VAC
Power Consumption 5 W

COMMAND / CONTROL INTERFACE

Craft Terminal Port RS232 Asynchronous (9600 bit/s)
Via Ethernet Propriety Ethernet utility (local or over the RF link)
Optional IP Access Telnet, SNMP V1 (core MIB II)

COMMUNICATIONS INTERFACE

LAN Interface 10/100 BASE-T Ethernet
Protocols supported for transport: Ethernet (protocol transparent)

MECHANICAL

Dimensions in inches (mm): 4.27W x 8.66H x 2.00D (120W x 220H x 51D)
Weight: 2.4 lbs (1.1kg)

ENVIRONMENT

Temperature: - 40° C to +65° C
Maximum humidity: 95% non condensing

CERTIFICATIONS

FCC, IC, CE Marked (Europe), SRRC (China)