Trimble 3710

PHASED ARRAY ANTENNA

The versatile Trimble Phased Array Antenna allows for a variety of applications from direction finding to interference reduction and can be used with any 2.4 Ghz band radio.

PRODUCT DESCRIPTION

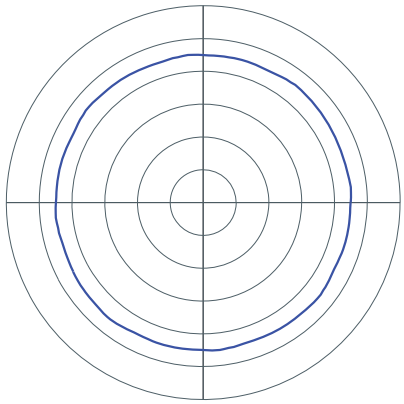
The Trimble 3740 Phased Array Antenna is a 2.4 GHz circular phased array antenna that is ideal for mobile applications. Features include:

- Connects with a wide variety of radios
- Rugged construction and only 4" tall
- Low power consumption
- Simple configuration via RS232, RS485 or high speed synchronous serial bus
- Precision control of phase and magnitude for each antenna element
- Fast recall of pre-defined patterns
- Two simultaneous signal paths: adaptive phased array and reference omnidirectional antenna
- Programmable or Automatic TX/RX control
- Embedded GPS
- Integrated Magnet Mount (optional suction cups)

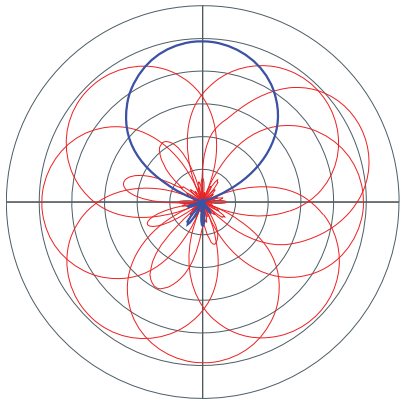
PATTERN EXAMPLES

A wide variety of patterns can be programmed into the 3740, including:

- Omnidirectional
- High Gain Directional
- Sectors
- Low Sidelobe Directional
- Figure-8 (dual beam)



Omnidirectional



Directional Patterns

Applications

- Vehicular Networks
- MANET and Mesh Networks
- Direction finding
- Interference & Jammer reduction
- Software Defined Radio
- WiFi / Zigbee / Bluetooth

TRIMBLE 3710 phased array antenna

TECHNICAL SPECIFICATIONS

Array Type
Uniform Circular Array
8 antenna elements

Frequency Range
2400 MHz to 2500 MHz

Antenna Gain
11.5 dBi maximum directional gain
5.5 dBi antenna gain for omnidirectional pattern
Steerable in azimuth

Phase Control, per element
1.0 degree resolution

Amplitude Control, per element
0.01 dB gain resolution
20 dB minimum dynamic range

Control Interface
RS232, RS485, High Speed Synchronous Serial

Receive Path Characteristics
5.5 dB electrical gain, per element
3.0 dB maximum noise figure

Transmit Path Characteristics
5 dB per element electrical gain (14 dB aggregate per array)
42 dBm 1dB compression point
35 dBm output w/ 2% EVM on 802.11g waveform
Independent Transmit gain control, 20 dB dynamic range
Automatic TX sensing, 400 nS latency
TX power sensor feedback, per element

Input VSWR at TNC Port
2.0, maximum

Pattern Memory
127 patterns can be defined, stored and recalled
Pattern definitions persist through reboots
1.2 µS pattern settling time

Polarization
Vertical

Power Consumption
9-36 VDC
13 Watts (receive)
33 Watts (TX, full power)

Overall Dimensions
12.0 inch diameter x 4.0 inch height

Connector Interfaces
TNC connectors for RF
MIL-DTL-38999 connector for power and control

Temperature Rating
-40 to +85 Celsius internal (temp sensor provided)

Specifications subject to change without notice.

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