



Trimble Phocus Array

ACCESS POINT FOR INDUSTRIAL Wi-Fi

RUGGED, RELIABLE WI-FI

For customers that want a rugged, reliable Wi-Fi network, the Phocus Array™ PK3110 is a Wi-Fi access point with a patented electronically configurable circular phased array antenna system. This antenna system allows software configurable antenna patterns to provide optimal network coverage by maximizing signal strength and reducing interference.

LOWER INSTALLATION COST

When compared with other typical access points on the market, only one Phocus Array will be needed to replace up to six typical access points – this can dramatically reduce installation costs especially in places where fiber is not yet installed. Additionally, time spent affixing external RF cables and aligning antennas can be avoided. The unit can simply be installed once and the antenna can be tuned through software by any administrator.

INCREASED RANGE, DECREASED INTERFERENCE

The Phocus Array default antenna pattern is a “super omni” pattern that provides double the range and 4x the coverage area of a typical access point. A more focused antenna beam can be configured to provide an additional 4x increase in range over the “super omni” pattern or an 8x increase over a typical access point. The focused beam also reduces interference by up to 88%. Trimble can provide customized antenna patterns specifically tailored to your site that optimize coverage on the site for maximum reliability.

PROVEN APPLICATIONS

Phocus Arrays are being used in seaport container terminals, intermodal railroad yards, auto processing facilities, strategic and tactical government security applications, and defense applications.

THE TECHNOLOGY

Based on patented Flexible Vector Modulator Technology™ (FlexVMT™), the circular 8-element Phased Array™ antenna system has a variable coverage footprint that ranges from a standard 360° “super” omnidirectional pattern to an extended long-reach focused 43° co-phase pattern, and standard 90° and 180° coverage patterns. The Phocus Array PK3110 combines signals from all eight antenna elements to form each directional or “super” omni pattern.

The directed antenna pattern avoids other radiation patterns and sources, reducing interference. With its ultra-sensitive receiver, the Phocus Array improves signal reach and quality for better throughput performance due to fewer packet retransmissions. The result is increased throughput speed for your wireless applications.

WORLD LEADER IN INDUSTRIAL TECHNOLOGY

Trimble® is the world leader in a wide range of positioning technologies including GPS laser, optical and inertial technologies with application software and information services to provide complete industrial solutions.

Key Features

- ▶ Rugged, Reliable Wi-Fi with best in class range and interference protection
- ▶ Trimble smart antennas to customize coverage footprints
- ▶ Get a GRIP on your outdoor Wi-Fi Network
 - **Geolocation***
 - **Range** – up to 8x increase in range
 - **Interference** – up to 88% less interference
 - **Privacy** – Support for WPA2 and other security protocols.
- ▶ Proven to work in harsh industrial environments

*when used with the Trimble eCone



TRIMBLE PHOCUS ARRAY ACCESS POINT

TECHNICAL SPECIFICATIONS

Reach Improvement

- Default "super-omni" pattern doubles reach of typical AP - 4x the coverage area
- Focused beam provides up to four times the reach over the "Super-Omni" and 8x the reach of a typical AP
- Bi-directional link reliability dramatically improves with a focused beam for receiver antenna gain
- Interference Improvement - Focused beam reduces interference by up to 88%

Privacy/Security

- Focused beam keeps signal away from threats and permits "Good Neighbor" behavior
- WEP, WPA, WPA2
- Firewall (IP)
- 16 VLANs
- Multiple SSIDs

Modes Supported

- AP bridged mode

Management & Software Interface

- Remote firmware upgrades. Secure browser connection for configuration and monitoring; SNMP (Ethernet MIB-2)
- Admin device identification: model number, serial number, unique naming

RADIO AND ANTENNA SPECIFICATIONS

Antenna Type (s)

- Eight (8) element uniform circular phased array
- Each with an associated FlexVMT T/R module

Coverage Area Available

- Standard 360° horizontal by 35° vertical, focused to 43° Horizontal

Possible Programmable Patterns

- Omn-directional or sector, 16 high-gain presets, and custom available

Dynamic Pattern Reconfiguration

- <100 μSecs

Frequency Bandwidth

- 2.401 GHz—2.484 GHz supporting IEEE 802.11 b/g

Data Rates—802.11 b and g*

- 1, 2, 5.5, 6*, 9*, 11, 12*, 18*, 24*, 36*, 48*, 54* Mb/sec

Antenna Gain

- 15 dBi maximum (43° HPBW azimuth)

EIRP - Effective Isotropic Radiated Power

- 42 dBm, meets FCC requirements (500 Milli-Watts conducted power)

Multipath reception

- Multiphase power envelope via 8 element Uniform Circular Array

HARDWARE

Physical and Electrical

Dimensions9.5" width x 9.5" depth x 11" height (.24m x .24m x .28m)

Weight 9.0 lbs (4.1 Kgs)

Connections 10/100 Ethernet via industrial RJ-45 connector
Serial console RS/232 UART IP67 circular connector

Electrical Interface Ethernet 10/100 with PoE

Ruggedized PackageOptimal for outdoor and mobile vehicle applications

Input Power Power over Ethernet (POE), 23 watts maximum at 48VDC

Power Consumption9.0 -12.1 Watts average, 23 Watts peak

Operating Temperature-40° Celsius (-40° F) to +85° Celsius (185° F)

CERTIFICATIONS

Radio / Environmental FCC - Part 15, IC

WARRANTY

One year limited warranty

Annual Product Support Agreement Available (APSA)

- Provides extended services and extensive customer support

Specifications subject to change without notice.

WORLDWIDE

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