

StarEast for Mesh and Radio Networking Product Brief



SE-BB



SE-CB



SE-MP

Product Overview

StarEast is a stackable system with three kinds of modified PCI Mezzanine Cards. One is a baseboard, and the other two are adapter daughter cards to provide miniPCI and CardBus interfaces.

The baseboard is based on an Intel® IXP425 network processor. It provides two fast Ethernet ports, one UART, and two mirror PMC PCI interfaces to connect the two daughter cards for miniPCI, CardBus or other customizing functions. To support large applications, the baseboard includes 133MHz, 256Mbytes of on-board SDRAM, and 32Mbytes of on-board Intel StrataFlash® memory.

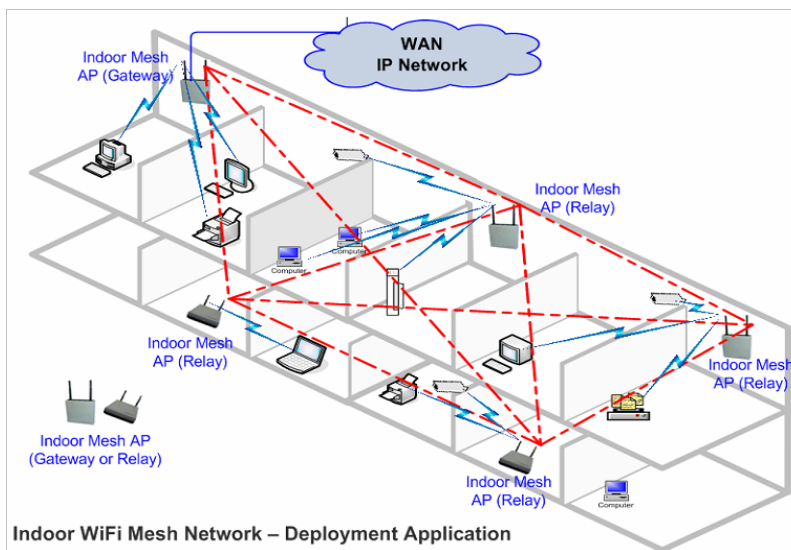
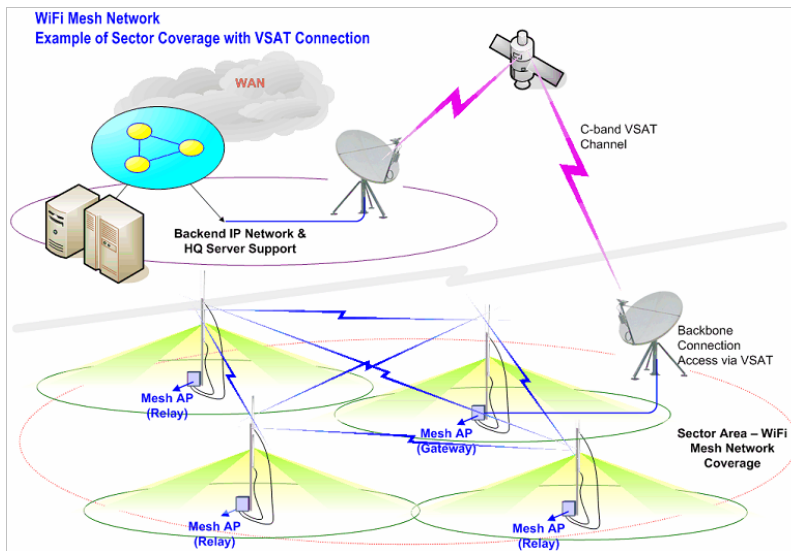
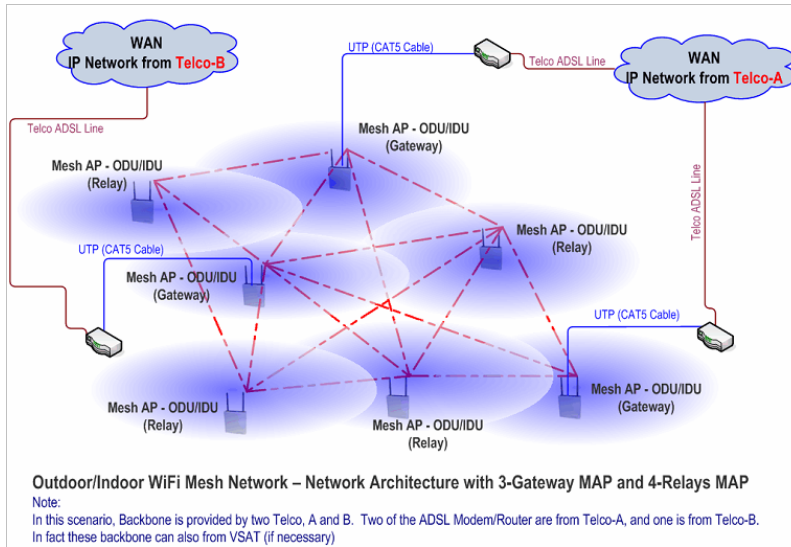
With two PMC2miniPCI daughter cards, StarEast supports four wireless Type IIIA miniPCI cards. To facilitate the development, debug, and troubleshooting of application software, StarEast is compatible with Intel® IXP400 software.

In addition, StarEast provides a software development tool chain based on open source Linux. Drivers for some commercial and internal wireless miniPCI cards are also provided. The platform has been tested and validated using Dorado™ Network Solutions.

Applications

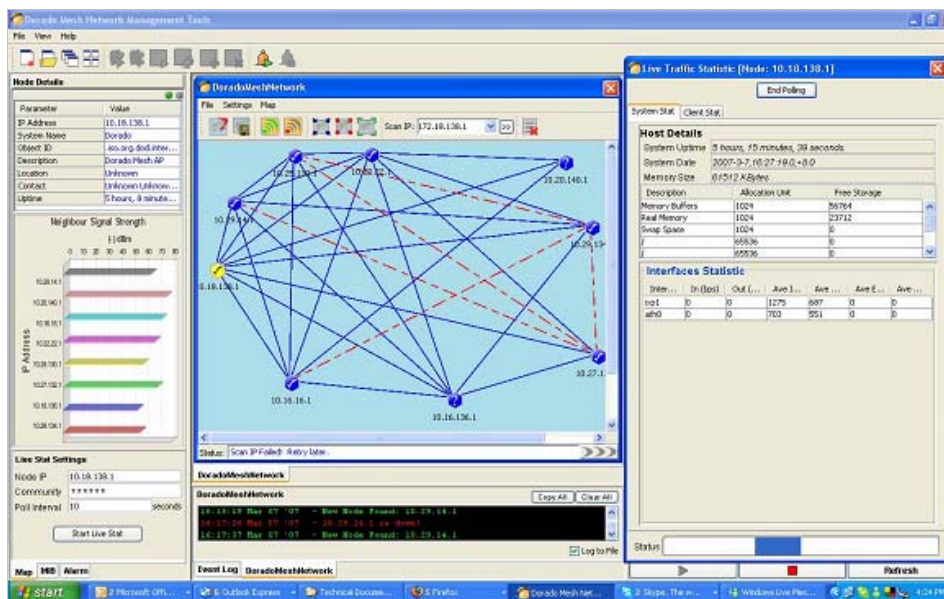
1. Radio Networking Research. Equipped with Intel Wireless PRO/2200 miniPCI card, StarEast enables the hot research on radio networks. The research focuses on improving the performance, ease of use and security of wireless networks. It explores the wireless RF characteristics to formalize self-managing, adaptive wireless network
2. General research platform. Open source Linux and adequate adapter daughter cards let you use the cheap commercial peripheral miniPCI/CardBus/PCI cards to do research
3. General industry, telecom controller. StarEast is a compact, standard size system with low power and large memory size, and can be directly integrated into a user system as a control unit

Deployment Chart

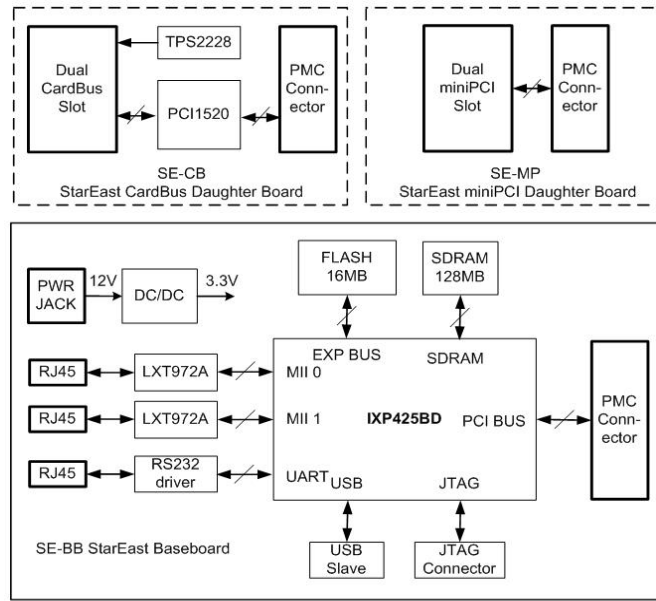


Dorado™ Networking Management Suite

- Dorado™ built-in with standard and enhanced security features for which protecting the backhaul mesh connection as well as the Client end-user access
- Privacy & Security is established via the different combination of the following features provide: 64/128 Bit WEP encryption; AES and IEEE802.1x; Both WEP and AES and WPA1/2; Firewall (User configuration); VPN (All VPN protocol pass thought, such as PPTP, L2TP & X.509); HTTP Login; HTTPS Login with SSL encryption; Authentication via RADIUS server; Zero Configuration for Clients Interface, with Proxy bypass, including DNS feed through
- Backhaul link via IEEE802.11g or .11a provides 54Mbps routing for mesh MAP-to-MAP connection and 10/100 BaseT WAN connection
- Client-end connection via IEEE802.11b/g offers either 54Mbps or 11Mbps connectivity (depending on Client-end devices) for wireless LAN access
- Fundamental data-rate access is given in the following scenario depending on link quality and RF signal coverage, IEEE802.11b (2.4~2.4835GHz), IEEE802.11g (2.4~2.4835GHz), IEEE802.11a (5.1~5.8GHz)
- Mesh AP equips with 2x10/100Mbps RJ-45 Auto-negotiation network interface for WAN/LAN (or other options) and/or Local Server connection, and also provides network extension via UTP Cable (when necessary)
- POE (IEEE802.3af) via WAN Port or Alternative DC Power Supply via Adaptor
- The following are the Services that provided within the Dorado™ MAP Solution: Static IP address, DHCP Server/Client; PPPoE client with PAP, CHAP; PPTP Client; Firewall; NAT; VLAN (Depending on Customer Specification); IPv6 Ready; 200KB Internal Web Space (Optional) at each Mesh AP



Block Diagram



StarEast Block Diagram

Hardware Specification

Processor	IXP425@533MHz Network Processor
Architecture	Stackable PCI architecture
Ethernet Port	Two 10/100 base Ethernet
Memory	256Mbytes SDRAM and 32Mbytes Flash
Slots and Interfaces	Up to four Type III MiniPCI slots and two Cardbus slots RS-232 interface and USB 1.1 (device only)
Other Features	Physical and electrical compatibility with PMC standard (IEEE1386/.1) 12V DC input and on-board DC-DC provides 3.3V@10A Red boot and open source Linux Driver for Prism* II wireless card and Intel® Pro/Wireless 2200
Dimension	SE_BB 153mm(L)x83mm(W)x23mm(H) SE_MP 149mm(L)x74mm(W)x19mm(H) SE_CB 150mm(L)x74mm(W)x24mm(H)