Resumo de ZigBee Wireless Sensor and Control Network

The First Practical Guide to Advanced Wireless Development with ZigBee Technologies Supported by more than a hundred companies, the new ZigBee standard enables powerful new wireless applications for safety, security, and control, ranging from smart energy to home automation and medical care to advanced remote control.

ZigBee Wireless Sensor and Control Network brings together all the knowledge professionals need to start building effective ZigBee solutions. The only simple, concise guide to ZigBee architecture, concepts, networking, and applications, this book thoroughly explains the entire ZigBee protocol stack and covers issues ranging from routing to security.

It also presents detailed, practical coverage of ZigBee features for home automation, smart energy networking, and consumer electronics. Topics include Fundamental wireless concepts: OSI Model, error detection, the ISM Band, modulation, WLAN, FHSS, DSSS, Wireless MANs, Bluetooth, and more ZigBee essentials: applications, characteristics, device types, topologies, protocol architecture, and expanded ZigBee PRO features Physical layer: includes frequency bands, data rate, channels, data/management services, transmitter power, and receiver sensitivity MAC layer: data/management services, MAC layer information base, access methods, and frames Network layer: data entities, NIB, device configuration, starting network, addressing, discovery, channel scanning, and more Application support sublayer and application layer: includes profiles, cluster format, attributes, device discovery, and binding ZigBee network security: includes encryption, trust center, security modes, and security management primitives Address assignment and routing techniques Alternative technologies: 6lowpan, WirelessHART, and Z-wave

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