


## Data sheet

### BAT54-F X2 FCC - BAT54-F X2 FCC

Industrial Ethernet:Industrial Wireless LAN:Chassis:BAT-F:BAT54-F X2 FCC

<b>Name</b>	BAT54-F X2 FCC
	
<b>Delivery informations</b>	
<b>Document created at</b>	05-08-2010
<b>Availability</b>	available
<b>Product description</b>	
<b>Description</b>	Dualband Ruggedized Industrial Wireless LAN Access Point/Client with two independent radio modules with IEEE 802.11a/b/g/h/i for installation in hazardous environment, with FCC-approval for USA and Canada.
<b>Port type and quantity</b>	2 x WLAN interfaces, up to 8 SSIDs per WLAN interface, one LAN port 10/100BASE-TX, autosensing, Power over Ethernet according to IEEE 802.3af
<b>Type</b>	BAT54-F X2 FCC
<b>Order No.</b>	943 959-002
<b>Radio technology</b>	
<b>Antenna connector</b>	4 x N-type jack antenna connectors
<b>Range</b>	Up to 20 km with external antenna (depending on type of antenna, frequency range and data rate)
<b>Transmission rate</b>	54 Mbps according to IEEE 802.11g (fallback to 48, 36, 24, 18, 12, 9, 6 Mbps, Automatic Rate Selection), compatible to IEEE 802.11b (11, 5.5, 2, 1 Mbps, Automatic Rate Selection), 802.11 b/g compatibility mode or pure g or pure b selectable. 54 Mbps according to IEEE 802.11a/h (fallback to 48, 36, 24, 18, 12, 9, 6 Mbps, Automatic Rate Selection), Super A/G with Turbo Mode (108 MBps), Bursting, Compression, fully compliant to ETSI requirements with TPC and DFS
<b>Encryption</b>	IEEE 802.11i / WPA2 with passphrase or 802.1x and hardware-accelerated AES, user authentication by 802.1x /EAP or LEPS, IEEE 802.1x Supplicant in Client Mode, WPA/TKIP, WEP, access-control lists, WLAN port and protocol filter, RADIUS client and server, Built-in Firewall with QoS, port filter, protocol filter, IDS and DoS protection, PMK-Caching and Preauthentication for fast roaming with IEEE 802.1x
<b>Operating system</b>	LAN interface usable for simultaneous DSL-over-LAN, IP-Router, NAT/Reverse NAT (IP-Masquerading) DHCP-Server, DHCP-Client, DHCP-Relay-Server, DNS-Server, PPPoE-Client (incl.Multi-PPPoE), PPTP-Client und -Server, NetBIOSProxy,DynDNS-Client, NTP, Port-Mapping, Policy-based Routing on basis of Routing-Tags, Tagging according to firewall rules, dynamic routing RIPv2, VRRP, Rapid Spanning Tree Protocol (IEEE 802.1w), ARP, Proxy ARP, BOOTP, DHCP, DNS, HTTP, HTTPS, IP, ICMP, NTP/SNTP, NetBIOS, PPPoE (Server), RADIUS, RIP-1, RIP-2, RTP, SIP, SNMP, TCP, TFTP, UDP, VRRP, VLAN with up to 4094 VLAN IDs for WLAN connections, 32 usable simultaneously, dynamic VLAN-Tags for 802.1x-Clients, Integrated RADIUS server with IEEE 802.1x/EAP authentication
<b>Frequency band</b>	2 x independent radio modules, each 2.4 GHz and 5 GHz: 2400-2483,5 MHz (ISM) and 5170-5810 MHz
<b>Modulation</b>	22M0F7D(DSSS/OFDM) @ 2,4 GHz 20M0G7D (OFDM) @ 5 GHz
<b>Receiver sensitivity</b>	2.4 GHz 802.11b: -87 dBm @ 11 Mbit/s, -94 dBm @ 1 Mbit/s; 2.4 GHz 802.11g: -87 dBm @ 6 Mbit/s, -70 dBm @ 54 Mbit/s; 5 GHz 802.11a/h: -87 dBm @ 6 Mbit/s, -67 dBm @ 54 Mbit/s
<b>Radio topology</b>	WLAN Access Point, Bridge, Router, Point-to-Point, Client, Client-Bridge Mode, fixed mesh with RSTP
<b>Roaming</b>	Seamless handover between radio cells, IAPP support, IEEE 802.11d support, Background scanning for rogue AP detection and fast roaming, Support of IEEE 802.11e (WME), preauthentication and PMK caching with IEEE 802.1x
<b>Radio Power</b>	2.4 GHz 802.11b: +19dBm @1 and 2 Mbps, +19dBm @ 5.5 and 11 Mbps, 2,4 GHz 802.11g: +19 dBm @ 6 Mbps, +14 dBm @ 54 Mbps, 5 GHz 802.11a/h: +18 dBm @ 6 Mbps, +12 dBm @ 54 Mbps with TPC and DFS, Power Reduction in 1dB steps down to 0.5 dBm minimum
<b>Power requirements</b>	
<b>Operating voltage</b>	2 x DC 24 V; 1 x Power-over-Ethernet according to IEEE802.3af; all power supplies redundant to each other
<b>Current consumption at 24 V DC</b>	417 mA
<b>Current consumption</b>	DC 24 V: 417 mA; PoE (DC 48 V): 167 mA
<b>Service</b>	
<b>Diagnostics</b>	Extensive LOG and TRACE options, PING and TRACEROUTE for checking connections, LANmonitor status display, internal logging buffer for SYSLOG and firewall events, monitor mode for Ethernet ports, WLANmonitor for WLAN network overview and Rogue AP detection
<b>Management</b>	SNMP management via SNMP V2, private MIB exportable by WEBconfig, MIB II Remote configuration with Telnet/SSL, SSH, browser (HTTP/HTTPS), TFTP or SNMP, firmware upload via HTTP/HTTPS or TFTP Support of up to 4094 VLAN IDs for WLAN connections, 256 simultaneously usable VLAN tags for 802.11 clients
<b>Other services</b>	Warning via e-mail, SNMP-Traps and SYSLOG; Remote management and configuration by modem support via LAN (DSL) or serial port

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<b>Ambient conditions</b>	
Operation temperature	-20 °C up to +55 °C
Storage/transport temperature	-40 °C up to +70 °C
Relative humidity (non-condensing)	max. 95%
MTBF	43.3 years
<b>Mechanical construction</b>	
Dimensions (W x H x D)	307 mm x 270 mm x 60 mm
Mounting	for wall and mast mounting
Protection class	IP 65, IP 67
<b>Approvals</b>	
Safety of information technology equipment	EN 60950
Radio	EN 300328, EN 301893, Certifications for FCC and Singapore
Environmental	IEC-60079 ZONE 2, GAS GROUP IIC, TEMPERATURE CLASS T4 for hazardous environment
<b>Scope of delivery and accessories</b>	
Scope of delivery	Device, CD, M12 connector, 2 x 50 Ohm terminators, mounting material
Accessories to order separately	External antennas for 802.11b/g and 802.11a/h operation adapter cable and surge arrester, mast mount material