# imall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



# Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832 Email & Skype: info@chipsmall.com Web: www.chipsmall.com Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# frontline BPA low energy

#### BLUETOOTH<sup>®</sup> PROTOCOL ANALYZER

Bluetooth low energy wireless technology is rapidly changing how the wireless world connects. Consuming only a fraction of the power of Basic Rate/Enhanced Data Rate (BR/EDR) Bluetooth wireless technology, Bluetooth low energy (Bluetooth Smart technology) will allow hundreds of millions of new wireless devices to interoperate within the Bluetooth ecosystem. From watches, sports and fitness devices, to wellness, healthcare and more, Bluetooth Smart technology is expected to greatly accelerate the wireless evolution.

#### Tiny Footprint, Huge Tracks

In an increasingly mobile world, it's more important than ever that developers' tools are just as mobile as the devices and technologies they're creating. Frontline puts problem-solving literally in the palm of your hand with the Frontline BPA low energy Bluetooth Protocol Analyzer. Smaller than a deck of cards and running on USB power, the Frontline BPA low energy packs a serious punch, decoding all traffic including advertising packets, data packets and LL control packets, and providing visibility into all three advertising channels concurrently, even before the connection is established. A single BPA low energy follows multiple connection requests from the same master to capture the resulting connections. Supports low energy features through Bluetooth 4.2 except optional extended packet length.

But powerful tools don't have to be hard to use. With the Frontline BPA low energy, setup is easy and requires no synchronization to devices - just start capturing. Working with custom protocols? No problem. The BPA low energy includes DecoderScript, which allows specifying decodes for custom protocols.

The Frontline BPA low energy Bluetooth Protocol Analyzer is the first name in portable, USBpowered, and affordable Bluetooth low energy analysis, and features the rich decoding toolset represented by the powerful software at the core of our Frontline family of developer-class protocol analysis products.

Filter Tabs isolate frames by profile or protocol for quick and convenient viewing of specific kinds of data.

Baseband   LE BB   LE PK		nergy devi		Data				
Bookmark	Frame#	Role	Opcode	Handle	UUID	Database	Error code	Fram
	321	Master	Read Request	6	Characteristic	d386ffbb(S)		22
	324	Slave		7	Peripheral Preferred Connection Pa	d386ffbb(S)		25
	325	Master	Read Request	7	Peripheral Preferred Connection Pa	d386ffbb(S)		22
	328	Slave	Read Response	7	Peripheral Preferred Connection Pa	d386(fbb(S)		28
	331	Master	Read Request	8	Primary Service	d386(lbb(S)		22
	334	Slave	Read Response	8	Generic Attribute Profile	d386ffbb(S)		22
	337	Master		9	Primary Service			22
	340	Slave		9	Glucose			22
	343	Master		10	Characteristic			22
	346	Slave		11	Glucose Measurement			25
	347			11	Glucose Measurement			22
	350			11	Slucose Measurement			22
								22
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								21
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								25
								22
								23
	6.607	Master	Bead Bequest	14				22
	6.610	Slave	Bead Besponse	14				21
								23
								22
								21
	22,735	Master		14				22
4			19.000331535325355				-	
	Bootmark	Bookmark Frame 221 224 225 238 331 343 343 343 343 343 343 345 347 355 367 369 367 369 367 369 369 369 369 369 369 369 369	Bootmark         Fremett         Roke           221         Matter         324           224         Matter         325           225         Matter         328           233         Matter         334           244         Store         337           247         Matter         348           343         Matter         349           346         Store         355           356         Store         358           357         Matter         358           358         Store         357           358         Matter         358           359         Matter         359           360         Matter         359           370         Store         359           350         Matter         350           361         Matter         359           370         Store         507           388         Matter         519           398         Matter         519           398         Matter         510           398         Matter         510           398         Matter         510	Bosknak         Franzi         Role         Opcode           221         Matter         Read Reporter         Read Reporter           232         State         Read Reporter         Read Reporter           233         Matter         Read Reporter         Read Reporter           233         Matter         Read Reporter         Read Reporter           234         State         Read Reporter         Read Reporter           233         Matter         Read Reporter         Read Reporter           234         Matter         Read Reporter         Read Reporter           236         Matter         Read Reporter         Read Reporter           237         Matter         Read Reporter         Read Reporter           238         Steve         Read Reporter         Read Reporter           239         Matter         Read Reporter         Read Reporter           230         Matter         Read Reporter         Read Reporter           230         M	Boskmark         Funest         Role         Opcode         Hande           221         Matter         Read Request         6           224         Silver         Read Request         7           225         Matter         Read Request         7           233         Silver         Read Request         7           234         Silver         Read Request         8           237         Silver         Read Request         9           238         Silver         Read Request         9           244         Silver         Read Request         10           345         Silver         Read Request         11           350         Silver         Read Request         11           355         Matter         Read Request         12           358         Silver         Read Request         12           359         Silver         Read Request         12           369         Matter         Read Request         13           369         Matter         Read Request         14           377         Silver         Read Request         14           378         Silver         Read Request	Boshnak         Funett         Rode         Opcode         Hande         UUID           321         Matter         Redd Request         6         Characteristic           324         Stave         Redd Request         6         Characteristic           324         Stave         Redd Request         7         Perphonal Petered Correction Pa           325         Matter         Redd Request         7         Perphonal Petered Correction Pa           323         Stave         Read Request         7         Perphonal Petered Correction Pa           326         Stave         Read Request         8         General Albade Puterel           327         Stave         Read Request         8         General Albade Puterel           327         Stave         Read Request         9         Disoce           328         Stave         Read Request         10         Disoce           329         Stave         Read Request         11         Glucose Measurement           343         Matter         Redd Request         12         Disoce         Blactorise           347         Matter         Redd Request         13         Chacteristic Reverstave         Blactorise         Blactorise         <	Boshnak         Funnst         Red         Opcode         Hande         UUID         Database           321         Mater         Red Repart         6         Cheadeninic         G3801bb15           324         Silver         Red Repart         7         Perjohand Perlemd Convector Pa.         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**Decode Pane** shows comprehensive layered decoders of each frame/message with clear, concise descriptions.

**Summary Pane** displays a one line overview of each data frame/message. Click on any line to reveal detail in mutiple panes below.

The Frontline BPA low energy Protocol Analyzer includes powerful Frontline software and the BPA low energy hardware interface.

#### **Key Benefits**

- Analyze NOW see events as they occur through live decoding and decryption of encrypted data
- Extraordinarily portable size and USB-powered make this the perfect tool for bench or field
- No Hassles Decoding features simple device setup for developers of Bluetooth Smart and Smart Ready technologies just plug into the USB port and go!
- Excellent Value
   Tailored specifically to low energy analysis, the Frontline BPA low energy features maximum value for the money
- Industry-best Decodes
   Bluetooth decodes that make
   for reliable development and
   problem-solving
- Maximum Flexibility DecoderScript lets you specify decodes for custom protocols
- Faster to Market
   Reduces debug time with
   simultaneous live capture, display,
   decode, filtering and detection of
   protocol errors
- Support for CSRMesh and Bluetooth mesh technology



#### Hardware Specifications

- Bus Type: USB 2.0 Mini-B
- Power: USB Powered (USB 2.0)
- Effective Receiver Sensitivity: -90.0 dBm for GFSK
- Dimensions:
   3.5" X 1.75" X .71"
   89mm X 44.5mm X 18mm
- Temperature: Storage Temperature: 0° to 65° Celsius
   32° to 149° Fahrenheit

Operating Temperature: 5° to 55° Celsius 41° to 131° Fahrenheit

 Humidity:
 Operating: 10% to 90% RH (noncondensing)

# The Frontline BPA<sup>®</sup> low energy Hardware

#### Interface

The Frontline BPA low energy Protocol Analyzer includes the portable BPA low energy hardware interface, which supports the wireless capture of Bluetooth low energy communications.

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The BPA low energy hardware interface is one member of an extensive arsenal of technology-specific hardware interfaces, all

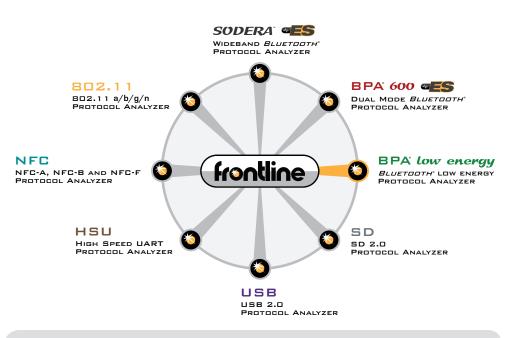
functioning with the powerful Frontline software. This modular approach allows greater flexibility in protocol analysis and debugging, and provides comprehensive coexistence views over virtually any combination of protocols.

## **Supported Configurations**

- OS Supported: Win 7 and Win 8
- USB Port: USB 2.0 or USB 3.0 High-Speed

### **Minimum System Requirements**

- Processor: Core i5 processor at 2.7 GHz
- RAM: 4 GB
- Free Hard Disk Space: 20 GB



### **The Frontline Modular Approach**

Frontline software is at the core of Frontline protocol analysis, allowing technologyspecific hardware interfaces to work individually or in combination with other hardware interfaces. This modular approach gives the developer or analyst the widest possible range of scenarios for debugging complex communications.

#### To order or for more information:

www.fte.com frontline\_onlinesales@teledyne.com 1.800.359.8570 US & Canada +1.434.984.4500 Fax: 434.984.4505



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