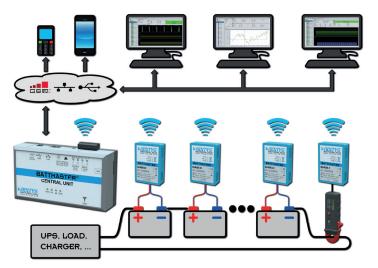


# **BATTMASTER®**



## Wireless Battery Monitoring System



www.nextys.com

BATTMAGTER<sup>®</sup> is the first *wireless (license free)* battery monitoring system.

It can be used in various fields such as:

- •UPS
- •TELECOM
- •ELEVATORS

#### •CRITICAL BATTERY POWERED SYSTEMS

Application examples:

-protecting mission critical systems

-evaluating battery compliance with the system

- -evaluating battery performance
- -dimensioning new battery based systems

-supporting claims related to system behavior

Major benefits:

- -installation, maintenance and operating costs decrease
- -control over the **battery operating conditions**
- -battery failure prediction
- -system reliability

-allows easy battery system's expansion

**BATTMASTER®** measures and stores **battery voltage**, **temperature**, **current** and **internal resistance** data for up to 1024 batteries/system. **User settable alarms** related to these parameters can be generated through E-Mail, LAN, SMS or dry contacts.

The **built-in clock** helps you to keep a precise history of the monitored parameters.

**BATTMASTER®** has a **good measurement precision** and **a complete**, **user-friendly database**. The recorded data (either on PC or on SD cards) can be easily transferred and processed as **spreadsheets or graphs**.

BATTMASTER<sup>®</sup> powerful application software (operating under **MS Windows**<sup>®</sup>) allows a precise analysis of the logged data and eases your decision making process.

## **BATTMASTER®**

YOUR LOYAL PARTNER!



**Central Unit (CU)** 



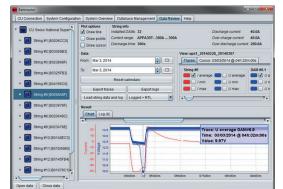
## Data Acquisition Module (DAM)



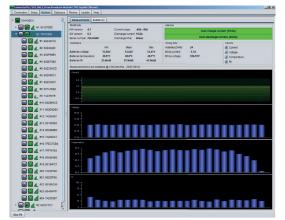
## Alarm History Screen

nected to /192.168.1.19 on Broadcorn nection Setup System Databa		Update Help			
COALGEDD		rements Events	(42)		
🖾 🚾 🔬 #1: 001270:02	Filter				Clea
A #1.80247083	Device	Serial number	Event	Value	Time
	DAM	801C7A83	ALARM_OVER_VOLTAGE_START	15.00/	13h:27m:14s - 26/07/2012
🕍 🚺 📶 #2. 80288D60	DAM	801F677F	ALARM_OVER_VOLTAGE_START	15.00V	13h:27m:14s - 26/07/2012
🔛 🛐 🚮 #3: 001F677F	DAM	80428FBF	ALARM_OVER_VOLTAGE_START	15.00/	13h;27m;14s - 26/07/2012
A 44, 8030078F	D-M	801D4EC0	ALARM_OVER_VOLTAGE_START	15.00/	13h:27m:14s - 26/07/2012
	DAM	8030978F	ALARM_OVER_VOLTAGE_START	15.00V	13n:27m 14s - 26/07/2012
🔛 🚺 🛃 #5: 80286F82	DAM	6030978F	ALARM_OVER_VOLTAGE_END	15.40/	13h:27m:16s - 26/07/2012
A #5: 80208481	DAM	7A219790	ALARM_OVER_VOLTAGE_START	15.00/	13h:27m 14s - 26/07/2012
	DAM	7A21979D	ALARM_OVER_VOLTAGE_END	15.38/	13h:27m:16s - 25/07/2012
🔛 🚺 📶 #7: 80447683	DAM	80618684	ALARM_OVER_VOLTAGE_START	15.00V	13h:27m.14s - 25/07/2012
🔛 🚺 🚮 #8:801C7AB3	044	80618684	ALARM. OVER. VOLTAGE, END	15.34/	13h/27m.16e - 25/07/2012
A #2.80104EC0	DAM	801F877F	ALARM_OVER_VOLTAGE_END	15.3W	13h:27m:16s - 26/07/2012
	DAM	8024557F	ALARM OVER VOLTAGE START	15.00/	13h/27m 14s - 26/07/2012
🕍 🚺 🚮 #10: 802C6C83	DAM	8024667F	ALARM OVER VOLTAGE END	15.40	13h:27m:16s - 26/07/2012
A #11.00308FC1	D-M	80288080	ALARM OVER VOLTAGE START	15.00	13h/27m:14s - 26/07/2012
	DAM	80288080	ALARM OVER VOLTAGE END	15.39	13h:27m:16s - 26/07/2012
🔛 🚺 🛃 #12.80154FC0	DAM	80234F9F	ALARM OVER VOLTAGE START	15.00	13h:27m:14s - 26/07/2012
🔛 🚺 🚮 #13: 85428F8F	DAM	80234F9F	ALARM OVER VOLTAGE END	15.34/	13h;27m:16s - 25/07/2012
A #14: 7421979D	DAM	80447883	ALARM_OVER_VOLTAGE_START	15.00V	138/27m 146 - 26/07/2012
	DAM	80447883	ALARM_OVER_VOLTAGE_END	15.30/	13h;27m;16s - 26/07/2012
🔛 🚺 📶 #15: 80618684	DW	80107483	ALARM_OVER_VOLTAGE_END	15.38/	130-27m 164 - 26/07/2012
🔛 🚺 🔏 #16: 802E7684	DAM	ROAR7FR3	ALARM_OVER_VOLTAGE_START	15.00/	13h/27m.14s - 2507/2012
#17: 00417982	DAM	80487583	ALARM_OVER_VOLTAGE_END	15.36	13h;27m;166 - 26/07/2012
	D4M	80284FB2	ALARM_OVER_VOLTAGE_START	15.00	13h/27m/14s - 28/07/2012
🔛 🚺 📶 #10:7A295E8E	DAM	80286582	ALARM_OVER_VOLTAGE_END	15.34	13h/27m/16s - 26/07/2012
F19, 8024667F	D-4M	801D4E00	ALARM_OVER_VOLTAGE_END	15.39	13h/27m 16s - 26/07/2012
	DAM	80257684	ALARM_OVER_VOLTAGE_START	15.00	13h/27m 14s - 25/07/2012
🔛 🚺 📶 #20: 80269680	DAM	802E7684	ALARM_OVER_VOLTAGE_END	15.34	13b.27m.16s - 26/07/2012
🔛 🛐 🔏 #21: 80379684	DAM	80154FC0	ALARM_OVER_VOLTAGE_START	15.00	13h:27m 14s - 26/07/2012
A #22.00407/80	DAM	80154FC0	ALARM_OVER_VOLTAGE_END	15.37	13h;27m 16s - 26/07/2012
	DAM	00205083	ALARM_OVER_VOLTAGE_START	15.00r	13h:27m:14s - 26/07/2012
📷 🚺 📶 #23: 80234F9F	DAM	80206083	ALARM_OVER_VOLTAGE_END	15.33/	13h/27m/16a - 26/07/2012
A #24: 00267082	DAM	00417902	ALARM_OVER_VOLTAGE_START	15.00	13h/27m/14s - 25/07/2012
	DAM	80417982	ALARM_OVER_VOLTAGE_END	15.34	13h27m16a - 2607/2012
-2 ///A3000	DAM	80379584	ALARM_OVER_VOLTAGE_START	15.00	13h.27m 14a - 2507/2012
🕋 🚰 🚮 #3:862377C1	DAM	80279584	ALARM OVER VOLTAGE END	15.397	13h-27m-16a - 26/07/2012

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## System Status Screen



## **Technical Specifications**

#### System Components

#### Central Unit (CU) - 1 per system

- Wireless data collector unit
- 100-240V power supply, backup batteries (~1.5h)
- Supports up to 1024 DAMs and 64 IDAMs
- Provided with 4GB SD card (about 5 years of logging)
- 100BASE-TX Ethernet, full speed USB 2.0, Modbus/TCP
- Embedded webserver for remote monitoring
- Manages e-mail and SMS notifications
- Stores user settable alarm thresholds
- Data Acquisition Module (DAM) 1 per battery
   Wireless voltage, temperature and internal resistance logger
- Current Acquisition Module (IDAM) 1 per string of batteries
  - Wireless current and environmental temperature logger
  - Powered by battery or external power supply

#### •BATTMASTER® software

- System configuration and monitoring
- Database of events and measurements, data review
- Real time system monitoring
- Data export to .CSV or .PNG formats

#### Communication

- Wireless (license free frequency, proprietary network protocol) between (I)DAMs and CU, range 100m (open air)
- •USB, LAN between CU and PC
- ·GSM (Quad Band) for SMS notifications
- Dry contacts for monitoring system alarms
- Isolated Digital Inputs for external custom control

#### Monitored Battery Types

2...12V lead acid batteries (other chemistries on request)

#### Monitored Battery Parameters

- Voltage (measurement accuracy: ±1.5%)
- Temperature (-20...80°C, ±2°C)
- Internal resistance  $(1...300m\Omega, \pm 10\% \text{ or } \pm 1m\Omega)$
- Discharging cycles
- Current: 300A range ±(2.4% +3A) / 600A range ±(4% +4A)
- Battery operating time

#### Redundancy

- •2 x NiMH rechargeable batteries for CU backup (~1.5h)
- (I)DAMs store measures and events in case of temporary communication failure

#### Mechanical

- •CU: size 82x150x46mm, weight 250g, ABS enclosure
- (I)DAM: size 81x56x21mm, weight 40g, ABS enclosure, with VELCRO tape for fixing
- Current Clamp: size 185x55x40mm, weight 180g (300A) size 203x70x37mm, weight 230g (600A)





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#### Distributor