



# Touchstone® Li-ion Battery Packs



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  - Model BPB022S  
ARRIS Part # 718003
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  - Model BPB024S  
ARRIS Part # 721944
- 
  - Model BPB044S  
ARRIS Part # 718005
- 
  - Model BPB044H  
ARRIS Part # 722841
- 
  - Model BPD066H  
ARRIS Part # 785170
- 
  - Model BPB088S  
ARRIS Part # 721192
- 
  - Model BPC088S  
ARRIS Part # 722842
- 
  - Model BPD088H  
ARRIS Part # 785171

## Setting the Standard for Battery Backup Solutions

ARRIS launched the new Lithium-Ion (Li-Ion) battery technology into DOCSIS® compliant Touchstone® Embedded Multimedia Terminal Adapters (E-MTAs) in 2003. ARRIS battery back-up solutions optimize E-MTA performance for lifeline telephony, reduce risk through multiple protection mechanisms, and maximize battery life with proprietary low power designs. ARRIS superior battery technology ensures that all Touchstone battery-backed E-MTA products provide unsurpassed quality, safety, and value within the industry.

## Lithium-Ion Technology Leadership

ARRIS battery packs come in 2, 4, 6, and 8-cell configurations. ARRIS maintains a comprehensive cell and pack qualification process, which includes safety qualification testing, electrical performance analysis, and rigorous manufacturing standards. With ARRIS batteries, Cable Operators can count on hours of dependable voice service during a local power outage.

## Environmentally Friendly ARRIS “Green”

ARRIS is pleased to provide products that meet the Restriction of Hazardous Substances (RoHS) directive. Beyond the present directive to remove lead and other heavy metals, ARRIS has increased our focus by removing other environmentally impacting materials from the packaging, cables, and other accessories. Please contact your sales representative for more information.

# Touchstone® Li-ion Battery Packs

## Applications

### Typical Idle Hold-Up Hours (All lines On-Hook, Programmed Charge)

Model #	Part #	AH	TM502	TM504	TM552	TM602v1	TM602v2	TM604	TM608	TM722
BPB022S	718003	2.2	5	4	4	6	8	6	-	4
BPB024S	721944	2.4	5	4	4	8	8	7	-	4
BPB044S <sup>1</sup>	718005	4.4	10	8	8	12	12	12	8	8
BPB044H <sup>2</sup>	722841	4.4	10	8	8	12	12	12	8	8
BPD066H	785170	6.6	-	-	-	-	-	-	-	12
BPB088S	721192	8.8	-	16	-	24	24	24	-	-
BPC088S	722842	8.8	-	-	-	-	-	-	16	-
BPD088H	785171	8.8	-	-	-	-	-	-	-	16

#### Notes:

1. 718005 will function in TM722 but will only charge at the standard rate.
2. 722841 is high charge 4-cell pack intended for TM722; charges standard rate in other models.
3. On loss of AC power, E-MTA shuts down data services (configurable; default 15 minutes).
4. "-" indicates battery not applicable or supported on this E-MTA model.

### Typical Talk Hours (1-Line Off-Hook, 23mA Current)

Model #	Part #	AH	TM502 <sup>2</sup>	TM504	TM552 <sup>2</sup>	TM602v1 <sup>3</sup>	TM602v2 <sup>4</sup>	TM604	TM608	TM722 <sup>5</sup>
BPB022S	718003	2.2	3	3	3	3:45	5	5	-	3
BPB024S	721944	2.4	3	3	3	5	5	5	-	3:30
BPB044S <sup>1</sup>	718005	4.4	6	6	6	7:30	8	8	6	6
BPB044H <sup>1</sup>	722841	4.4	6	6	6	7:30	8	8	6	6
BPD066H	785170	6.6	-	-	-	-	-	-	-	9
BPB088S	721192	8.8	-	12	-	15	16	16	-	-
BPC088S	722842	8.8	-	-	-	-	-	-	12	-
BPD088H	785171	8.8	-	-	-	-	-	-	-	12

#### Notes:

1. See Notes 1 and 2 above
2. TM502/552 2-line talk time (hours): BPB022S (2:30), BPB044S (5)
3. TM602v1 2-line talk time (hours): BPB022S (3), BPB044S (6)
4. TM602v2 2-line talk time (hours): BPB022S (4), BPB044S (8)
5. TM722 2-line talk time (hours): BPB022S (2:30), BPB044H (5), BPD066H (7:30), BPD088H (10)

### Multi-line Typical Talk Hours (#-Lines Off-Hook, 23mA Current)

Combination	Lines:	2	3	4	5	6	7	8
TM504 talk time with BPB044S		5	4	3	-	-	-	-
TM504 talk time with BPB088S		10	8	6	-	-	-	-
TM604 talk time with BPB044S		7	6	5	-	-	-	-
TM604 talk time with BPB088S		14	12	10	-	-	-	-
TM608 talk time with BPB044S		5	4:30	4	3:30	3:15	3	2:45
TM608 talk time with BPC088S		10	9	8	7	6:30	6	5:30

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# Touchstone® Li-ion Battery Packs

## Specifications

### Physical

Operating Temperature °F (°C)	32 to 122 (0 to 50)
Operating Relative Humidity(Min.-Max.)	5-95% (Non condensing)
Storage Temperature °F (°C)	-4 to 140 (-20 to 60) Note: Storage above 77°F (25°C) will reduce life of the battery and is not recommended.
Operating and Storage Altitude ft (m)	-200 to 12,000 (-61 to 3,658)
Battery Shelf Life (without recharge, 25°C)	16 months
Battery Life Expectancy (with 2 discharge cycles per year, 25°C)	6 to 10 years
Color	BPB022S, BPB044S, BPD066H, BPB088S, BPC088S, BPD088H: Black BPB024S, BPB044H: Light Gray
Dimensions (H x W x D) in. (cm)	BPB022S, BPB024S: 1.2 x 3.1 x 1.8 (3.1 x 7.9 x 4.7) BPB044S, BPB044H: 1.2 x 5.7 x 1.8 (3.1 x 14.5 x 4.7) BPD066H, BPD088H: 2.0 x 6.4 x 2.1 (5.1 x 16.2 x 5.3) BPB088S: 2.0 x 6.9 x 2.0 (5.1 x 17.6 x 5.1)
Weight lbs (g)	BPB022S, BPB024S: 0.25 (114) BPB044S, BPB044H: 0.50 (228) BPB066H: 0.80 (351) BPB088S, BPC088S, BPD088H: 1.00 (439)

### Electrical

Connector Type	5-Pin, 2.0 mm	
Output Voltage Range	+6.0 to +8.4 V DC	
Output Current (Maximum)	1.6 A DC	
Over Voltage Protection (No Damage)	+18.0 V	
Cell Type	Lithium-Ion 18650 battery	
Number of Cells	BPB022S, BPB024S: 2 BPB044S, BPB044H: 4	BPD066H: 6 BPB088S, BPC088S, BPD088H: 8
Pack Capacity (Amp Hour)	BPB022S: 2.2 BPB024S: 2.4 BPB044S, BPB044H: 4.4	BPD066H: 6.6 BPB088S, BPC088S, BPD088H: 8.8
Charge Current (Maximum, mAmps)	BPB022S, BPB024S, BPB044S, BPB088S, BPC088S: 115 BPB044H, BPD066H, BPD088H: 500	

### Standards

Hazardous Materials Regulations and Procedures CFR Title 49, Section 173, Subsection 185 EN 300386	FCC Part 15, Subpart B UL 60950 EN 60950 EC 60950	ISA AS/NZS 60950 RoHS Compliant 2002/95/EC
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### Ordering Information

Model Number	Part Number	Description
BPB022S	718003	Touchstone Li-Ion Battery Pack, 2-Cell, 8.4V, 2200 mAH, Standard Charge, Order in Multiples of 10
BPB024S	721944	Touchstone Li-Ion Battery Pack, 2-Cell, 8.4V, 2400 mAH, Standard Charge, Order in Multiples of 10
BPB044S	718005	Touchstone Li-Ion Battery Pack, 4-Cell, 8.4V, 4400 mAH, Standard Charge, Order in Multiples of 10
BPB044H	722841	Touchstone Li-Ion Battery Pack, 4-Cell, 8.4V, 4400 mAH, High Charge, Order in Multiples of 10
BPD066H	785170	Touchstone Li-Ion Battery Pack, 6-Cell, 8.4V, 6600 mAH, High Charge, Order in Multiples of 10
BPB088S	721192	Touchstone Li-Ion Battery Pack, 8-Cell, 8.4V, 8800 mAH, Standard Charge, Order in Multiples of 10
BPC088S	722842	Touchstone Li-Ion Battery Pack, 8-Cell, 8.4V, 8800 mAH, Standard Charge, Order in Multiples of 10
BPD088H	785171	Touchstone Li-Ion Battery Pack, 8-Cell, 8.4V, 8800 mAH, High Charge, Order in Multiples of 10

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