



Adaptive USB Power Supply/Quick Charger for Medical and ITE applications for USB PD2.0/3.0 Applications

Information

Model Number GTM96605-GEN2-T2

Description GTM96605-GEN2-T2, USB Adaptive Power Source ITE/Medical Power supply, 60601-1-4th Ed. , Desktop/External, USB Adaptive Power Supply AC Adaptor, , Input Rating: 100-240V~, 50-60Hz, IEC 60320/C8 AC Inlet connector, Class II, Non-Earth Ground (aka "Figure-8"), Output Rating: 60 Watts, Power rating with convection cooling (W) , 3.6-20V in 0.1V increments, Approvals: CE PSE WEEE VCCI RoHS China RoHS Level VI Double Insulation EAC Ukraine CB 60601-1 2MOPP CB CB CCC ETL ETL cETLus 60601-1 3rd cETLus cETLus RCM S-Mark S-Mark IEC/EN 60601-1

Model Picture



Agency

Documents <http://www.globtek.info/certs/GTM96605-GEN2/>

CE

EC-Declaration https://www.globtek.com/pdf/ec_declaration/a000c00000PGI8DEAX

RoHS/RoHS2

Declaration https://www.globtek.com/pdf/rohs_cert/a000c00000PGI8DEAX

REACH

Declaration https://www.globtek.com/pdf/iso_certificates/REACH.pdf

Conflict

Minerals

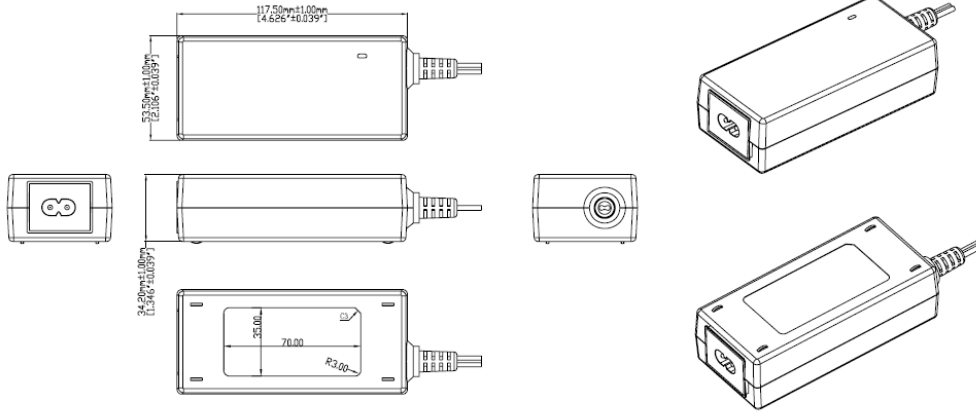
Declaration <https://www.globtek.com/pdf/conflict-minerals.pdf>

Model Parameters

Type	Desktop/External
Technology	USB Adaptive Power Supply AC Adaptor
Category	USB Adaptive Power Source ITE/Medical Power supply
Input Voltage	100-240V~, 50-60Hz
I/P Amps (A)	1.5A
Wattage (W)	60.0
Vout Range (V)	3.6-20
Efficiency Level	VI
Ingress Protection	
Size (mm)	



ENCLOSURE



RATING TABLE

Model Number	Voltage	Amps(A)	Watts(W)	RFQ
GTM96605-GEN2-A1-T2V				RFQ
GTM96605-GEN2-A2-T2V				RFQ



SPECIFICATIONS

OUTPUT CAPABILITIES:

Following communication formats supported: USB PD 2.0/3.0, QC 2.0/3.0, QC 4.0/4.0+

OUTPUT PARAMETERS for USB2.0/3.0 Applications

Communications: Using CC1 pin on USB type C connector

Initial Output State: 5V/2A

Advertised PDO Voltages/Currents rating:

-A1 option: 5V/4.6A, 5.8V/4.6A, 9V/4.4A, 12V/4A, 15V/3.6A and 20V/3A (high current)

-A2 option: 5V/3A, 5.8V/3A, 9V/3A, 12V/3A, 15V/3A and 20V/3A (limited current)

A1 option is the standard config, a permanently attached, 1.5M Length, 20 Gauge shielded power cable, with a 5A rated type C connector at the cord end is used.

A2 option is a non-standard config, for when a detachable output cable is required. Contact factory for availability.

OUTPUT PARAMETERS for QC2.0/3.0 Applications

Communications: Using D+ and D- pins on the USB type C connector

Initial Output State: 5V/2A

HVDCP Class B Output Voltages/Currents rating:

D+	D-	Output
0.6V	GND	5V/4.6A
3.3V	0.6V	9V/4.4A
0.6V	0.6V	12V/4A
3.3V	3.3V	20V/3A
0.6V	3.3V	Continuous Mode, adjusts from 3.6V to 20V in 200mV steps

Permanently attached, 1.5M Length, 20 Gauge with shield power cable

A) GENERAL ELECTRICAL SPECIFICATIONS:

01. Input Voltage: Specified 90-264 Vac, Nameplate rated: 100-240Vac

90-264 Vac range @ 100% of rated load current

85-264 Vac range @ 85% of rated load current

110-370 VDC range @ 100% of rated load current

02. Input Frequency: Specified 47-63 Hz, Nameplate rated 50-60Hz

03. Output Regulation: +/- 4% measured at the output connector

04. Line Voltage Regulation: +/- 0.5% typical measured at full load

05. Green Power On Indicator LED

06. Output Ripple (Vp-p): 100 mV, measured at 20 MHz bandwidth with 0.1 uf ceramic capacitor in parallel with a low impedance 47 uf electrolytic capacitor connected at the end of the output connector

07. Turn-ON/OFF Overshoot: 5% maximum, 1 mS typical recovery time for 40% to 70% step load

08. Turn-ON Delay: 1 second maximum @ full load, nominal line

09. Hold-Up Time: 8 mS typical @ nominal input voltage and full load

10. Inrush Current: 30A/60A maximum cold start @ 115/230Vac input

11. Efficiency: Compliant with Efficiency Level VI and CoC Tier 2 standards

12. No Load Standby Power: <0.075 W @ 230Vac

B) PROTECTION

01. Input Protection: Input line fusing and 300Vac MOV

02. Short Circuit/ Overload: Electronically Protected unit will auto recover upon removal of fault

Output Current Limit: 110% to 135% of rated output current

03. Output Over-Voltage: 25Vdc max



C) SAFETY

01. Dielectric Withstand Voltage: 4000Vac or 5656Vdc from input to output,
02. Earth Leakage Current: 3 conductor AC input models < 300uA, N/A for 2 conductor input models
03. Touch Current: 3 conductor AC input models < 20uA, 2 conductor input models < 65uA
04. [Output Isolation Options](#):
 - a) C8 Inlet, Class II (Standard)
 - b) C6 or C14 Inlet, Class II FE, Output Isolated from Earth contact (Standard)
 - c) C6 or C14 Inlet, Class I, Output directly attached to Earth contact
05. Means of Protection: 2 x MOPP
06. Compliant Standards: See listings at end of this drawing for specifics

D) EMC

EN 60601-1-2, 4th edition

Emissions, per EN 55032, EN 61000-6-3, EN 61000-6-4

Conducted Emissions: Class B, FCC Part 15, Class B

Radiated Emissions: Class B, FCC Part 15, Class B

Line Frequency Harmonics EN61000-3-2, Class A

Voltage Fluctuations/Flicker EN61000-3-3

Immunity, per EN 55024, EN 61000-6-1, EN 61000-6-2

Static Discharge Immunity EN61000-4-2, 10kV Contact Discharge, 20kV air discharge

Radiated RF Immunity EN61000-4-3, 10V/m 80-1000MHz, 3V/m 1-2.7GHz, 80% 1KHz AM.

EFT/Burst Immunity EN61000-4-4, 4kV/100kHz.

Line Surge Immunity EN61000-4-5, 2kV differential, 4kV common-mode

Conducted RF Immunity EN61000-4-6, 3Vrms, 80% 1KHz AM

Power Frequency Magnetic Field Immunity EN61000-4-8, 3A/m

Voltage Dip Immunity EN61000-4-11, Criteria

E) OTHER:

01. MTBF: 300,000 Hours @ 25°C ambient temperature
02. Operating Temperature: -10°C to 40°C ambient temperature at full load, -10°C to 50°C ambient temperature with derating to 80% load
03. Operating Humidity: 0% to 95% relative humidity, non-condensing
04. Storage Temperature: -30°C to 80°C
05. Operating Altitude: 5000 Meters
06. ROHS 2: Complies with EU 2011/65/EU and China SJ/T 11363-2006

F) ENCLOSURE

01. Housing: High impact plastic, 94V0 polycarbonate, non-vented
02. Markings: Label or Laser Printed
03. AC Input mechanical options: Desktop C6, C8, C14 or C18 IEC Inlet.
Hybrid option (Desktop or Wall Plug-in) Class I or Class II input

G) SPECIAL OPTIONS

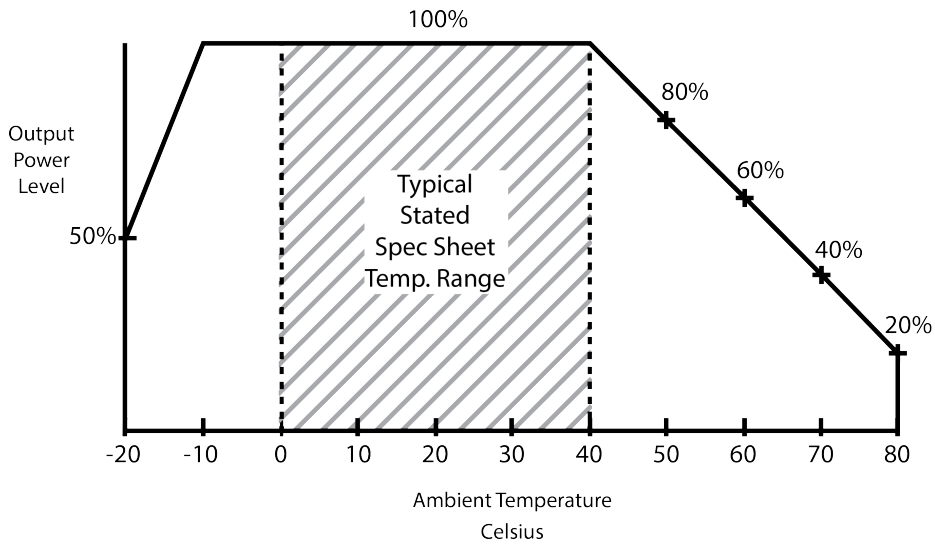
01. Detachable USB C Output Cordset (contact factory for availability)
02. Special Fixed Output Cord length, 1M, 2M or 3M lengths
03. Custom Markings, and Marking methods
04. Special Housing Colors and Cordset Colors
05. USB Micro B connector at end of cordset for QC2.0/3.0 applications.
06. Tighter output voltage tolerance
07. Special PD3.0 output voltage, selectable between 3.6V and 20V
08. Constant Current battery Charging, with constant Voltage Top-off, and max charge duration timer



DERATING CURVE

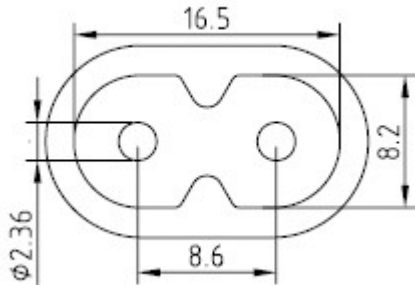
**Typical External
Power Supply Derating Curve**

(For Efficiency Level V and Efficiency Level VI Products)



Input Configuration

Description IEC 60320/C8 AC Inlet connector, Class II, Non-Earth Ground (aka "Figure-8")



Mates with IEC 60320/C7 Plug

[Standard International IEC 320/C7 Cordsets](#)

Below are standard cordsets which are "not included" (unless stated above); these may be purchased separately or packaged with the power supply. Please contact your Sales Engineer if the style required is not shown below. Many more available in different lengths, colors or cable material.

[Standard International IEC 320/C7 Cordsets](#)

2094112M703(R)	Argentina	IRAM 2063	IEC 320/C7	20007
5014112M703A(R)	Australian	AS 3112	IEC 320/C7	20007
207B4111M8703(R)	Brazil, Type N	NBR14136	IEC 320/C7	1800 6
4533501M8703(R)	China	GB 2099.1	IEC 320/C7	18306
2074112M703A(R)	European, Type C	CEE 7/16	IEC 320/C7	20007
2084111M8703(R)	India, Type D	BS 546	IEC 320/C7	1800 6
451J3401M8703(R)	Japan	JIS 8303	IEC 320/C7	18306
2044112M703®	Korea	KS C8305	IEC 320/C7	2000 7
4511116F703A(R)	N. American, Type A	NEMA 1-15P	IEC 320/C7	18306
4033401M8703A(R)	Taiwan	CNS690	IEC 320/C7	1830 6
6104112M703A(R)	UK, Type G	BS1363	IEC 320/C7	20007

Output Configuration

Common output connector options:



L Type (Coaxial
5.5x2.5mm plug)



C Type (Coaxial
5.5x2.1mm plug)



K Type (Coaxial
3.5x1.3mm plug)



LL Type (5.5x2.5mm
Locking 760k type)



CL Type (5.5x2.1mm
Locking S761k type)



ML2 Type (Molex
housing 43025-0200)



YL3 Type (KPPX-3P)



YL4 Type (KPPX-4P)



EJ1/2/3/4/5 (EIAJ
RC-5320A type
connectors)



MSB Type (Micro USB)



USBC Type (USB Type
C)












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design

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Contact GlobTek for your specific requirements or custom solutions.

Approvals

Logo	Description
No Logo Applicable No Logo	CB report IEC60601-1 2005 A1+C1+C2 2016-2-4 and or EN 60601-1:2006 3.1rd Edition 2xMOPP CB Report IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013 (GTM96605-GEN2-XX)
No Logo Applicable	CB for IEC 62368-1:2014 (Second Edition)
 仅适用于在海拔2000m以下地区使用	CCC to GB4943.1-2011 GB9254-2008 GB17625.1-2012
	CE Certification
 Intertek	Audio/Video, Information And Communication Technology Equipment - Part 1: Safety Requirements [UL 62368-1:2014 Ed.2]Audio/Video, Information And Communication Technology Equipment - Part 1: Safety Requirements [CSA C22.2#62368-1:2014 Ed.2]
 Intertek	Information Technology Equipment Safety Part 1: General Requirements (UL 60950-1 Issued: 2007/03/27, Ed: 2 Rev: 2014/10/14) Information Technology Equipment Safety Part 1: General Requirements (CSA C22.2 No. 60950-1 Issued: 2007/03/27 Ed: 2 (R2012) Amd.
 Intertek 4867497	AAMI ES60601-1 Issued: 2012/08/20 Medical Electrical Equipment - Part 1: CAN/CSA-C22.2 No.60601-1:14, Third Edition Issued: 2014/03/01 - Medical Electrical Equipment - Part 1: IEC 60601-1-11 Issued: 2015/01/20 Ed. 2 Medical Elec. Equip.- Part 1-11:
 Conforms to AAMI STD.ES60601-1,IEC 60601-1-11 Certified to CAN/CSA STD.C22.2 NO.60601-1	CHINA SJ/T 11364-2014, China RoHS Chart: http://en.globtek.com/globtek-rohs.php
Conforms to UL STD. 1310 Certified to CSA STD. C22.2 NO.223	Conforms to AAMI STD. ES60601-1,IEC 60601-1-11 Certified to CAN/CSA STD.C22.2 NO.60601-1 Conforms to UL STD. 1310 Certified to CSA STD. C22.2 NO.223
	Declaration # ???? N RU ?-US.??75.?01052 Custom Union of Russia, Belarus and Kazakhstan http://www.globtek.com/redirect/?loc=gost-certificate-eac-declaration
 GlobTek, Inc.	JAPAN TUV R-PSE, Cert. No. JD 50313285, to J60950-1(H26) , J55022(H22),J3000(H25)[DC15? 30V]. Please reference the following website for guidelines on PSE regulations: http://en.globtek.com/importing-ite-and-medical-power-supplies-ac-adaptors-to-japan/
EFFICIENCY LEVEL 	Efficiency: complies to section 301 of Energy Independence and Security Act (EISA) complies with Energy Star tier 2 (North America), ECP tier 2 (China), MEPS tier 2 (Australia), Code of Conduct (Europe)



Australia and New Zealand Regulatory Compliance, Mark (

<http://rcm.standards.org.au/rcmfaq/rcmfaq.htm>

RoHS



Intertek



Intertek

IEC/EN60601-1



10276



Specifications of directive 2011/65/EU Annex VI (ROHS-2) with amendment 2015/863-EU (ROHS-3) <http://www.ce-mark.com/Rohs%20final.pdf>

S-Mark Certificate EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011+A2:2013

<http://www.intertek.com/marks/s/>

Semko S-Mark-Cert-EN60601-1 3.1rd Edition (<http://www.intertek.com/marks/s/>)

Ukraine UKRSePro (Document: www.globtek.com/html/iso_certificates/GT_Ukraine.pdf)

Japan: Voluntary Control Council for Interference (VCCI)

WEEE: Complies with EU 2012/19/EU (http://ec.europa.eu/environment/waste/weee/index_en.htm)

Mark is on the label or Molded in the case