

KAM/CHS/09U

Acra KAM-500 chassis - 9 user-slots

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Overview

The KAM/CHS/09U is a nine user-slot Acra KAM-500 chassis, which along with the housing and backplane, includes a power supply module which regulates power supplies for the backplane (isolated 28V nominal in).

The backplane has nine connectors for user-modules, which are polarized to prevent the insertion of the backplane controller module. The backplane distributes power and connects address, data and control lines to the user-modules.

The only ICs on the backplane are demultiplexers for user-module select signal. Any user-module can be placed in any user-slot in any combination.

2.0A is available for bridge excitation.



Key Features

- Power supply unit and nine user-slots
- 18 to 40 VDC isolated power supply
- Rugged aluminum housing
- 8 MHz x 16-bit digital backplane
- Operates as master or slave in distributed system
- LED power-on indicator

Applications

- Flight test instrumentation systems

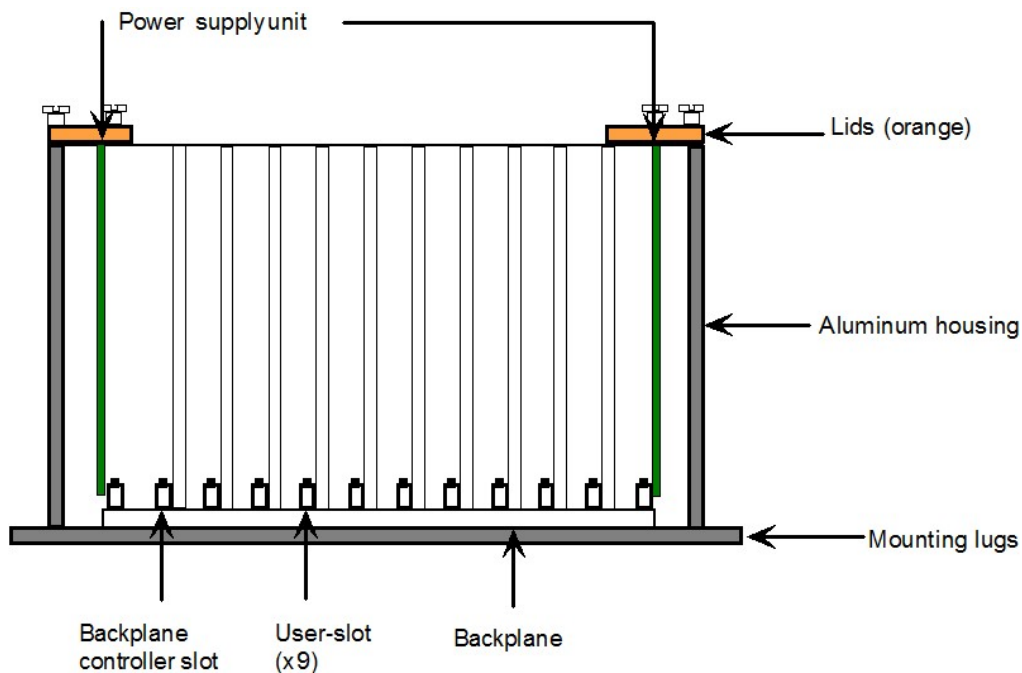


Figure 1: KAM/CHS/09U with PSU and nine user-slots

Specifications

All values provided in the following specification tables are valid within the operating temperature range specified under “Environmental ratings” in the “General specifications” table.

TABLE 1		General specifications				
PARAMETER	MIN.	TYP.	MAX.	UNITS	CONDITION/DETAILS	
User slots	–	–	9	–		
Dimensions					Design metric is millimeters.	
height	–	98.5	–	mm	Includes module retention screws and ground bolt.	
height	–	3.88	–	in.	Includes module retention screws and ground bolt.	
length	–	224	–	mm	Includes mounting lugs.	
length	–	8.82	–	in.	Includes mounting lugs.	
width	–	80	–	mm	Excludes heat sinks.	
width	–	3.15	–	in.	Excludes heat sinks.	
Mass					Design metric is kilograms.	
no modules	1.2	1.4	1.6	kg	Includes power supply. For variations of the chassis listed in “Specifications” on page 2, the mass ranges +/-200 g.	
no modules	2.65	3.09	3.52	lb	Includes power supply.	
fully populated	1.95	2.15	2.35	kg	Typical module weight of 75 g.	
fully populated	4.3	4.74	5.18	lb	Typical module weight of 2.61 oz.	
Environmental ratings					See <i>Environmental Qualification Handbook</i> .	
operating temperature	-40	–	85	°C	Chassis base/side plate temperature.	
storage temperature	-55	–	125	°C		
Finish					Electroless nickel-plated.	
top parts	–	–	–	–	Painted REINORANGE RAL2004.	
base, side and end plates	–	–	–	–	Painted black GRIGIO SCURO OPACO C604.	
Chassis material	–	–	–	–	Aluminum alloy 6082-T6 (Din No: AlMgSi1).	

Details and dimensions of this chassis, as shown in the following figure, refer to all variations of the chassis listed in “Ordering information” on page 5; the 9-way micro-miniature PSU connector is the only difference.

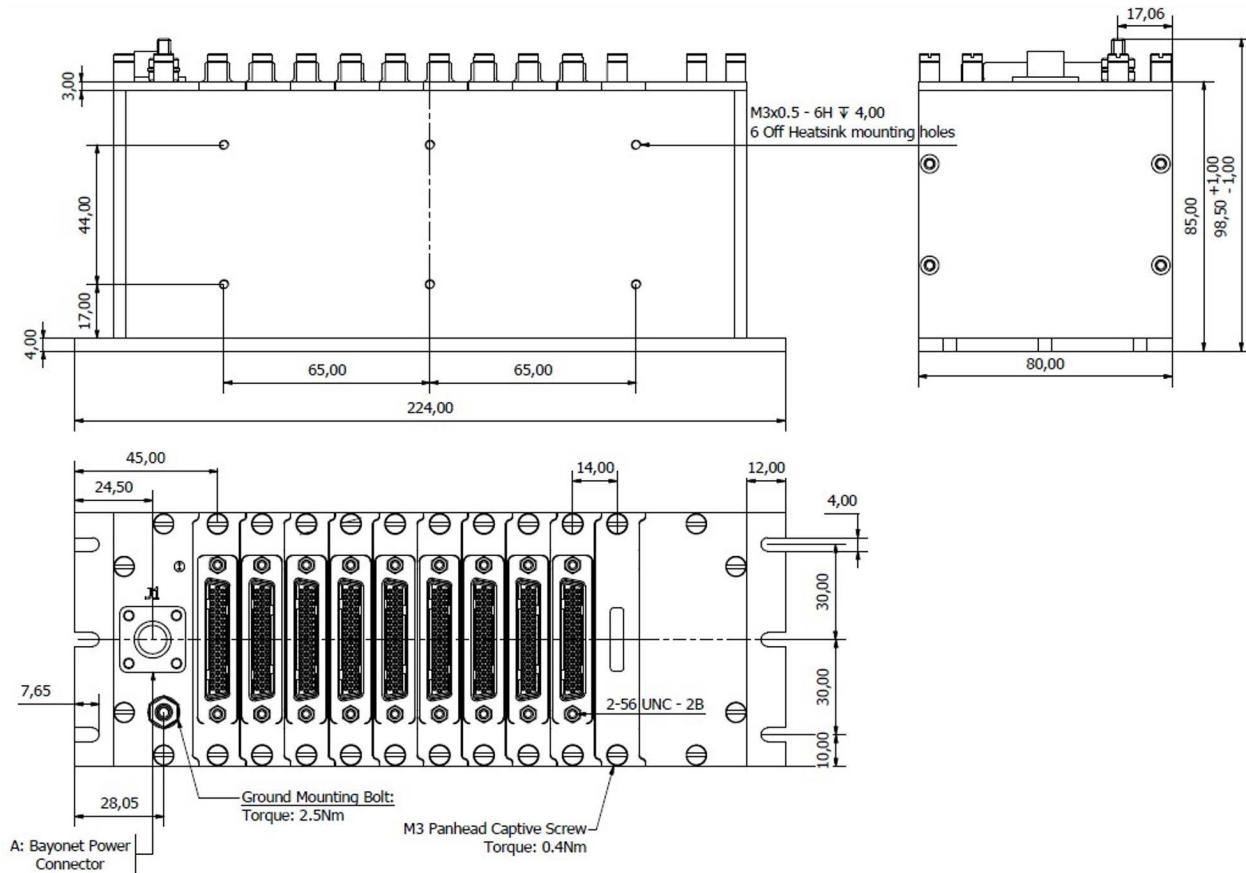


Figure 2: KAM/CHS/09U mechanical drawing

Getting the most from the KAM/CHS/09U

Where space permits, it is recommended that one or two heat sinks (ACC/HSK/001/09U) also be used. Heat sinks must be ordered separately.

Slot J2 is always reserved for the backplane controller module. A controller is required in slot J2 for control and programming of user-modules.

Connector pinout of the KAM/PSU/011/B supplied with the KAM/CHS/09U/MM

PIN	NAME	SEE SPECIFICATIONS TABLE	COMMENT
1	POWER+	Nominal 28V supply	Isolated internally; aircraft power
2	POWER-	Return for nominal 28V	Isolated internally; aircraft power
3	+12V	Internal +12V out	Current depends on internal loading
4	-12V	Internal -12V out	Current depends on internal loading
5	GND	Internal ground	
6	+5V	Internal +5V out	Current depends on internal loading
7	GND	Internal ground	
8	DNC		Not connected
9	DNC		Not connected

Connector pinout of KAM/PSU/012/B/AG2 supplied with the KAM/CHS/09U/AG2

PIN	NAME	SEE SPECIFICATIONS TABLE	COMMENT
1	POWER+	Nominal 28V supply	Isolated internally; aircraft power
2	POWER-	Return for nominal 28V	Isolated internally; aircraft power
3	-12V	Internal -12V	Current depends on internal loading
4	GND	Internal ground	
5	+12V	Internal +12V	Current depends on internal loading
6	+5V	Internal +5V	Current depends on internal loading

Connector pinout of the KAM/PSU/012/B and KAM/PSU/012/B/NC supplied with the KAM/CHS/09U and KAM/CHS/09U/NC

PIN	NAME	SEE SPECIFICATIONS TABLE	COMMENT
1	POWER+	Nominal 28V supply	Isolated internally; aircraft power
2	POWER-	Return for nominal 28V	Isolated internally; aircraft power
3	CHASSIS	Chassis	
4	GND	Internal ground	
5	+12V	Internal +12V	Current depends on internal loading
6	+5V	Internal +5V	Current depends on internal loading

Ordering information

PART NUMBER	DESCRIPTION
KAM/CHS/09U/E	Acra KAM-500 chassis - 9 user-slots
KAM/CHS/09U/E/AG2	Acra KAM-500 chassis - 9 user-slots (pin 3 connected to -12V)
KAM/CHS/09U/E/MM	Acra KAM-500 chassis - 9 user-slots (micro-miniature connector)
KAM/CHS/09U/E/NC	Acra KAM-500 chassis - 9 user-slots (no brown out capacitor)

By default, the standard mating connector, (CON/PSU/007/FL/100 for KAM/CHS/09U; or ACC/ASY/007/04 for KAM/CHS/09U/MM), is included with each chassis in the shipment. Its part number will be added to the Confirmation of Order unless an alternative option is specified (see the *Cables* data sheet). In this data sheet, KAM/CHS/09U refers to all variations listed in the Ordering information table above. Spare lids (ACM/LID/001) for unused user-slots can be supplied. These are optional items and must be ordered separately; refer to Related products.

Revision history

REVISION	DIFFERENCES	STATUS
KAM/CHS/09U/E	PSU upgraded to 5A on +5V power line	Recommended for new programs
KAM/CHS/09U/D	PSU upgraded to 4A on +5V power line	Not recommended for new programs
KAM/CHS/09U/C	Includes KAM/PSU/010 with diode for power-up	Not recommended for new programs
KAM/CHS/09U/B	Includes KAM/PSU/007	Not recommended for new programs
KAM/CHS/09U	First release	Not recommended for new programs

Supporting software

SOFTWARE	DETAILS
DAS Studio 3	User interface for setup and management of data acquisition, network switches, recorders and ground stations in an integrated environment
KSM-500	This module is supported by the KSM-500 suite of software tools

Related products

MODULE	DETAILS
ACM/LID/001	Spare user-slot lids and spare screws for the Acra KAM-500 system
ACC/HSK/001/09U	Optional heat sinks for a 9 user-slot Acra KAM-500 system
BAC/PSU/007	Backshell for CON/PSU/007
CON/PSU/007	6-way nickel-plated bayonet standard PSU mating connector
KAM/PSU/011/B	Power supply unit for Acra KAM-500 chassis (+5V, $\pm 7V$ and $\pm 12V$) - 9-way connector
KAM/PSU/012/B	+5V, $\pm 7V$ and $\pm 12V$ power supply unit for Acra KAM-500 chassis with 6-way connector
KAM/PSU/012/B/AG2	+5V, $\pm 7V$ and $\pm 12V$ power supply unit for Acra KAM-500 chassis with -12V on power supply
KAM/PSU/012/B/NC	+5V, $\pm 7V$, and $\pm 12V$ power supply unit for Acra KAM-500 chassis with glitch capacitors removed

Related documentation

DOCUMENT	DETAILS
DOC/DBK/001	Acra KAM-500 Databook
DOC/MAN/018	KSM-500 Databook
DOC/MAN/030	DAS Studio 3 User Manual

DOCUMENT	DETAILS
DOC/HBK/002	Environmental Qualification Handbook
TEC/NOT/016	Power dissipation