

# KAM/CHS/02F

Acra KAM-500 chassis (base-mounted power supply and housing) -  
2 user-slots

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## Key Features

- Power supply unit and two user-slots
- 18 to 40VDC isolated power supply
- Rugged aluminum housing
- 8MHz x 16-bit digital backplane
- Special mounting orientation
- Operates as master or slave in distributed system

## Applications

- Flight test instrumentation systems for limited spaces

## Overview

The KAM/CHS/02F is a compact two user-slot Acra KAM-500 chassis, which along with the housing and backplane, includes a power supply unit.

The backplane has two slots for user-modules, which are polarized to prevent the insertion of the backplane controller module. The backplane has power supply lines and the standard 16-bit address/data bus with read/write control lines. The only ICs on the backplane are demultiplexers for user-module select.

This chassis has been specially designed for space-limited applications. As such, those modules which require excitation from  $\pm 7V$  are not suitable as the power supply does not supply these voltage levels.

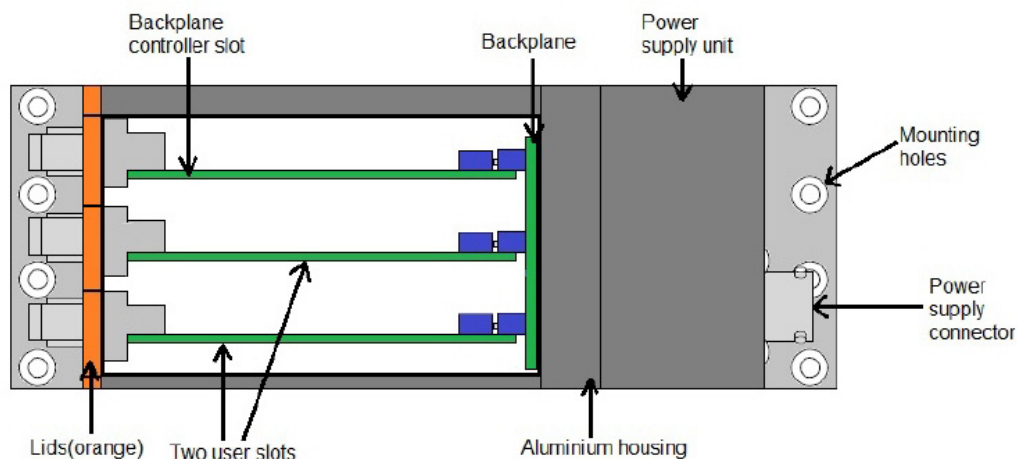


Figure 1: KAM/CHS/02F with PSU and two user-slots

## 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		Mechanical specifications				
PARAMETER	MIN.	TYP.	MAX.	UNITS	CONDITION/DETAILS	
User slots	–	–	2	–		
Dimensions					Design metric is millimeters.	
height	–	84.2	–	mm		
height	–	3.31	–	in.		
length	–	136.5	–	mm		
length	–	5.37	–	in.		
width	–	50	–	mm		
width	–	1.97	–	in.		
Mass					Design metric is kilograms.	
no modules or base plate	–	0.51	–	kg		
no modules or base plate	–	1.12	–	lb		
no modules, with base plate	–	0.59	–	kg		
no modules, with base plate	–	1.30	–	lb		
fully populated	–	0.81	–	kg	Typical module weight of 75g.	
fully populated	–	1.79	–	lb	Typical module weight of 2.65oz.	
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.	

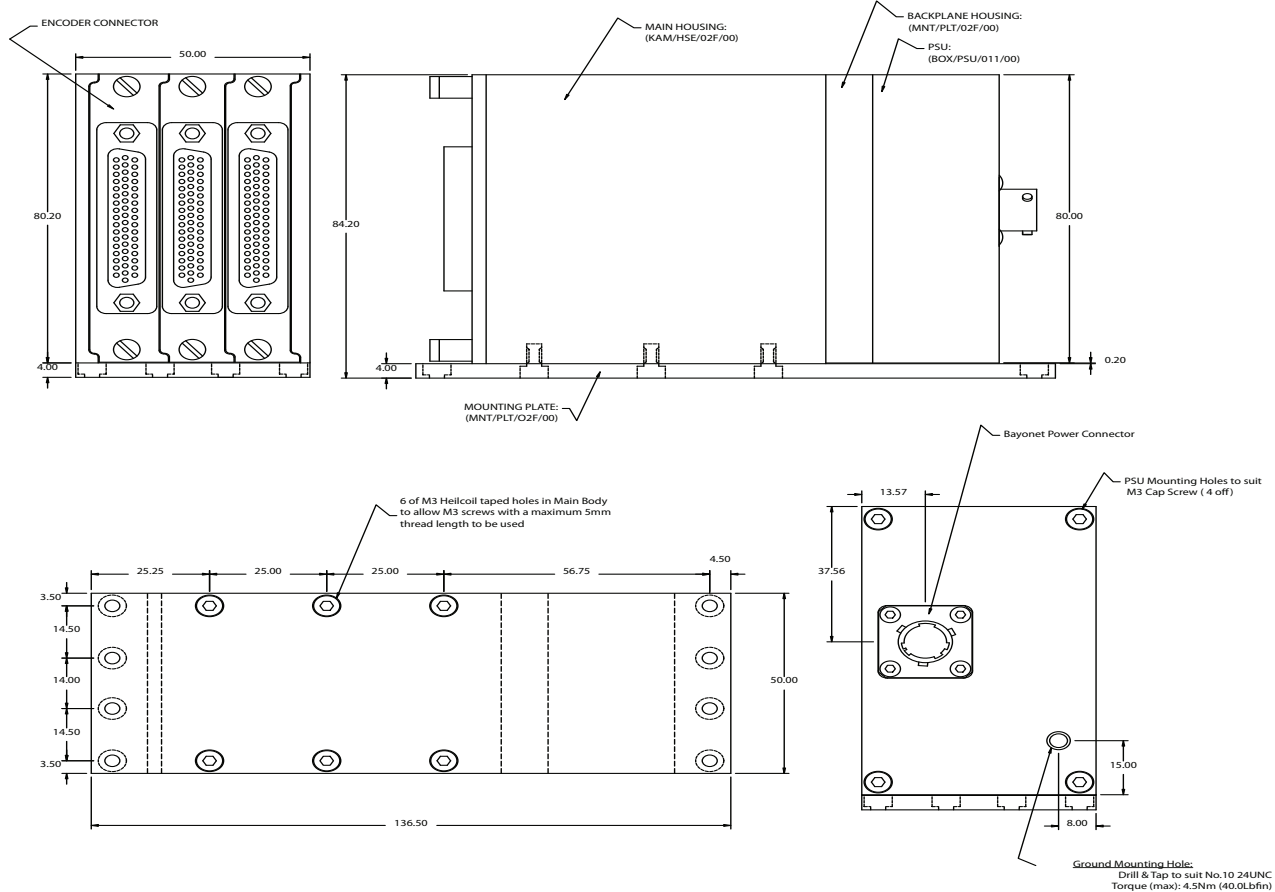


Figure 2: KAM/CHS/02F mechanical drawing

## Getting the most from the KAM/CHS/02F

Slot J2 is always reserved for the backplane controller module. A controller is required in slot J2 for controlling and programming of user-modules. Due to mechanical constraints, only the KAD/BCU/xxx family of controllers can be used in the KAM/CHS/02F.

For mounting, we recommend the use of M3 × 10mm or 1/8th in. tool steel or stainless steel screws to attach the chassis mounting plate to the mounting frame. Alternatively, if the attached mounting plate is not used, the chassis can be attached to the mounting frame or mounting plate using M3 screws pan/flat head with a maximum of 5mm of threaded insert.

### Ground mounting bolt

The KAM/CHS/02F has a ground mounting hole that fits a 10-24 UNC bolt as shown in the previous figure, however the chassis does not ship with a ground mounting bolt pre-fitted.

The length of the threaded housing is 9.2mm (0.362 in.) and it is followed by an air gap of 11mm (0.433 in.). The maximum insertable length of the ground bolt is 20mm (0.787 in.) and the recommended insertable length is 10mm (0.393 in.).

An example of a suitable ground bolt for this application is a 10-24 UNC x 3/4 inch Imperial Hexalobular/Torx Pan Head Screws (DIN 7985) - A2 Stainless Steel, which can be externally fitted.

## Connector pinout of the KAM/PSU/014

PIN	NAME	SEE SPECIFICATIONS TABLE	COMMENT
1	POWER+	Nominal Acra KAM-500 28V supply	Isolated internally; aircraft power
2	POWER-	Return for nominal 28V	Isolated internally; aircraft power
3	CHASSIS	Chassis	Current depends on internal loading
4	GND	Internal ground	
5	+12V		Acra KAM-500 internal +12V out; available current depends on internal loading
6	+5V		Acra KAM-500 internal +5V out; available current depends on internal loading

## Ordering information

PART NUMBER	DESCRIPTION
KAM/CHS/02F	Acra KAM-500 chassis (base-mounted power supply and housing) - 2 user-slots

By default, the standard mating connector, CON/PSU/007/FL/100, 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). 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/02F	First release	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

PRODUCT	DETAILS
ACM/LID/001	Spare user-slot lids and spare screws for the KAM-500 system
KAM/PSU/014	Power supply unit for KAM/CHS/02F

## Related documentation

DOCUMENT	DETAILS
DOC/DBK/001	Acra KAM-500 Databook
DOC/GBK/002	Environmental Qualification Handbook
DOC/MAN/018	KSM-500 Databook
TEC/NOT/016	Power dissipation
TEC/NOT/049	Power estimation