

**Schroff** 

# ADVANCEDMC CARRIERS



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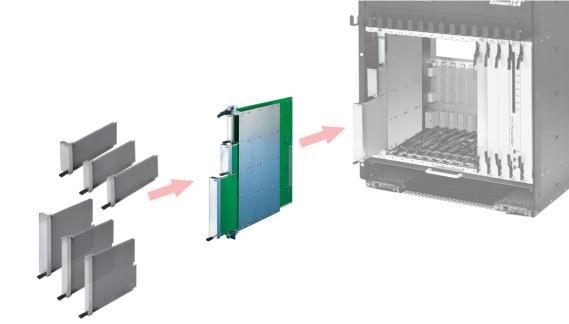
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#### AdvancedMC carriers

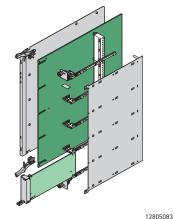
AdvancedMC carriers are plug-in units that are slotted into an AdvancedTCA system. They contain the carrier board that accepts AdvancedMC modules.

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#### Cutaway carrier

- Carrier board is cut out in the area of the AdvancedMC modules
- Max. placement: 8 single compact or 4 single full-size AdvancedMC modules
- Combinations of full-size and compact modules are possible

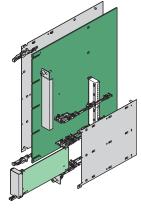
Electrical connection to the AdvancedTCA backplane is via connectors. With the fullyassembled AdvancedMC carrier in place, cost-effective additional functions may be integrated into the system.



#### Conventional carrier

- Carrier board runs continuously from front to rear
- Max. placement: 4 single compact or 4 single mid-size AdvancedMC modules

The standard, in accordance with PICMG specification AMC.0 R2.0, defines three different mechanical versions:



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#### Hybrid carrier

- Carrier board is a combination of conventional and cutaway carrier
- The maximum placement depends on the carrier board design
- Combinations of all AdvancedMC modules are possible



Overview .....8.26

**Cutaway carriers** For compact and full-size

Complete kits .... 8.28 Kit without struts,

guide rails . . . . . 8.29

Guide rails/struts 8.30

Complete kits

with AdvancedTCA

IEA handle . . . . . 8.32 Guide rails/struts 8.33 Microswitches . . . 8.33

modules

## Systems - AdvancedMC carriers

#### AdvancedMC carriers for AdvancedTCA systems

- Cutaway, conventional and hybrid carrier mechanics for
  - compact AdvancedMC carrier boards
  - Mid-size AdvancedMC carrier boards
  - Full-size AdvancedMC carrier boards
- Standard versions from stock
- Individual carrier/module combination of your choice





#### AdvancedMC carriers

- 1 slot chassis, 8 U, 6 HP for AdvancedTCA systems
- Inserter/extractor handle for microswitch activation
- Versions
  - Cutaway carrier for compact and full-size modules
- Conventional carrier for mid-size and compact modules

#### Microswitches ... 8.31 **Differences** between standard and MF handles for AMC carriers . 8.31 Conventional carriers For mid-size and compact modules



#### Individual solutions on request

- AdvancedMC hybrid carrier
- AdvancedMC hybrid mechanics for rugged AdvancedMC modules (MicroTCA.1)

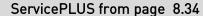
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ServicePLUS . . 8.34

ServicePLUS configuration

Hybrid carrier . . 8.35



- e.g. individual configuration and fitting of hybrid carriers)
- e.g. modifications (cut-outs, special colours)
- e.g. custom solutions (special sizes)

www.schroff.biz/ServicePLUS





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# Carrier mechanics for compact and full-size AdvancedMC modules

- Mechanics for cutaway carrier board (carrier with 3 different struts, guide rails, ESD clips)
- Stainless steel (EMC shielded)
- Width 1 slot (6 HP), height 8 U, corresponds to PICMG<sup>®</sup> AMC.0 R2.0
- Inserter/extractor handle, designed for microswitch activation hot-swap)

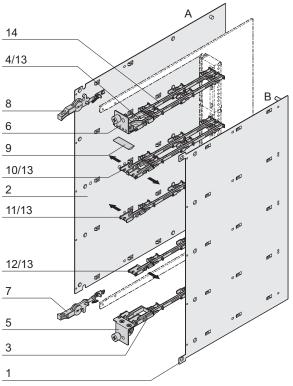
#### Delivery comprises (Kit)

ltem	Qty	Description
1	1	Cover plate B (right), stainless steel, brushed, 0.6 mm, inner surface electrically insulated, exterior with protective film
2	1	Cover plate A (left), stainless steel, brushed, 0.6 mm, inner surface electrically insulated, exterior with protective film
3	1	Lower splitting extrusion (strut), Zn die-cast, nickel-plated
4	1	Upper splitting extrusion (strut), Zn die-cast, nickel-plated
5	1	Lower front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in
6	1	Upper front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in, with holes for LEDs
7	1	Standard inserter/extractor handle, with microswitch operation, plastic lever, black
8	1	Standard inserter/extractor handle, plastic lever, black
9	1	EMC profile seal, core: foam, sleeve: textile cladding with CuNi coating
10	3	Support member between cover A and B
11	3	Support member for cover A (on the left)
12	3	Support member for cover B (on the right)
13	8	ESD clip
14	10	AdvancedMC guide rail, PBT, UL 94 V-0, red
15	1	Assembly kit

#### **Order Information**

Description	Part no.
Carrier mechanics for AdvancedMC compact and full-size modules <b>with</b> struts, ESD clips and guide rails	10849-001
Accessories	
Microswitch, normally closed, for AdvancedMC carrier (compact and full-size modules) for soldering (SMD), PU 10 pieces	20849-236
Microswitch, normally open, for AdvancedMC carrier (compact and full-size modules) for soldering (SMD), PU 10 pieces	20849-235
Description inserter/extractor handle	Page 8.31
Microswitch description	Page 8.31
AdvancedMC module mechanics	Page 8.56









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# Carrier mechanics for compact and full-size AdvancedMC modules

- Mechanics for cutaway carrier board (carrier without struts, guide rails, ESD clips, for individual placement)
- Stainless steel (EMC shielded)
- Width 1 slot (6 HP), height 8 U, corresponds to PICMG<sup>®</sup> AMC.0 R2.0
- Inserter/extractor handle, designed for microswitch activation (hot-swap)

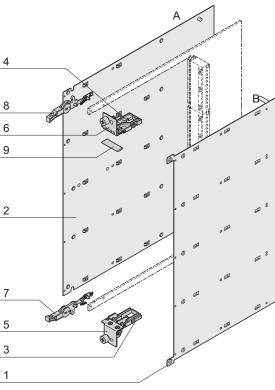
#### Delivery comprises (Kit)

1 Cover plate B (right), stainless steel, brushed, 0.6 mm, inner surface electrically insulated, exterior with protective film 2 1 Cover plate A (left), stainless steel, brushed, 0.6 mm, inner surface electrically insulated, exterior with protective film 3 1 Lower splitting extrusion (strut), Zn die-cast, nickel-plated	ltem	Qty	Description
inner surface electrically insulated, exterior with protective film  1 Lower splitting extrusion (strut), Zn die-cast, nickel-plated  1 Upper splitting extrusion (strut), Zn die-cast, nickel-plated  1 Lower front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in  1 Upper front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in, with holes for LEDs  1 Standard inserter/extractor handle, with microswitch operation, plastic lever, black  1 Standard inserter/extractor handle, plastic lever, black  2 IEMC profile seal, core: foam, sleeve: textile cladding with CuNi coating			Cover plate B (right), stainless steel, brushed, 0.6 mm, inner surface electrically insulated,
4 1 Upper splitting extrusion (strut), Zn die-cast, nickel-plated 5 1 Lower front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in 6 1 Upper front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in, with holes for LEDs 7 1 Standard inserter/extractor handle, with microswitch operation, plastic lever, black 8 1 Standard inserter/extractor handle, plastic lever, black 9 1 EMC profile seal, core: foam, sleeve: textile cladding with CuNi coating	2	1	inner surface electrically insulated,
5 1 Lower front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in 6 1 Upper front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in, with holes for LEDs 7 1 Standard inserter/extractor handle, with microswitch operation, plastic lever, black 8 1 Standard inserter/extractor handle, plastic lever, black 9 1 EMC profile seal, core: foam, sleeve: textile cladding with CuNi coating	3	1	Lower splitting extrusion (strut), Zn die-cast, nickel-plated
alignment pin and retention screws pressed in  Upper front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in, with holes for LEDs  Standard inserter/extractor handle, with microswitch operation, plastic lever, black  Standard inserter/extractor handle, plastic lever, black  EMC profile seal, core: foam, sleeve: textile cladding with CuNi coating	4	1	Upper splitting extrusion (strut), Zn die-cast, nickel-plated
alignment pin and retention screws pressed in, with holes for LEDs  7	5	1	· · · · · · · · · · · · · · · · · · ·
operation, plastic lever, black  Standard inserter/extractor handle, plastic lever, black  EMC profile seal, core: foam, sleeve: textile cladding with CuNi coating	6	1	alignment pin and retention screws pressed in,
9 1 EMC profile seal, core: foam, sleeve: textile cladding with CuNi coating	7	1	· · · · · · · · · · · · · · · · · · ·
sleeve: textile cladding with CuNi coating	8	1	Standard inserter/extractor handle, plastic lever, black
10 1 Assembly kit	9	1	
	10	1	Assembly kit

#### **Order Information**

Description	Part no.	
Carrier mechanics for AdvancedMC compact and full-size modules without struts, ESD clips and guide rails	10849-002	
Accessories		
Microswitch, normally closed, for AdvancedMC carrier (compact and full-size modules) for soldering (SMD), PU 10 pieces	20849-236	
Microswitch, normally open, for AdvancedMC carrier (compact and full-size modules) for soldering (SMD), PU 10 pieces	20849-235	
Further struts, ESD clips and guide rails	Page 8.30	
Description inserter/extractor handle	Page 8.31	
Microswitch description	Page 8.31	
AdvancedMC module mechanics	Page 8.56	





ServicePLUS see page 8.34



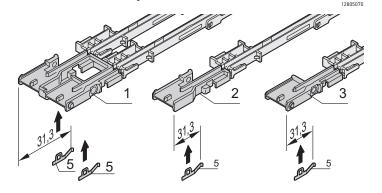
# 4 3/5 2/5 4

# Board guides/struts for AdvancedMC compact and full-size modules

- Struts and guide rails are always required to guide boards
- 3 different struts
  - The strut is assembled between the cover plates A and B  $\,$
  - The strut is assembled on the left of cover plate A
  - The strut is assembled on the right of cover plate  $\ensuremath{\mathsf{B}}$
- The ESD clip pushes into the strut (one per board guide)
- The guide rails clip into the cover plate

#### **Order Information**

Item	Description	Qty/PU	Part no.	
1	Strut between cover A (left) and B (right), Zn die-cast, nickel-plated	10	20849-009	
2	Splitting extrusion (strut) for cover A (left), Zn die-cast, nickel-plated	10	20849-010	
3	Splitting extrusion (strut) for cover B (on the right), Zn die-cast, nickel-plated	10	20849-011	
4	AdvancedMC guide rail, PBT, UL 94 V-0, red	10	20849-008	
5	ESD clip, stainless spring steel, for deflection of electrostatic charges	50	20849-021	
Acces	sories			
(comp	Microswitch, normally closed, for AdvancedMC carrier (compact and full-size modules)  for soldering (SMD), PU 10 pieces, page 8.31  20849-236			
carrie	Microswitch, normally open, for AdvancedMC carrier (compact and full-size modules) for soldering (SMD), PU 10 pieces - page 8.31			







# Microswitch for carrier (compact and full-size AdvancedMC modules)

■ Microswitch for soldering (SMD)

#### **Order Information**

Technical data

Max. switch current

Operating temperature Electrical lifespan

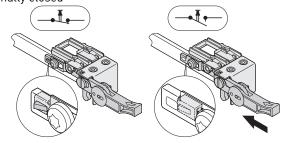
Description	Qty/PU	Part no.
Microswitch, <b>normally closed</b> , for AdvancedMC carrier (compact and full-size modules)	10	20849-236
Microswitch, <b>normally open</b> , for AdvancedMC carrier (compact and full-size modules)	10	20849-235

1 mA, 5 V<sub>DC</sub> -15 °C ... +70 °C

10<sup>5</sup> switching cycles

#### ,

#### "Normally closed"



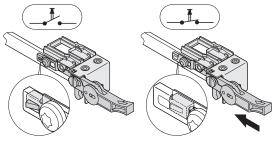
Handle in inoperative position

Handle activated

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#### Closer

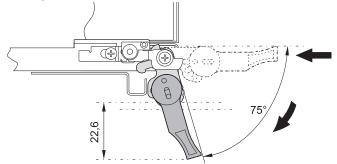


Handle in inoperative position

Handle activated

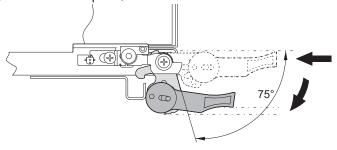
# Differences between standard and MF handle for AdvancedMC carrier (compact and full-size modules)

**Standard front handle** - is included in delivery of carriers for compact and full-size modules



- Extractor handle 75° opening angle
- Insertion/extraction in one step
- Swing range: 23 mm below and above the pitch line
- Included in delivery of carrier

**MF handle** - can be exchanged by standard handle if needed (available on request)



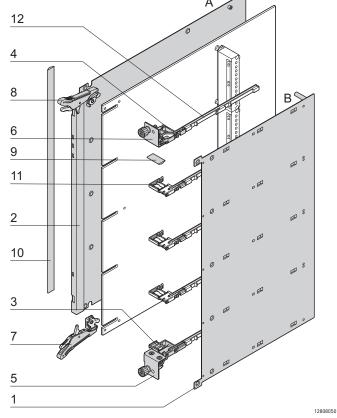
- Extractor handle 75° opening angle
- Insertion/extraction in three steps (2 operations)
- Small swing range (0 mm) below and above the pitch line. The lower respectively upper limit of the carrier is not exceeded during extraction.

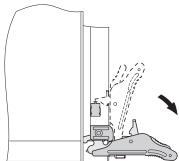


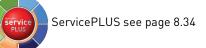
## Systems - AdvancedMC conventional carrier











#### Carrier mechanism for mid-size AdvancedMC modules with AdvancedTCA IEA handle, complete kit

- Mechanics for conventional carrier, stainless steel (EMC shielded)
- Width 1 slot (6 HP), height 8 U, corresponds to  $PICMG^{\otimes}$ AMC.0 R2.0
- AdvancedTCA IEA inserter/extractor handle, designed for microswitch activation (hot-swap)
- Carrier mechanics with struts and guide rails for four modules

#### Delivery comprises (Kit)

Item	Qty	Description
1	1	Cover plate B (right), stainless steel, brushed, 0.6 mm, inner surface electrically insulated, exterior with protective film
2	1	Cover plate A (left), stainless steel, brushed, 0.6 mm, inner surface electrically insulated, exterior with protective film
3	1	Lower splitting extrusion (strut), Zn die-cast, nickel-plated
4	1	Upper splitting extrusion (strut), Zn die-cast, nickel-plated
5	1	Lower front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in
6	1	Upper front panel, stainless steel, brushed, 1 mm, alignment pin and retention screws pressed in
7	1	Lower AdvancedTCA IEA inserter/extractor handle, with microswitch activation, plastic lever, black
8	1	AdvancedTCA IEA inserter/extractor handle, top, with microswitch activation, lever plastic, black
9	1	EMC profile seal, core: foam, sleeve: textile cladding with CuNi coating
10	1	EMC profile seal, core: foam, sleeve: textile cladding with CuNi coating
11	3	Splitting extrusion between covers A and B (4 ESD clips)
12	5	AdvancedMC guide rail, PBT, UL 94 V-0, green
13	1	Fixing material kit

#### **Order Information**

Description	Part no.	
AdvancedMC carrier mechanism for mid-size AdvancedMC modules with AdvancedTCA IEA handle with struts, ESD clips and guide rails	10849-011	
Accessories		
Microswitch for carriers (mid-size AdvancedMC modules) normally closed, for soldering (SMD), PU 10 pieces	20817-853	
Microswitch for carriers (mid-size AdvancedMC modules) normally open, for soldering (SMD), PU 10 pieces	20817-909	
AdvancedMC module mechanics	Page 8.56	

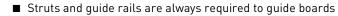
#### Note

- Carrier with stronger cover plate A (1 mm) on request
- Carrier for compact AdvancedMC modules on request
- Southco type handle kit on request



# Systems - AdvancedMC conventional carrier

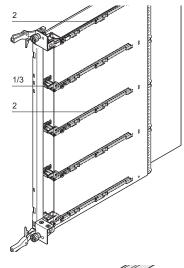
#### Board guides/struts for AdvancedMC mid-size modules

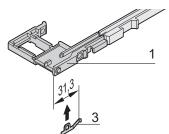


- Strut is assembled between cover plates A and B
- The ESD clip pushes into the strut (one per board guide)
- The guide rails clip into the cover plate

#### **Order Information**

Item	Description	Qty/PU	Part no.
1	Strut between cover A (left) and B (right), Zn die-cast, nickel-plated	10	20849-242
2	AdvancedMC guide rail for mid-size carrier, PBT, UL 94 V-0, green	10	20849-166
3	ESD clip, stainless spring steel, for deflection of electrostatic charges	50	20849-021





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# Microswitch for carriers (mid-size AdvancedMC modules)

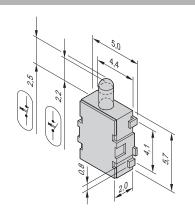
- Microswitch for soldering (SMD)
- Can be used for all conventional carrier handles

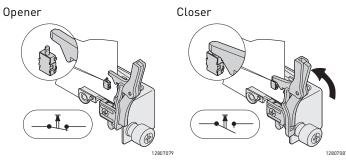
#### **Order Information**

Description	Qty/PU	Part no.
Microswitch (normally closed) for carrier (mid-size AdvancedMC modules)	10	20817-853
Microswitch ( <b>normally open</b> ) for carrier (mid-size AdvancedMC modules)	10	20817-909

#### Technical data

Max. switch current	100 mA, 12 V <sub>DC</sub>
Operating temperature	-20 °C +60 °C
Flectrical lifespan	5 x 10 <sup>5</sup> switching cycles







# Systems - AdvancedMC carrier ServicePLUS



#### modification

#### Small changes. Large impact.

Custom drillings, cut-outs and special colours for off-the-shelf products

Mechanical modifications

■ Ready to send within 10 working days



#### solution

#### Simple. Fast. From one source.

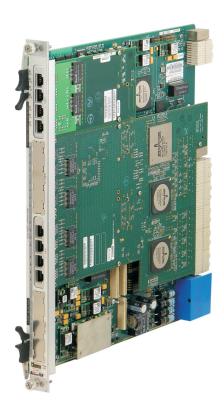
Integration and custom developments

■ Customised complete solutions



# Systems - AdvancedMC carrier ServicePLUS

#### ServicePLUS: solution



#### AdvancedMC carrier mechanics

- The carrier board is a combination of conventional and cutaway carriers
- Max. placement depends on the design of the carrier board
- Custom versions on request
  - Single/double combinations
  - Handles
    - AdvancedTCA IEA
    - AdvancedTCA Southco



### Appendix - Order notes

#### **Packaging units**

A packaging unit (PU) - e.g. carton, bag - contains the stated quantity. If you order the quantity 1, you will automatically receive the quantity defined as PU.

Example: EMC textile gasket

See page 5.22

Part number 21101-853

Quantity (per part number): 10 pieces

2 . . . . . . . . . . . . 20 pieces 3 . . . . . . . . . . . . . . . . 30 pieces

#### **Price list**

Our price list is available by e-mail from your customer consultant. Please find all contact details at www.schroff.biz/contact.

#### Standard pack quantity (SPQ)

Please take into consideration that deliveries may be carried out in the stated SPQs (SPQ, e.g. 5 pieces, 10 pieces, 50 pieces, etc.). Differing order quantities (e.g. 2 pieces) may be changed to the next possible delivery quantity = Standard Pack Quantity (in this case 10 pieces).

Example: Front horizontal rail

See page 5.31

Part number 34560-228

Quantity (per part number): 1 piece Standard pack quantity (SPQ): 10 pieces

Order quantity: . . . . . . . Delivery quantity:

#### **Delivery times**

Part numbers in bold face type are ready for despatch within 2 working days; part numbers in normal type are ready for despatch within 10 working days.

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#### Responsible for contents and print

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Faults and spelling mistakes, but mainly changes due to improvements and further developments of our products are subject to change. There is no possibility to claim indemnity/compensation.

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Largest Supplier of Electrical and Electronic Components

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