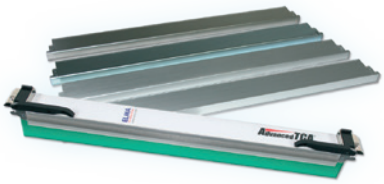
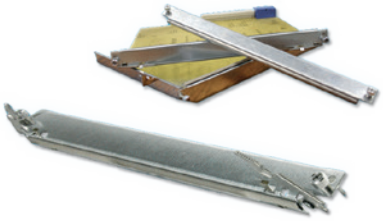
2: Front Panels for Plug-In Units



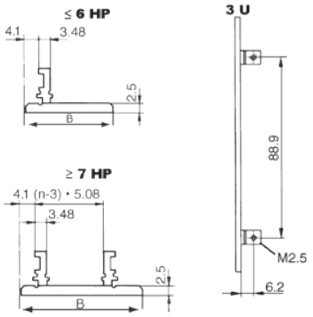
2: Front Panels for Plug-In Units



2.1 Plug-In Units acc. to IEC

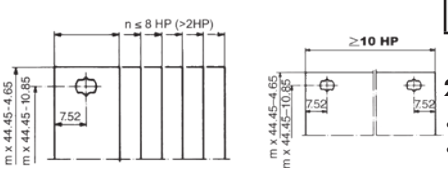
2.1.1 Extruded Front Panel

- Aluminium 2.5 mm, clear anodised (non-conductive)
- PCB mounting lugs are formed on the rear face of the panel
- No PCB fixing screws on the front face of the panel, leaving more space for silk screening and mounting front panel components
- Suitable for all sub racks and cases
- Thickness of the mounting lugs (3.48 mm) allows PCBs to be mounted on either side of the lugs
- Drill marks at rear for handle-fixing holes
- **Scope of delivery:**
  - Extruded front panel, clear anodised
- Front panel screws see below



2.1.1 Extruded Front Panels, without Openings

Width	B		Part-No. 3 U	Part-No. 6 U
	mm	inch		
3 HP	15.0	0.59	26N303	26N603
4 HP	20.1	0.79	26N304	26N604
5 HP	25.2	0.99	26N305	26N605
6 HP	30.3	1.19	26N306	26N606
7 HP	35.3	1.38	26N307	26N607
8 HP	40.4	1.59	26N308	26N608
10 HP	50.6	1.99	26N310	26N610
12 HP	60.7	2.38	26N312	26N612
14 HP	70.9	2.79	26N314	26N614
16 HP	81.1	3.19	26N316	26N616
21 HP	106.5	4.19	26N321	-



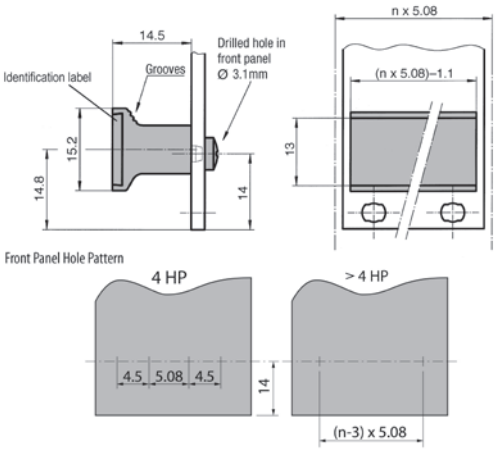
2.1.1.1 Front Panel Screws

- Set of 10 screws
- With screw retainer
- Front panel width up to 9 HP = 2 screws; ≥ 10 HP = 4 screws

Description	Part-No. 10 pcs.
Torx screws M2.5 x 11.3 , size T8, with plastic screw retainer	63K159
Rounded head screws recessed M2.5 x 11.3, with plastic screw retainer	63-159

2.1.1.2 Rigid-Mounted Unit Handles with Identification Label

- Black, plastic UL94 V-0, label aluminium anodised
- **Scope of delivery:**
  - Rigid-mounted handle
  - Identification label
- Assembly material see below



2.1.1.2 Rigid-Mounted Handle with Identification Label

Width	Scope of Delivery	Part-No.
4 HP	10 pcs.	60-200-04
5 HP	10 pcs.	60-200-05
6 HP	10 pcs.	60-200-06
7 HP	10 pcs.	60-200-07
8 HP	10 pcs.	60-200-08
10 HP	10 pcs.	60-200-10
12 HP	10 pcs.	60-200-12
14 HP	1 pc.	60-200-14

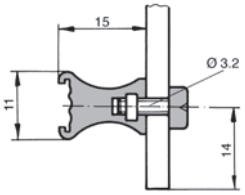
- Other sizes (up to 84 HP) are available upon request

Assembly Material

Description	Part-No.
Cross recessed rounded head screw	61-276

2.1.1.3 Fluted Handles

- Extruded aluminium handles, shaped to facilitate withdrawal of plug-in units
- Two grooves in the front face will accept identification strips (0.5 x 9 mm)
- **Scope of delivery:**
  - Extruded handle, clear anodised
  - Assembly material

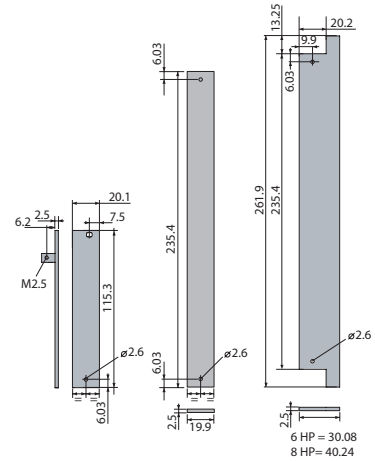


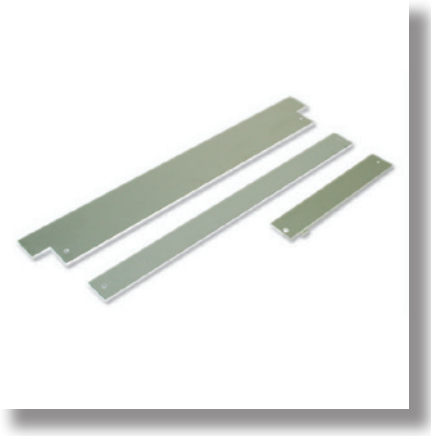
2.1.1.3 Fluted Handles for Front Panels to IEC

Front Panel Width HP	Width mm	Width inch	Handle Length mm	Handle Length inch	Part-No.
3 HP	15.0	0.59	12.5	0.49	60-103
4 HP	20.1	0.79	17.6	0.69	60-104
5 HP	25.2	0.99	22.6	0.88	60-105
6 HP	30.3	1.19	27.7	1.09	60-106
7 HP	35.3	1.38	33.5	1.31	60-107
8 HP	40.4	1.59	37.9	1.49	60-108
10 HP	50.6	1.99	48.0	1.88	60-110
12 HP	60.8	2.39	58.2	2.29	60-112
14 HP	70.9	2.79	69.1	2.72	60-114
16 HP	81.1	3.19	78.5	3.09	60-116
21 HP	106.5	4.18	104.6	4.11	60-121
30 HP	152.2	5.99	149.6	5.88	60-130
40 HP	203.0	7.99	200.4	7.88	60-140
60 HP	304.6	11.99	302.0	11.88	60-160
84 HP	426.5	16.79	424.0	16.69	60-184

2.1.2 Front Panel with Cutout for IEC Ejector Handle

- Aluminium 2.5 mm, clear anodised (non-conductive)
- PCB mounting lugs are formed on the rear face of the panel (only 3 U-Version)
- No PCB fixing screws on the front face of the panel, leaving more space for silk screening and mounting front panel components
- Suitable for all sub racks and cases
- 3 U front panels prepared for one handle
- 6 U front panels prepared for two handels
- **Scope of delivery:**
  - Front panel, clear anodised
- Front panel screws see 2.1.2.1 (for 3 U-Version only)
- IEC ejector handles, see 2.1.2.2





2.1.2 Front Panel with Cutout for IEC Ejector Handle

Width	B		Part-No. 3 U	Part-No. 6 U
	mm	inch		
4 HP	20.0	0.79	26N304-51	21N604-51
6 HP	30.2	1.19		21N606-51
8 HP	40.3	1.59		21N608-51

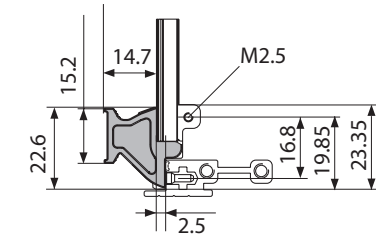
2.1.2.1 Front Panel Screws (for 3 U-Version only)

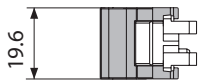
- Set of 10 screws
- With screw retainer
- Front panel 3 U = 1 screw

Description	Part-No. 10 pcs.
Torx screws M2.5 x 11.3, size T8, with plastic screw retainer	63K159
Rounded head screws recessed M2.5 x 11.3, with plastic screw retainer	63-159

2.1.2.2 Ergonomic Ejector Handles acc. to IEC

- Simple assembly of plug-in units
- Allows trouble-free extraction of electronic units with multi-pole connectors
- Main features in one part: card holder, ejector handle and centring pin
- Reset spring for safe insertion
- One version for top and bottom only
- Handle is injection moulded, glass-reinforced plastic, UL94 V-0
- Card holder is zinc die-cast, nickel plated
- Reset spring is stainless steel
- **Scope of delivery:**
  - Ejector handle
  - Assembly material (cross recessed screws M2.5 for fixing of card holder/printed board/front panel)
- Front panel with special cutouts have to be ordered separately



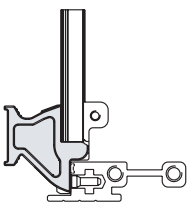


2.1.2.2 Ejector Handle acc. to IEC

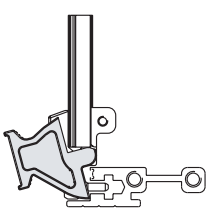
Description	Part-No.
Ejector handle black	81-233
Ejector handle grey	81-234

Extraction process:

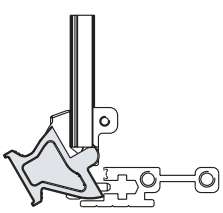
Rest position



Extraction

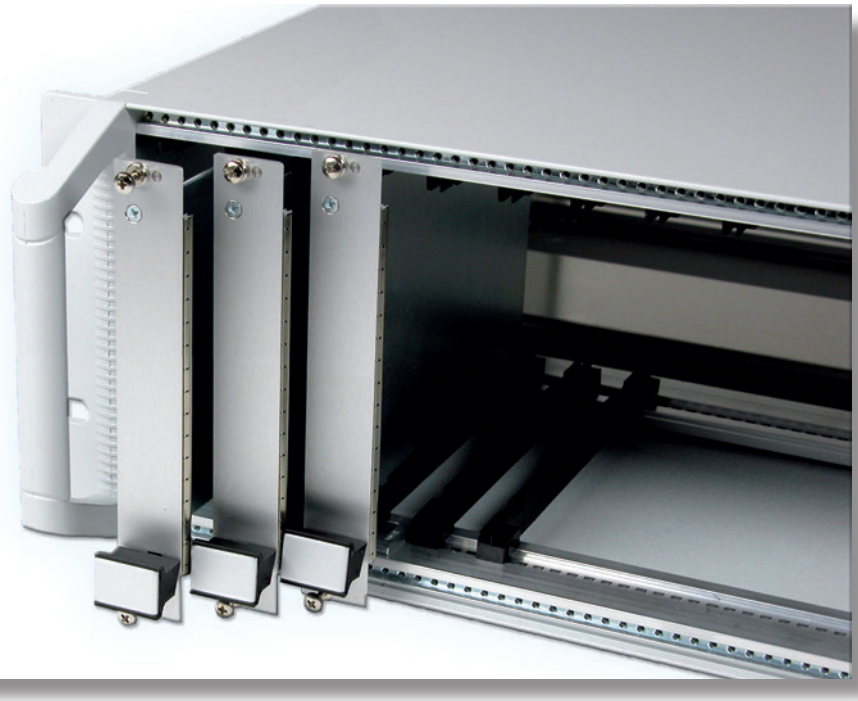


End position



Label

Description	Part-No.
1 sheet A4 of 220 labels	81-031



2.2 EMC Plug-In Units acc. to IEC

2.2.1 EMC Filler Panel without Openings

- Excellent EMC shielding
- Made of aluminium extrusions
- Rear side: conductive surface finish (clear passivated)
- Used in the assembly of plug-in units
- The EMC-gasket is integrated into the front panel profile to protect it from damage
- A pressfit centering pin guarantees optimum positioning of the panel as well as the right pressure between the contact strip and the next panel

2.2.1 EMC Filler Panel without Openings

- High stability
- Extruded aluminium
- Pressed-in centring pin and bushes M2.5
- Front side clear anodised, rear side conductive
- **Scope of delivery:**
  - EMC front panel, incl. pressed-in centering pin and bushes M2.5
- EMC-gasket see below
- Front panel screw see below
- Handles and card holders cannot be fitted with this type of front panel

Width	Part-No. 3 U	Part-No. 6 U
4 HP	66-514-73	66-514-76
6 HP	66-516-73	66-516-76
8 HP	66-518-73	66-518-76

2.2.1.1 EMC Gasket (Stainless Steel)

Height	Part-No.
3 U	81-062-03
6 U	81-062-06

2.2.1.2 Front Panel Screws

- Front panel width up to 8 HP = 2 screws

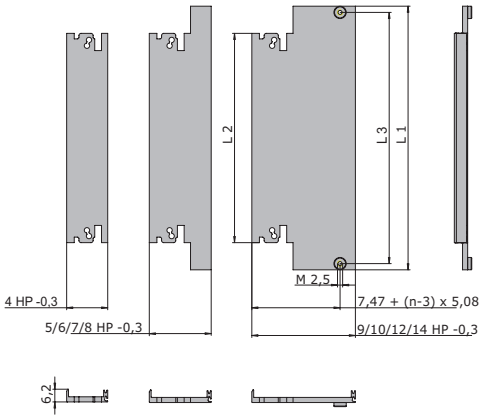
Description	Part-No.
Torx screw, M2.5 x 11.3, size T8	5443-08
Rounded head screw, cross recessed M2.5 x 12.7	61-287

Use Elma's front panel service for machining and screen printing of your panels!

2.2.2 EMC Front Panels for IEC Plug-In Units with Cutout for Ejector Handle acc. to IEC

EMC Front Panels Aluminium with EMC Gasket

- Excellent EMC shielding
- Immune to snagging
- EMC-gasket slid onto the extrusion
- **Scope of delivery:**
  - EMC front panel, incl. pressed-in bushes M2.5 (size ≥ 9 HP)
- EMC-gasket see 2.2.2.4
- Handle has to be ordered separately, see 2.2.2.6
- Front panel screw (size ≥10 HP), see 2.2.2.5



2.2.2.1 Front Anodised, Rear Conductive (2 cutouts)

- With 2 cutouts (bottom + top)

Width	Part-No. 3 U	Part-No. 6 U	Part-No. 9 U
4 HP	66-514-23	66-514-26	66-514-29
5 HP	66-515-23	66-515-26	-
6 HP	66-516-23	66-516-26	66-516-29
7 HP	66-517-23	66-517-26	-
8 HP	66-518-23	66-518-26	66-518-29
9 HP	66-519-23	66-519-26	-
10 HP	66-520-23	66-520-26	66-520-29
12 HP	66-522-23	66-522-26	-
14 HP	66-534-23	66-534-26	-

2.2.2.2 Front Anodised, Rear Conductive (1 cutout)

- With 1 cutout (bottom)
- Incl. pressed-in centring pin and bush M2.5 (top)
- Incl. cutout for mounting of card holder 61-156 (top) with screw 5322-08 (see 2.2.2.7)

Width	Part-No. 3 U
4 HP	66-514-43
5 HP	66-515-43
6 HP	66-516-43
8 HP	66-518-43
10 HP	66-520-43
12 HP	66-522-43
14 HP	66-534-43

Dimensions

Height	L1 mm	L1 inch	L2 mm	L2 inch	L3 mm	L3 inch
3 U	128.55	5.06	102.05	4.01	122.50	4.82
6 U	261.90	10.31	235.40	9.27	255.85	10.07
9 U	395.25	15.56	368.75	14.51	389.20	15.32

2.2.2.4 EMC-Gasket (Stainless Steel)

Unit	Part-No. 3 U	Part-No. 6 U	Part-No. 9 U
1 pc.	81-062-03	81-062-06	81-062-09

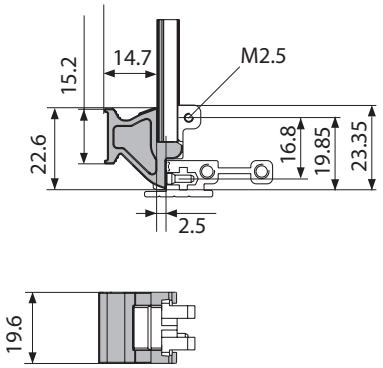
2.2.2.5 Front Panel Screw

- For EMC front panels size ≥ 9 HP = 2 additional screws are needed

Description	Part-No.
Cross recessed rounded head screws M2.5 x 12.7	61-287
Torx screws M2.5 x 11.3, size T8	5443-08

2.2.2.6 Ergonomic Ejector Handles acc. to IEC

- Simple assembly of plug-in units
- Allows trouble-free extraction of electronic units with multi-pole connectors
- Main features in one part: card holder, ejector handle and centring pin
- Reset spring for safe insertion
- One version for top and bottom only
- Handle is injection moulded, glass-reinforced plastic, UL94 V-0
- Card holder is zinc die-cast, nickel plated
- Reset spring is stainless steel
- **Scope of delivery:**
  - Ejector handle
  - Assembly material (cross recessed screws M2.5 for fixing of card holder/printed board/front panel)
- Front panel with special cutouts have to be ordered separately

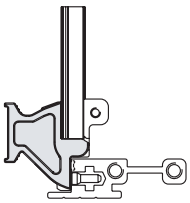


2.2.2.6 Ejector Handle acc. to IEC

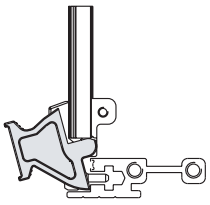
Description	Part-No.
Ejector handle black	81-233
Ejector handle grey	81-234

Extraction process:

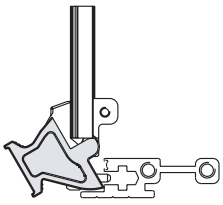
Rest position



Extraction



End position

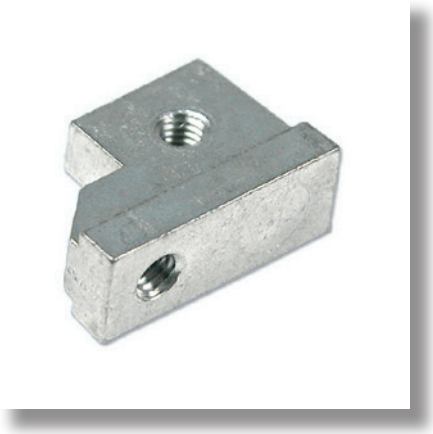


Label

Description	Part-No.
1 sheet A4 of 220 labels	81-031

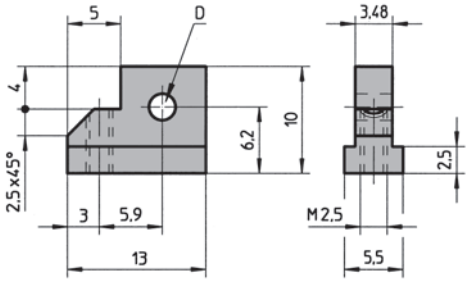
2.2.2.7 Card Holder acc. to IEC Standard

- By using the zinc die-cast card holder, flat front panels and EMC front panels acc. to IEC can be connected to a PC card to form a plug-in unit
- The card can be mounted both in the standard position and offset 1 HP (5.08 mm)
- **Scope of delivery:**
  - Card holder
- Assembly material see below



2.2.2.7 Card Holder without Swivel Stop

Description	Application	D	Part-No.
Card holder without swivel stop	Without injector / ejector handle	M2.5	61-156



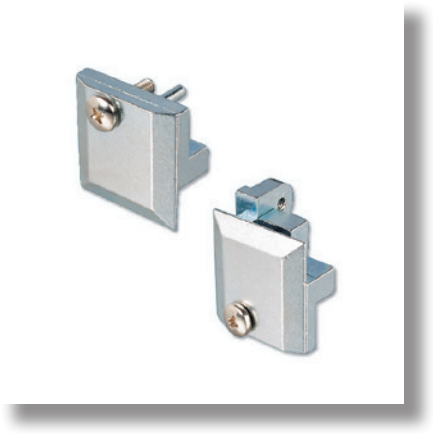
Assembly Material

Description	Application	Part-No.
Cross recessed countersunk screw M2.5 x 8	For card holder	5322-08
Torx countersunk screw M2.5 x 8, size T8	For card holder	5470-21
Slotted pan head screw M2.5 x 6	For printed board	5571-06
Torx cylinder head screw M2.5 x 6, size T8	For printed board	5470-04

2.2.2.8 Card Holder/End Piece without ESD Pin

- **Scope of delivery:**
  - End piece card holder (zinc die-cast, nickel plated)
  - Assembly material

  (screws M2.5 for fixing of front panel/card holder/printed board)



Card Holder/End Piece *without* ESD Pin

Description	Part-No.
Top	81-018-01
Bottom	81-019-01

2.3 Plug-In Units acc. to IEEE

2.3.1 EMC Front Panels Aluminium with EMC Gasket acc. IEEE

- Excellent EMC shielding
- Immune to snagging
- EMC-gasket slid onto the extrusion
- **Scope of delivery:**
  - EMC front panel, incl. press-in bushes M2.5 (size ≥ 10 HP)
- EMC-gasket see 2.3.1.1
- Handle has to be ordered separately, see 2.3.5
- Front panel screw (size ≥10 HP), see 2.3.1.2

2.3.1.1 Front Anodised, Rear Conductive (2 cutouts)

- With 2 cutouts (bottom + top)

Width	Part-No. 3 U	Part-No. 6 U
4 HP	66-514-23	66-514-26
5 HP	66-515-23	66-515-26
6 HP	66-516-23	66-516-26
7 HP	66-517-23	66-517-26
8 HP	66-518-23	66-518-26
9 HP	66-519-23	66-519-26
10 HP	66-520-23	66-520-26
12 HP	66-522-23	66-522-26
14 HP	66-534-23	66-534-26

2.3.1.2 Front Anodised, Rear Conductive (1 cutout)

- With 1 cutout (bottom)
- Incl. pressed-in centring pin and bush M2.5 (top)
- Incl. cutout for mounting of card holder 61-156 (top) with screw 5322-08

Width	Part-No. 3 U
4 HP	66-514-43
5 HP	66-515-43
6 HP	66-516-43
8 HP	66-518-43
10 HP	66-520-43
12 HP	66-522-43
14 HP	66-534-43

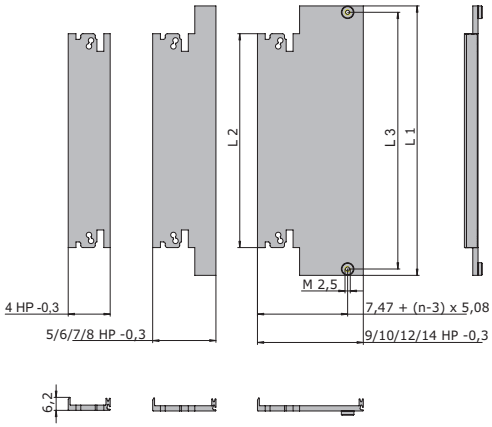
EMC-Gasket (Stainless Steel)

Unit	Part-No. 3 U	Part-No. 6 U
1 pc.	81-062-03	81-062-06

Front Panel Screw

- For EMC front panels size ≥ 9 HP = 2 additional screws are needed

Description	Part-No.
Cross recessed rounded head screws M2.5 x 12.7	61-287
Torx screws M2.5 x 11.3, size T8	5443-08



Dimensions

Height	L1 mm	L1 inch	L2 mm	L2 inch	L3 mm	L3 inch
3 U	128.55	5.06	102.05	4.01	122.50	4.82
6 U	261.90	10.31	235.40	9.27	255.85	10.07

2.3.2 Injector/Ejector Handles acc. to IEEE

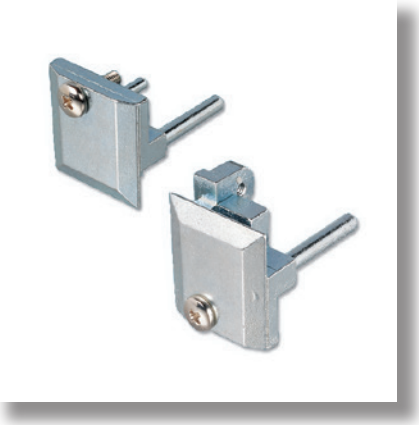
Type			Mounting	ESD Pin	Colour	Part-No.
Ergonomic			Bottom	With ESD-pin	Black	81-076
Ergonomic			Top	With ESD-pin	Black	81-075
Ergonomic			Bottom	Without ESD-pin	Black	81-076-01
Ergonomic			Top	Without ESD-pin	Black	81-075-01
Ergonomic	Hot Swap		Bottom	With ESD-pin	Black	81-096
Ergonomic	Hot Swap		Top	With ESD-pin	Black	81-095
Ergonomic	Hot Swap		Bottom	Without ESD-pin	Black	81-096-01
Ergonomic	Hot Swap		Top	Without ESD-pin	Black	81-095-01
Ergonomic	Hot Swap	Offset	Bottom	With ESD-pin	Black	81-185
Ergonomic	Hot Swap	Offset	Top	With ESD-pin	Black	81-184
Classic			Bottom	With ESD-pin	Black	81-261
Classic			Top	With ESD-pin	Black	81-260
Classic		Offset	Bottom	With ESD-pin	Black	81-161
Classic		Offset	Top	With ESD-pin	Black	81-160
Classic	Hot Swap		Bottom	With ESD-pin	Black	81-256
Classic	Hot Swap		Top	With ESD-pin	Black	81-255
Classic	Hot Swap	Offset	Bottom	With ESD-pin	Black	81-156
Classic	Hot Swap	Offset	Top	With ESD-pin	Black	81-155
Telecom	Hot Swap		Bottom	With ESD-pin	Black	81-206
Telecom	Hot Swap		Top	With ESD-pin	Black	81-205
Telecom	Hot Swap		Bottom	Without ESD-pin	Black	81-206-01
Telecom	Hot Swap		Top	Without ESD-pin	Black	81-205-01
Telecom	Hot Swap	Offset	Bottom	With ESD-pin	Black	81-189
Telecom	Hot Swap	Offset	Top	With ESD-pin	Black	81-188
Telecom long	Hot Swap		Bottom	With ESD-pin	Black	81-215
Telecom long	Hot Swap		Top	With ESD-pin	Black	81-214
Telecom long	Hot Swap	Offset	Bottom	With ESD-pin	Black	81-116
Telecom long	Hot Swap	Offset	Top	With ESD-pin	Black	81-117
Microswitch						81-088-1 (10 pcs.)

For more information refer to chapter 3 "Handles".

2.3.3 Card Holder and Coding Pins acc. to IEEE

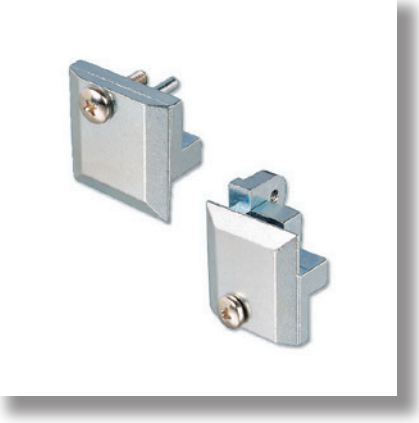
- **Scope of delivery:**
  - End piece card holder (zinc die-cast, nickel plated)
  - Assembly material

  (screws M2.5 for fixing of front panel/card holder/printed board)



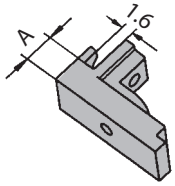
2.3.3.1 Card Holder/End Piece *with* ESD Pin

Description	Part-No.
Top	81-018
Bottom	81-019



2.3.3.2 Card Holder/End Piece *without* ESD Pin

Description	Part-No.
Top	81-018-01
Bottom	81-019-01



2.3.3.3 Middle Part

- Usable for all front panels
- For positioning and fixing of 6 U and 9 U cards, card thickness 1.6 mm
- Material: Plastic UL94 V-0

Description	A		Part-No.
	mm	inch	
Aluminium 2.5 mm	2.5	0.10	61-960

Assembly Material

Description	Part-No.
PT-countersunk, 2.5 x 6	5534-06

2.3.3.4 Coding Pins

- Acc. to IEC 60297-3-103
- Plastic, UL94 V-0
- Can be rotated in 4 positions

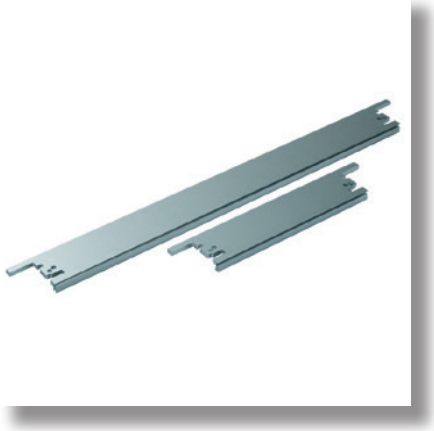
Description	Part-No.
Grey	81-054-02
Dark red	81-054-06
Black	81-054-04

2.4 Plug-In Units acc. to VPX

2.4.1 EMC Front Panels Aluminium acc. VPX

- Excellent EMC shielding
- EMC gasket can be inserted on the profile
- In accordance with VPX specifications
- Aluminum extrusion, anodized front, side and rear: conductive
- Front panels with 2 cut-outs (bottom + top); 66-515-43-VPX only 1 cut-out (bottom)

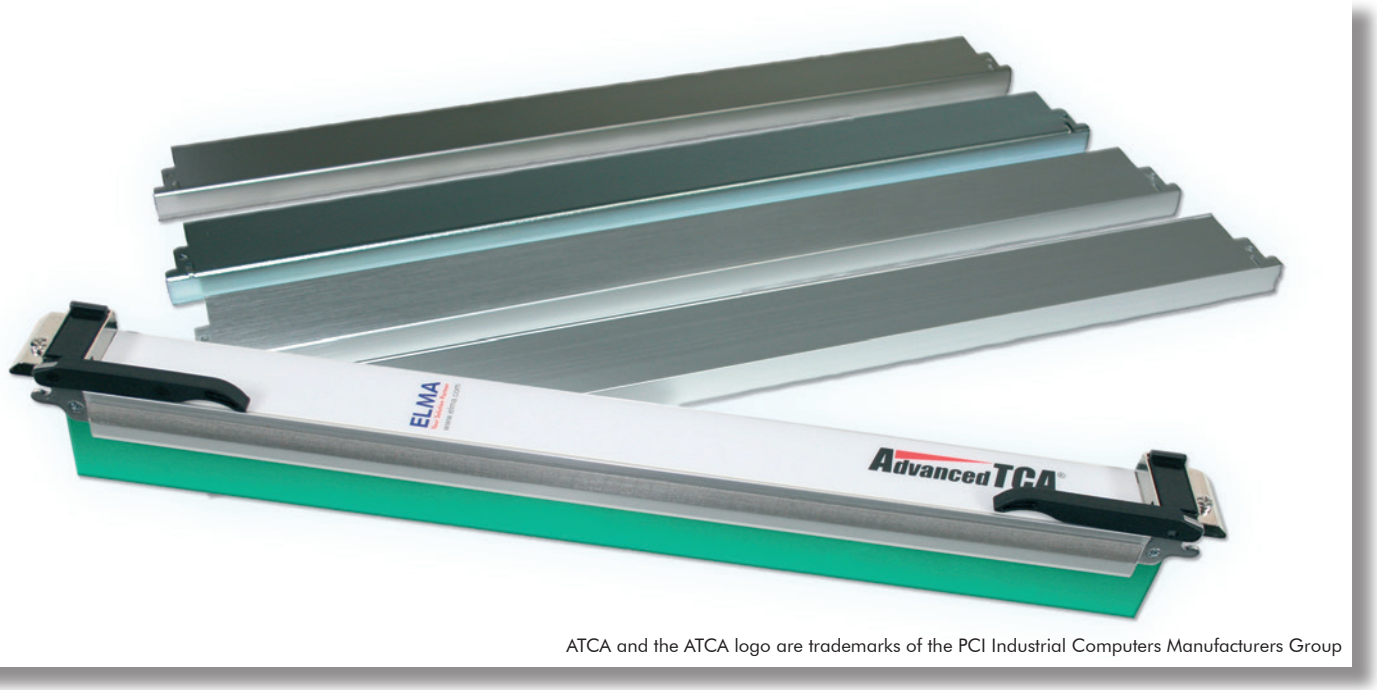
- **Scope of delivery:**
  - 1 EMC front panel, aluminum
  - 66-515-43-VPX additionally 1 card holder and assembly material
  - EMC gasket and injector handles must be ordered separately
  - For more injector handles, see Elmaset, Chapter C_3



Description	Part-No. 3 U	Part-No. 3 U, 1 cut-out	Part-No. 6 U
VPX profile front panel, 5 HP	66-515-23-VPX	66-515-43-VPX	66-515-26-VPX
EMC gasket (stainless steel)	81-062-03	81-062-03	81-062-06
Ergonomic injector handle bottom	81-096	81-096	81-096
Ergonomic injector handle top	81-095	-	81-095
Telecom injector handle bottom	81-206	81-206	81-206
Telecom injector handle top	81-205	-	81-205
10 pcs. Microswitch for injector handle	81-088-1	81-088-1	81-088-1

Contact us for the mechanical processing and imprinting of your VPX front panels.

Use Elma's front panel center for the processing, coloring, digital and anodized digital aluminium printing and installation of your operating unit.



ATCA and the ATCA logo are trademarks of the PCI Industrial Computers Manufacturers Group

AdvancedTCA

- AdvancedTCA, the PICMG 3.0 family, is a new series of PICMG specifications, targeted to requirements for the next generation of carrier grade communications equipment. This series of specifications incorporates the latest trends in high speed interconnect technologies, next generation processors and improved reliablility, manageability and serviceability.
- AdvancedTCA has several key features including Gigabit/Terabit per second bandwidth across each shelf, 150 - 200 W per board and 3 kilowatts per chasis power. It accomodates larger (8 U x 280 mm) boards and a 1.2 mm pitch which allows larger/taller components and more space on each board. Over 100 companies participated in developing the ATCA specification

2.5 Plug-In Units "Ergonomic" acc. to AdvancedTCA

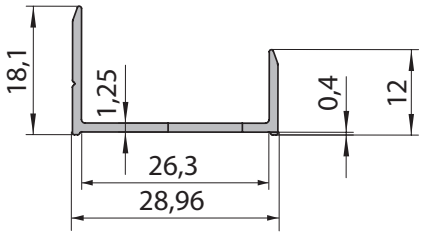
2.5.1 EMC ATCA Front Panels "Ergonomic"

- 8 U x 6 HP
- Conform to the PICMC 3.0 specification
- For boards with thicknesses of 1.6 mm to 2.4 mm
- Made for the ATCA Ergonomic handle family

2.5.1 EMC Front Panel 8 U x 6 HP Aluminium for Overlays

- Extruded aluminium
- Clear passivated
- **Scope of delivery:**
  - EMC front panel

Description	Part-No.
EMC front panel with pinhole for microswitch activation	66-535-38

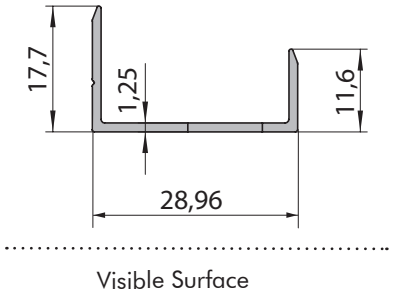


2.5.2 EMC Front Panel 8 U x 6 HP Aluminium

2.5.2 EMC Front Panel 8 U x 6 HP Aluminium

- Extruded aluminium
- Surfaces: visible part : Clear anodised
  rest: Clear passivated
- **Scope of delivery:**
  - EMC front panel

Description	Part-No.
EMC front panel	66-536-28
EMC front panel with pinhole for microswitch activation	66-536-38



2.5.3 ATCA Ergonomic Handle

2.5.3 ATCA Ergonomic Handle

- Pre-assembled
- Easy assembling onto front panel and PCB
- **Scope of delivery:**
  - Handles pre assembled
  - Screws front panel assembly loose packed
  - Screws PCB mounting loose packed

Description	Part-No.
Top handle	81-300-00
Bottom handle	81-301-00
Bottom handle with pin for microswitch activation	81-301-01

2.5.4 Microswitch for Injector/Ejector Handle

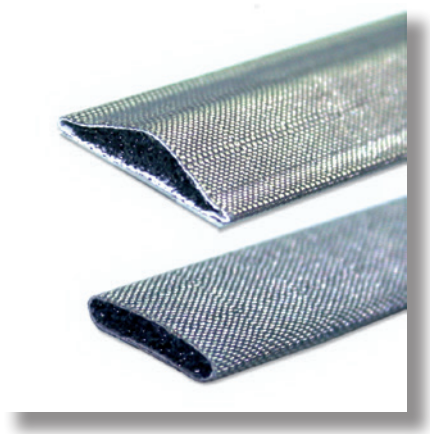
2.4.4 Microswitch for Injector/Ejector Handle

- Technical data and function see 3.5.3.1

Description	Part-No. 10 pcs.
Microswitch with pre-assembled wire cable length (25 mm)	81-088-1

Assembly material for mounting of Microswitch onto front panel acc. to ATCA, 2 pcs. 5686-05 have to be ordered separately

2.5.5 EMC-Gasket



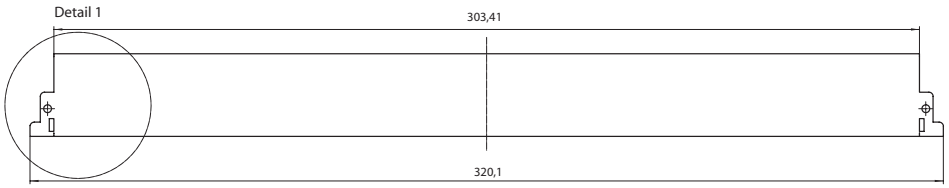
2.4.5 EMC-Gasket

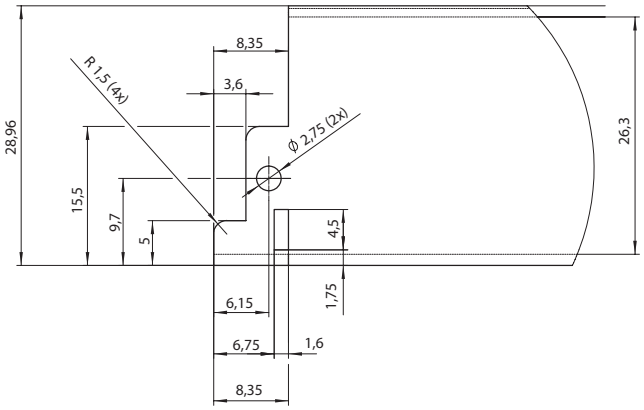
- Polyurethan foam core
- Conductive fabric (Cu + nickel plated)

Description	Part-No.
EMC-gasket triangular. 2.3 x 10 mm, L = 300 mm	7821-300
EMC-gasket triangular. 2.3 x 10 mm, L = 2000 mm	7821-2000

2.5.6 Cutouts for ATCA Ergonomic Handle without Switching Nose

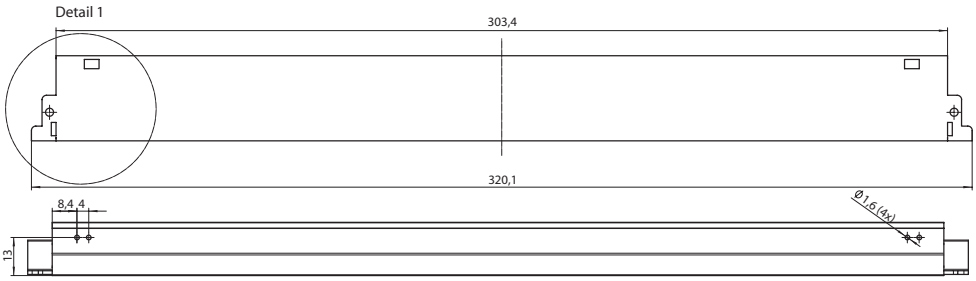
- Microswitch 81-088 assembled to handle
- Microswitch activation through interlock (sliding button) on handle

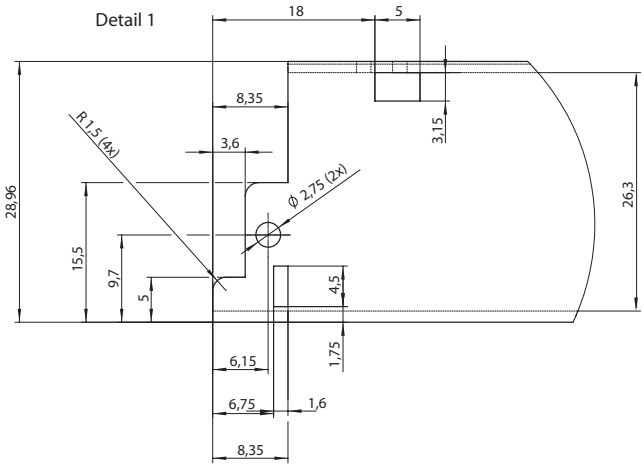


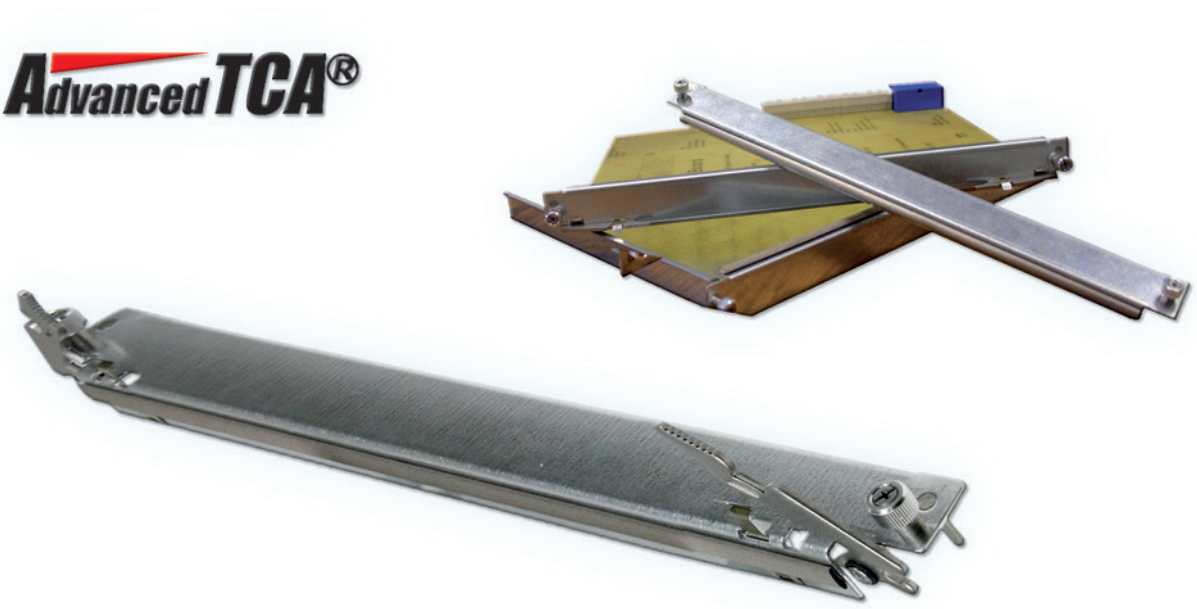


2.5.7 Cutouts for ATCA Ergonomic Handle with Switching Nose

- Microswitch 81-088 assembled to front panel
- Microswitch activation through switching pin on lever handle







2.6 Plug-In Units "Classic" acc. to AdvancedTCA

2.6.1 Plug-In Units "Classic"

- 8 U x 6 HP with handles
- Conform to the PICMC 3.0 specification
- For boards with thicknesses of 1.6 mm to 2.4 mm

2.6.1 Front Panel 8 U x 6 HP with Handles acc. to ATCA

- **Scope of delivery:**
  - Galvanised steel front panel incl. captive screws M3
  - EMC gasket
  - Handle set

Description	Part-No.
Steel front panel with handle	12T100

2.6.2 Filler Panel

2.6.2.1 Filler Panel 8 U x 6 HP acc. to ATCA

- **Scope of delivery:**
  - Steel filler panel, incl. captive screws M3
  - EMC gasket

Description	Part-No.
Filler panel steel, incl. captive screws M3	12T102

2.6.2.2 Filler Panels with Baffle

- **Scope of delivery:**
  - Steel filler panel, incl. captive screws M3
  - EMC gasket
  - Incl. Baffles

Description	Part-No.
Filler front panel with baffles 8 U x 6 HP x 270 mm	12T120
Filler RTM panel with baffles 8 U x 6 HP x 72.5 mm	12T121

2.6.3 Handle Set acc. to ATCA

2.6.3 Handle Set acc. to ATCA

- **Scope of delivery:**
  - 2 steel handles
  - 2 shoulder screws M2.5, Torx size T10
  - 4 + 4 washers
  - 2 latch spring clips

Description	Part-No.
2 handles	12T130

2.6.4 Captive Screw M3 and Latch Spring Clip

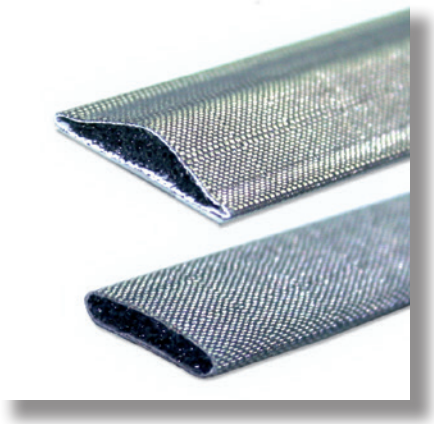
2.6.4.1 Captive Screw M3

Description	Part-No.
Screw M3 captive	12T133

2.6.4.2 Latch Spring Clip

Description	Part-No.
Latch spring	12T132

2.6.5 EMC-Gasket

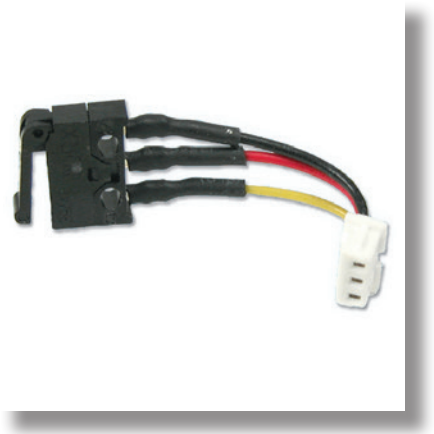


2.6.5 EMC-Gasket

- Polyurethan foam core
- Conductive fabric (cu+Niplated)

Description	Part-No.
EMC-gasket triangular. 2.3 x 10 mm, L = 300 mm	7821-300
EMC-gasket triangular. 2.3 x 10 mm, L = 2000 mm	7821-2000

2.6.6 Microswitch for Injector/Ejector Handle



2.6.6 Microswitch for Injector/Ejector Handle

Technical data and function see 3.5.3.1

Description	Part-No. 10 pcs.
Microswitch with pre-assembled wire cable length (25 mm)	81-088-1

AdvancedTCA

AdvancedTCA (ATCA) stands for Advanced Telecom Computer Architecture.
ATCA is the first open industry specification for carrier grade equipment incorporating high speed switched fabric technology. ATCA systems are capable of switching and processing 2.5 terabits per second in a single shelf.

What Size are the Boards?

After lengthy deliberations, sophisticated thermal simulations, and a lot of customer feedback, PICMG 3 boards are 8 U (322.25 mm) high and 280 mm deep. This size was carefully arrived at after considering cooling, front panel space, backplane size, and rear panel I/O requirements. Boards are spaced at a 1.2" (6 HP) pitch. The wider pitch accommodates taller components like next generation CPU's with integral heat sinks, off-the-shelf memory modules, and high power DC-DC converters. The wider pitch also improves cooling as more air volume can be circulated over a card.

Elma's ATCA Products and Services

Capabilities
- Simulation
- NEBS certification
- Customisation
- 3D solid modeling
- Manufacturing
- Integration

Systems
- 2 U, 3 U, 4 U, 5 U, 12 U & 13 U
- Redundant 48VDC input (AC input options available)
- Optimised via thermal simulation studies
- IPM sentry shelf management options

Backplanes
- 2, 4, 5, 14 & 16 slots
- Dual star, mesh or replicated mesh
- Compliant to PICMG 3.0
- Optimised via signal integrity studies

Accessories
- Front panels
- Handles
- Shelf managers

Please find further information on www.elma.com

AdvancedMC

AdvancedMC (AMC) brings hot swap and ATCA like features to a new generation of mezzanine modules.
While AMC was developed to be compatible with the ATCA architecture, AMC modules will be used in conjunction with other platform architectures. As its predecessors have shown, good mezzanine cards will be used wherever they can fit, which will encompass a very wide range of carrier form factors and applications.

AdvancedMC Products

To build up AMC Carriers and mezzanine modules mechanics in different versions are needed: Covers, Front Panels, Handles, EMC-Gaskets, Card-Guides, Filler Panels, Air Baffles and Micro Switches.
Elma is still working on those products.

Please find further information on www.elma.com

Customisation is the standard at Elma. With an extensive offering of modular products as a foundation, Elma is able to leverage existing solutions and proven design concepts to meet any custom application.

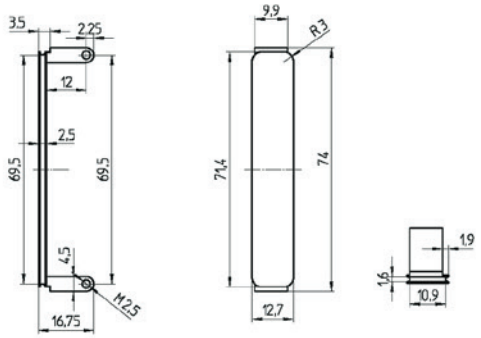
uTCA

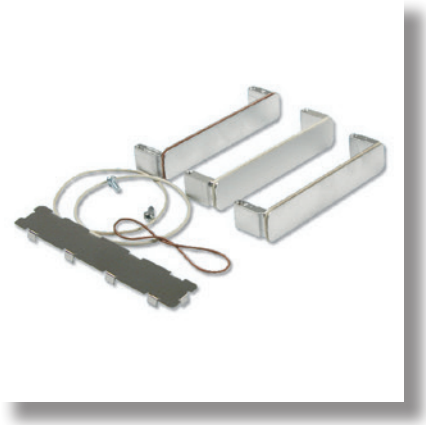
MicroTCA defines a system architecture that uses AdvancedMC mezzanine cards plugged directly into a backplane architecture to produce smaller form factor systems.

Please find further information on **www.elma.com**

2.7 PMC Mezzanine Front Panels

- Acc. to IEEE 1386
- Used on VME-, Future, CPCI- or MultibusII-Boards when additional interfaces are needed
- On a double euro board (6 U / 4 HP) maximum two PCI mezzanine cards can be placed
- Two designs are available: Zinc die-cast or aluminium extrusion
- Mezzanine filler panel: To cover the unused Mezzanine cut outs. The filler panels are simply clipped into the cut outs.
- The EMC-gaskets can be inserted into the groove of the front panels
- **Scope of delivery:**
  - 1 Mezzanine front panel
  - 1 Gasket
  - 2 screws M2.5 x 6 mm





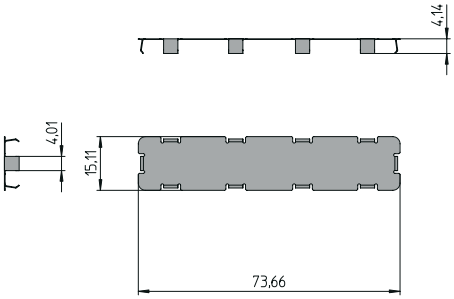
2.7 PMC Mezzanine Front Panels

Description	Material	Part-No.
Mezzanine front panel incl. EMC-gasket	Zinc die-cast, chrome-plated	21M171
Mezzanine front panel incl. EMC-gasket	Aluminium extrusion, clear anodised	21M271

Accessories

Description	Material	Part-No.
EMC-gasket (for zinc die-cast version)	Berilium copper	21M571
EMC-gasket (for aluminium profile version)	Elastomer mix with metal portion	21M570
Mezzanine filler panel	Stainless steel	21M600
Screws cross recessed M2.5 x 6 mm	Steel zinc plated blue	5325-06
Torx cylinder head screw M2.5 x 6, size T8	Stainless	5470-04

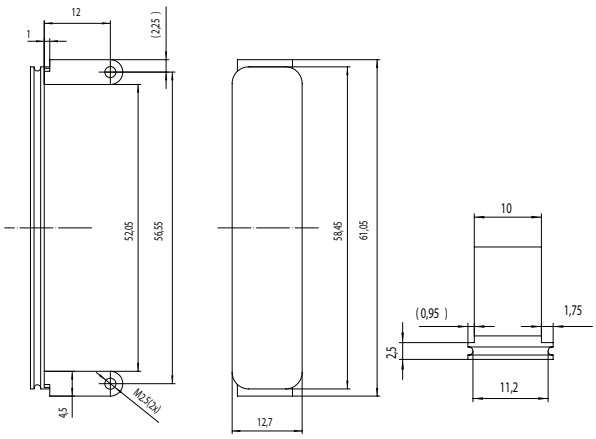
Mezzanine Filler Panel



2.8 FMC Mezzanine Front Panels

FPGA Mezzanine Card or FMC (Vita 57.1) describes a specification of I/O mezzanine modules in conjunction with FPGA or another device with configurable I/O capability. The low-profile design allows use on any industry standard slot card with form factors such as VME, VPX, CompactPCI, AdvancedTCA, MicroTCA, PCI, PXI, and many others. The compact size is very highly adaptable to many configuration requirements and complements existing mezzanine technologies such as PMC.

- Front panel in accordance with VITA 57.1 for FPGA Mezzanine Card (FMC)
- Material: aluminum
- The EMC gasket is inserted into the groove on the front panel
- **Scope of delivery:**
  - 1 Mezzanine FMC front panel, aluminum, anodized front, rest: conductive
  - 1 EMC gasket (elastomer)
  - 4 cylinder screws with cross recess M2.5 × 6 mm
  - 21M2080-2 additionally: 2 standoffs 10mm, 4 screws



2.8 FMC Mezzanine Front Panels

Description	Part-No.
1 FMC Mezzanine front panel incl. EMC-gasket	21M280-1
1 FMC Mezzanine front panel incl. EMC-gasket and 2 standoffs 10mm	21M280-2