

***Short update on the ATCA
procurement contract***

Procurement and maintenance framework key objectives - Reminder

Target

- Total estimated needs
 - ATLAS: 100 - 130 units
 - CMS: 100 - 130 units
- Technical requirements: No change compared to the original price enquiry for limited quantities.

Total estimated : 250 shelves

Blanket purchase contracts

- For both, ATCA shelves and AC-DC rectifier units
- Covering procurement and maintenance over long term

ATCA shelf

- 14 ATCA slots w. RTM
- Vertical (or Horizontal) cooling
- DS or FM topology
- 40G backplane (100G optional TBC)
- Bussed IPMB (Radial upon request)
- 1 Shelf man. Included (PP ShMM 700)

- 48Vdc rectifier system

- Up to 18 kW max output pwr (w. expansion unit)
- 9 kW with N+1 redund. (one 1U unit)
- Based on 5 pwr bricks
- Single bulk power output
- Ctrl module (SNMP over eth.)



<https://espace.cern.ch/ph-dep-ESE-BE-ATCAEvaluationProject/Procurement/SitePages/Home.aspx>

Procurement framework for ATCA shelf and -48V rectifier - Reminder

Main contractual conditions

- *Delivery lead-time: 10 weeks from ordering date **
- *Warranty duration: 2 years from delivery date*
- *Long term maintenance:*
 - *Fixed repair prices for every type of equipment (independent from the failure reason)
Subject to a 3 months repair warranty*
 - *Fixed verification prices for every type of equipment
Mostly applied in case of «no fault found»*
- *Faulty equipment: «fault report» to be registered in the DB prior to equipment return at the ePool reception*
 - *Subject to budget code registration. But DAI is issued only if equipment is out of warranty*

** Update on slide 6 !*

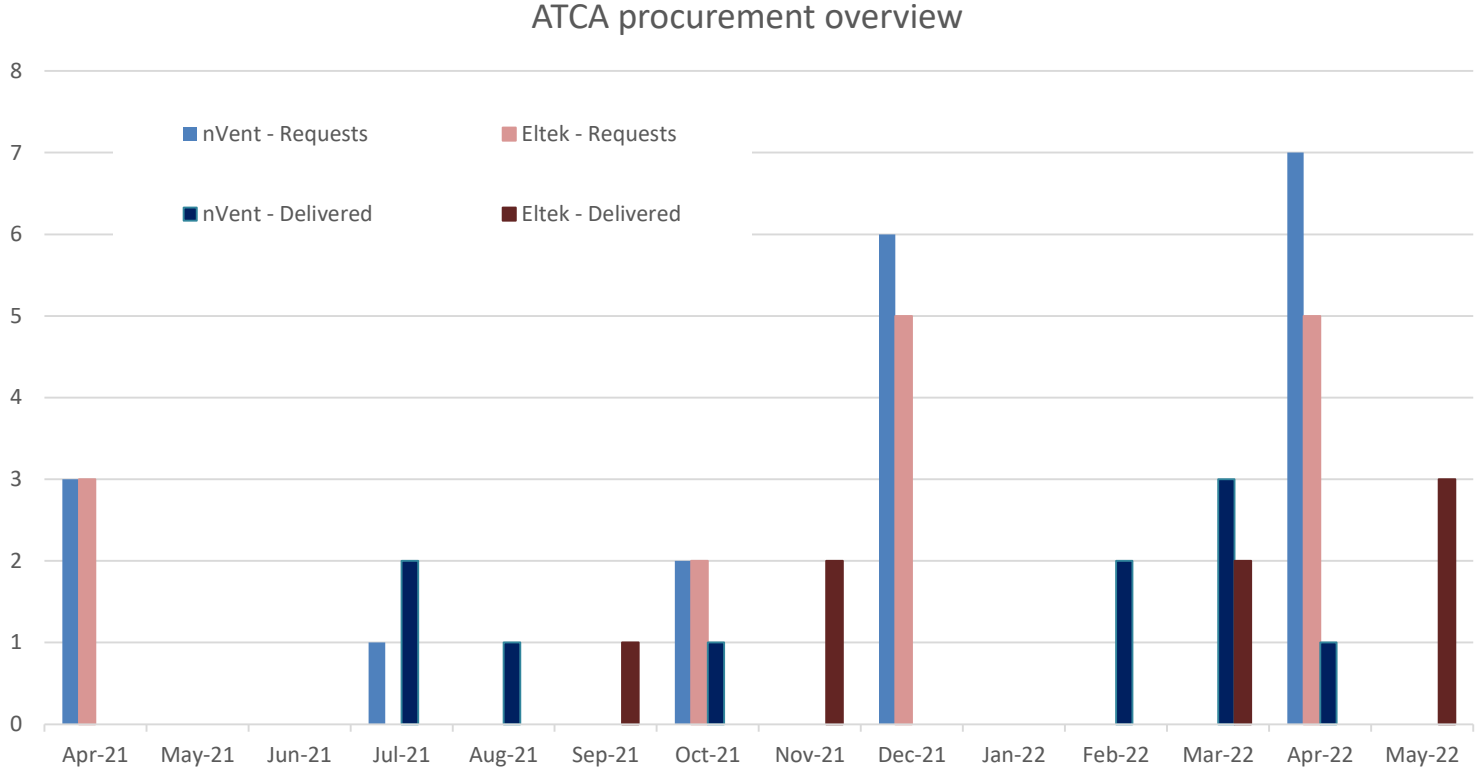
Equipment procurement status

Total ordered

- nVent crates: 16
- Eltek rectifiers: 12

Delivered so far

- nVent crates: 10
- Eltek rectifiers: 8



Equipment request using the DB - Reminder

Link to the technical database:
https://aisdb.cern.ch/pls/html_db_aisdb_prod/f?p=117

Under the Welcome page,
«ordering equipment» click
«new request»

In case of trouble/questions,
please contact:
lvps-crates.support@cern.ch

EP-ESE homepage - CERN homepage - Help Printer friendly Logout

EP-ESE Technical Database

Request details

Welcome Catalogue Items Actions **Requests** Statistics Persons Management

Search | [New Request](#) |

General details

For help, click on the field labels.

New Request

This page is only used for requesting the purchase of new equipment. If you have purchased equipment directly from the contractor yourself and need to have it registered, you can find a separate page for this under the items tab.

Please don't use the back button in the browser while adding the request

Order Status:

* Manufacturer:

* Owner: Experiment/Dept: Subdetector/Group:

Contact lvps-crates.support@cern.ch if your group/experiment doesn't appear.

* Contact:

Contact lvps-crates.support@cern.ch if your contact person doesn't appear. [Other Contact](#)

* Date Required:

* Budget Code:

TID:

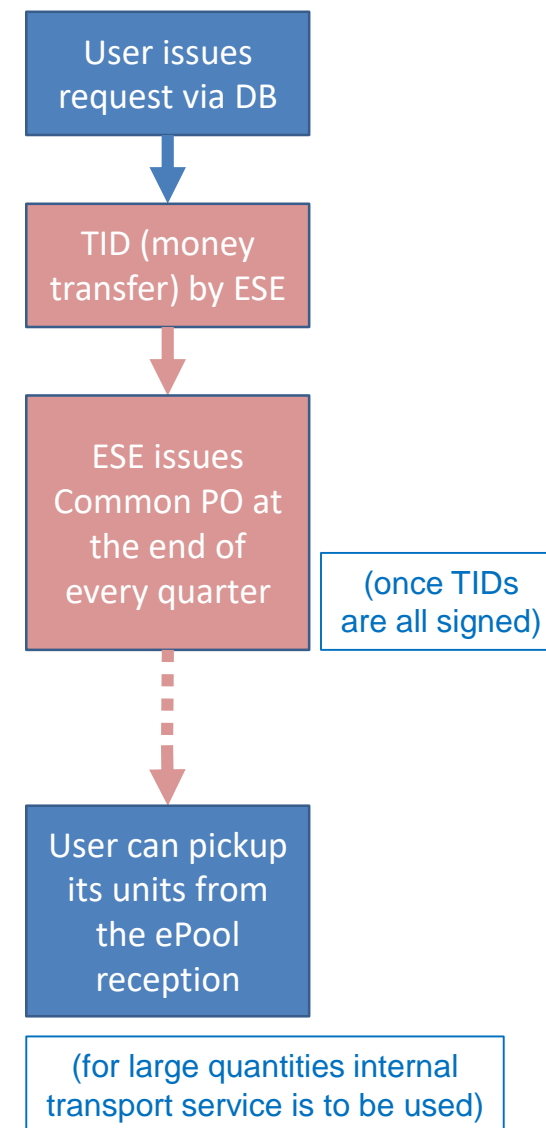
* Delivery Location: 13/R-009 is the default delivery place (Electronics Pool reception).

Comments:

Check here to request test on delivery by EP-ESE.

VBOBILLI (admin) en-us version 18.2.0.00.12 - 2018

Simple request workflow



Current procurement lead-times

Delivery lead-times of Eltek and nVent currently exceed the contractual 10 weeks.

Eltek rectifiers:

- Contractor issued a warning about the delivery delays for upcoming orders.
- Delays of > 6 months was observed on the Eltek rectifiers recently.

nVent/Schroff chassis

- Situation slightly better; thanks to the stock of ~20 crates maintained at the factory.
- Any larger request will be subject to “important” delay! > 6 months to be expected

*Users knowing their procurement plans should communicate them asap.
Firms will book production slots accordingly.*

Thanks for your attention

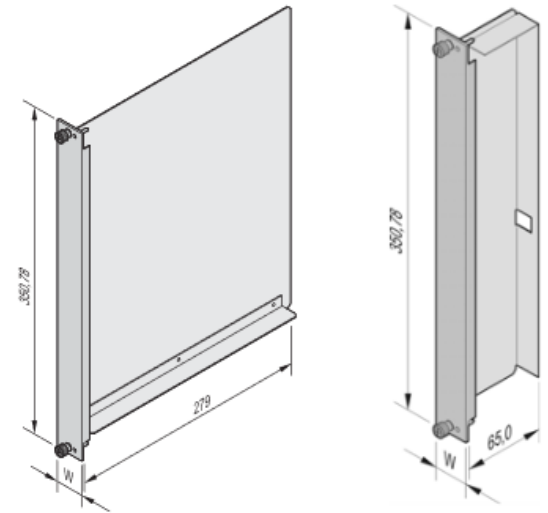
Accessories - Reminder

Filler modules/panels

- *Needed in unused slots (air cooling efficiency)*
- *Available from the CERN stores*
 - *Front panel, AdvancedTCA Air Deflector 280mm, with air baffle SCEM: 06.61.81.407.9*
 - *Rear panel, AdvancedTCA Air Deflector 70 mm, with Air baffle SCEM: 06.61.81.409.9*

Cabling

- *Mains connection and -48 Vdc link between the rectifier and the shelf*
- *Solution investigated by CMS (presented by Magnus Hansen)*
- *Highly rack integration dependant.*



Integration in the existing PS & crate technical DB

[EP-ESE homepage](#) - [CERN homepage](#) - [Help](#)

EP-ESE Technical Database Components - Search results

[Welcome](#) | [Catalogue](#) | [Items](#) | [Actions](#) | [Requests](#) | [Statistics](#) | [Persons](#) | [Management](#)
[Search](#) | [Search results](#) | [Create new component](#) | [Upload component prices](#) | [Upload components from file](#) | [Upload firmware revision values](#)

For help, click on the field labels.

Search criteria

List date: 13-JAN-21, Manufacturer: SCHROFF

[Back To Search Page](#)

Search results

Click the LHC inventory number to see the component details. The qty column will let you see all items of this type.

User price is calculated by converting the list price to CHF (if it is in EUR), and adding a transport cost specified in the component's purchase contract, unless the type of the component is "Additional charge". Other factors can also be applied to the price depending on the contract. The exchange rate used to convert from EUR to CHF is 1.1045. It is subject to fluctuations and is automatically adjusted on a regular basis. Prices in CHF get frozen only once a component request has been generated.

*: The equipment is verifiable.

Inv No	Manuf	Manuf Part No	Hide	Pool Inv No	Qty	Functn	Type	Variant	Description ↑	FF	RFF	Tot Ht	BckpIn	No 6u Slots	No Blowers	Cooling	Control	Magt (MT)	Radt (Gy)	List Price Currency	Purchase User Price (CHF)	Purchase List Price	Repair List Price	Repair User Price (CHF)	Verification List Price	Verification User Price (CHF)
7701	SCHROFF	40G Dual Star *	No	-	2	Subrack	Card-Cage	-	⊕ ATCA card	-	-	14U	Dual Star - 40G	-	-	Air	-	-	-	EUR	6,065.56	5,384.00	410.00	461.90	304.00	342.48
7702	SCHROFF	40G full mesh *	No	-	0	Subrack	Card-Cage	-	⊕ ATCA card	-	-	14U	Full Mesh - 40G	-	-	Air	-	-	-	EUR	7,150.47	6,347.00	410.00	461.90	304.00	342.48
7704	SCHROFF	100G full mesh *	No	-	0	Subrack	Card-Cage	-	⊕ ATCA card	-	-	14U	Full Mesh - 100G	-	-	Air	-	-	-	EUR	13,361.36	11,860.00	410.00	461.90	304.00	342.48
7703	SCHROFF	100G dual star *	No	-	0	Subrack	Card-Cage	-	⊕ ATCA card	-	-	14U	Dual Star - 100G	-	-	Air	-	-	-	EUR	7,650.67	6,791.00	410.00	461.90	304.00	342.48
7707	SCHROFF	100G Dual Star, Radial IPMB *	No	-	0	Subrack	Card-Cage	-	⊕ ATCA card	-	-	14U	Dual Star - 100G	-	-	Air	-	-	-	EUR	7,785.86	6,911.00	410.00	461.90	304.00	342.48
7705	SCHROFF	40G Dual Star, Radial IPMB *	No	-	0	Subrack	Card-Cage	-	⊕ ATCA card	-	-	14U	Dual Star - 40G	-	-	Air	-	-	-	EUR	6,312.28	5,603.00	410.00	461.90	304.00	342.48
7706	SCHROFF	40G full mesh, Radial IPMB *	No	-	0	Subrack	Card-Cage	-	⊕ ATCA card	-	-	14U	Full Mesh - 40G	-	-	Air	-	-	-	EUR	7,677.71	6,815.00	410.00	461.90	304.00	342.48
7708	SCHROFF	100G full mesh, Radial IPMB *	No	-	0	Subrack	Card-Cage	-	⊕ ATCA card	-	-	14U	Full Mesh - 100G	-	-	Air	-	-	-	EUR	13,501.05	11,984.00	410.00	461.90	304.00	342.48
7709	SCHROFF	PEM *	No	-	4	Module	Power-Box	-	⊕ ATCA Power	-	-	-	-	-	-	Air	-	-	-	EUR	617.15	547.80	404.00	455.14	103.00	116.04
7710	SCHROFF	ShMM-700R *	No	-	1	Module	Module	-	⊕ ATCA Shelf	-	-	-	-	-	-	Air	-	-	-	EUR	803.60	713.30	156.60	176.42	120.60	135.87
7711	SCHROFF	ShMM-700R, radial IPMB *	No	-	0	Module	Module	-	⊕ ATCA Shelf	-	-	-	-	-	-	Air	-	-	-	EUR	949.04	842.40	156.60	176.42	120.60	135.87
7712	SCHROFF	Top Fan-Tray *	No	-	2	Subrack	Fan-Tray	-	⊕ ATCA Top Cooling	-	-	-	-	-	6	Air	-	-	-	EUR	1,453.41	1,290.10	514.20	579.29	80.20	90.35
7713	SCHROFF	Bottom Fan-Tray *	No	-	2	Subrack	Fan-Tray	-	⊕ ATCA Bottom	-	-	-	-	-	6	Air	-	-	-	EUR	1,647.07	1,462.00	514.20	579.29	80.20	90.35
7715	SCHROFF	100G dual star backplane *	No	-	0	Subrack	Backplane	-	⊕ ATCA Bare	-	-	-	Dual Star - 100G	-	-	Air	-	-	-	EUR	6,134.28	5,445.00	373.20	420.44	131.20	147.81
7714	SCHROFF	100G full mesh backplane *	No	-	1	Subrack	Backplane	-	⊕ ATCA Bare	-	-	-	Full Mesh - 100G	-	-	Air	-	-	-	EUR	8,263.54	7,335.00	373.20	420.44	131.20	147.81

[Export to Excel](#)

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Purchase orders placed in common at the end of every quarter:

- Requests to be submitted via online DB
- TID (money transfer) to a common account prior to common PO (DAI)
- Equipment tracked in the DB from common PO on

Reception tests upon delivery

Test on delivery

- *Reception test can be requested by the users at the time of the purchase request via the technical DB (subject to additional delivery delay of 1-2 weeks)*
- *Depending on the batch size, only sample testing will be performed (10% but at least 1 unit /batch)*
- *The reception test consists in a basic functional test:*
 - *Visual inspection*
 - *Powering, checking of all fans*
 - *Module insertion (in one slot), recognition (by the ShMM) and activation*

Delivery of large quantities

- *Delivery of large size batches (> 10 units) will be subject to internal transport directly to the experiment/user premises*
- *In this case sample testing (if so requested) will be performed at the user's premises*

Useful links

- *Technical database:* https://aisdb.cern.ch/pls/htmldb_aisdb_prod/f?p=117

- *SharePoint page about the ATCA equipment procurement:*

<https://espace.cern.ch/ph-dep-ESE-BE-ATCAEvaluationProject/Procurement/layouts/15/start.aspx#/SitePages/Home.aspx>

In case of questions, contact: lvps-crates.support@cern.ch

Outcome of the IT-4604 (shelf) and DO-32713 (rectifier)

Selected companies

- *ATCA shelf: nVent (Schroff)*
- *Power rectifier: Eltek*

No change compared to the original price enquiry for limited quantities.

DCS integration

- *ATCA shelf: Remote control via the Schroff shelf manager (ShMM 700 based)*
- *Power rectifier: Remote control via “smartpack” control module over snmp (warning: no On/Off capabilities)*



Schroff/nVent ATCA shelf



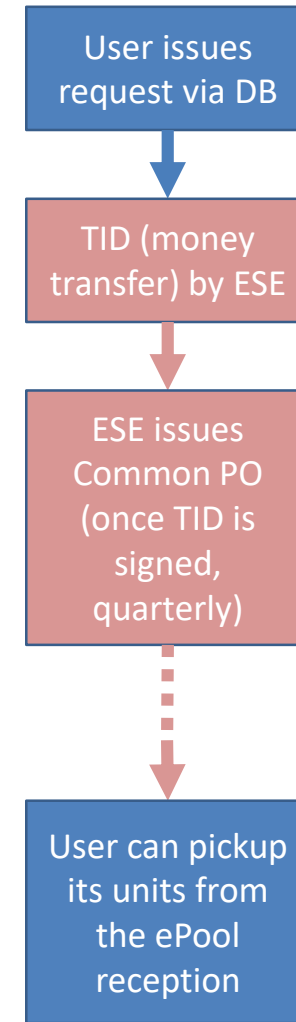
Eltek - 48Vdc rectifier system

Procurement framework for ATCA shelf and - 48V rectifier

New procurement framework

- *Based on blanket framework contracts*
- *Ok for large quantities over long term (10+ years)*
- *Purchase orders placed **in common at the end of every quarter***
 - *Requests to be submitted via dedicated online DB*
 - *Fixed negotiated prices (subject to yearly price indexation linked to local cost of living)*
 - *TID (money transfer) to a common account prior to common PO (DAI)*
 - *Equipment tracked in the DB from common PO on*

Goal: Same procedure as for ordering VME crates today



PO: purchase order

User support

Manufacturer documentation

- nVent/Schroff: <https://schroff.nvent.com/en-us/products/advancedtca-systems>
- Eltek: <https://ideltaemeapartners.deltaww.com/docsharing/Documents/>
(User: v-lvps-crates Password: R\$MZcBhB)

Support provided by the PS & crate service

- *Free of charge verification tests of full shelf systems and/or modules (to be requested via the DB)*
- *Remote support by email*
- *Testing of ATCA blades in reference shelf system*

Mini shelves available from the ePool

- *2 slots Schroff shelves available from the ePool for rental (w. integrated AC-DC)*

https://aisdb.cern.ch/pls/htmldb_aisdb_prod/f?p=189:7:::NO:RP:P7_ITEM:0530

