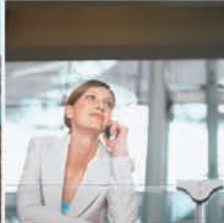




## AdvancedTCA® CO2-3U

**AC/DC 3U, 2 slot Central Office Shelf**  
**Side to Side Cooling**



**Front view**



### Features

- 19" Rack mounted 3U AC/DC Economy Version
- 2 slot replicated full mesh Backplane
- 2 slot horizontal for ATCA Front- and RTM boards
- Redundant -48VDC PEM & EMC filtered power feeds or Redundant Dual 850W AC Power Supply,
- Push-pull cooling hot-swap & redundant Fan Trays
- Dedicate RTM cooling
- Fully PICMG 3.0 Rev 2.0 compatible
- Designed for NEBS/ETSI compliance, RoHS
- High Reliability busbed IPMI

**Hot swap – Front side**



### Benefits

- Side to Side cooling
- Highly efficient packaging with up to 300W per slot cooling in horizontal 3U form factor
- RTM cooling 30W per slot
- High performance Backplane exceeds AdvancedTCA® specification
- 2 hot swap fan units
- Removable Air filter on air inlet side
- Quiet fans under no-failure conditions
- Controller is compatible with CO2 and CO6 horizontal systems

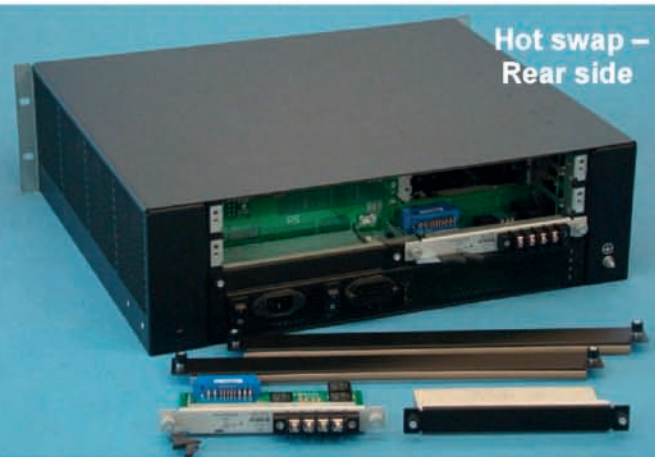
**Rear view**



### Notes

- The zone 3 area is unpopulated
- Individual Airflow blanking plates are provided
- Custom zone 3 backplanes can be provided
- EMC and airflow blanking modules are available

**Hot swap – Rear side**



### Dimensions

Height	133 mm	(3U, 5,25")
Width	440 mm	(19")
Depth	410 mm	(16.2")
Weight	15 kg	

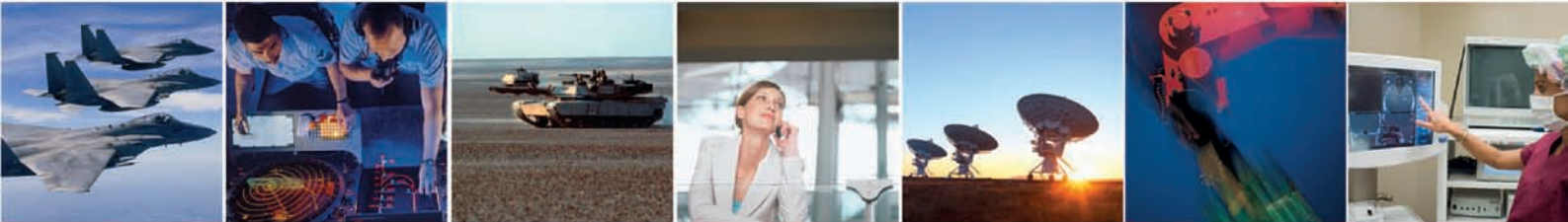
### AC-Power Supply

- Two PSU versions: 850W or 1.150W
- Wide Input Voltage Range 90VAC to 264VAC
- -48VDC output
- UL/EN60950-1, CE, CCC
- On chassis rear side:  
separate AC-inlet and 2-pole switch for each PSU





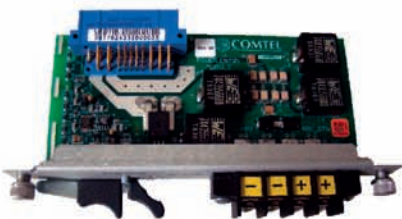
## Field Replaceable Units (FRU)



### AC PSU – 850W / 1.150W



### Power Entry Module



### Shelf Controller



### Pigeon Point SHMM500 Shelf Manager



### PEM

- Two Version of PEM's
- Input voltage -36V to -72VDC as per ETS 300 132-2
- Power connections 2 x 5mm
- Maximum current 45A per PEM
- EMI filter
- Transient suppression between -48V and -48V\_RTN & SHIELD-GND
- Fuses or Current sensor which read from shelf controller
- One PEM can drive full loaded system

### Two Types of Shelf Management Controller

#### 1. Simple Shelf Manager (SSM)

The Simple Shelf Manager is a low cost solution with minimum management functionalities, but without using an additional expensive high-end shelf manager processor module.

The SSM polls permanently all chassis sensors and sets the fan speeds according to the system cooling demands. Additionally, the SSM monitors the Power status.

For redundancy there can be installed two SSM.

#### 2. Pigeon Point Shelf Manager Controller (PPShMC)

The Pigeon Point Shelf Management Controller is the solution with the maximum chassis management functionalities.

The PPShMC controls all field replaceable units, read all sensors and sets the fan speeds according to the cooling demands of the system. In case of redundancy there can be installed two PPShMC.

### Functionality

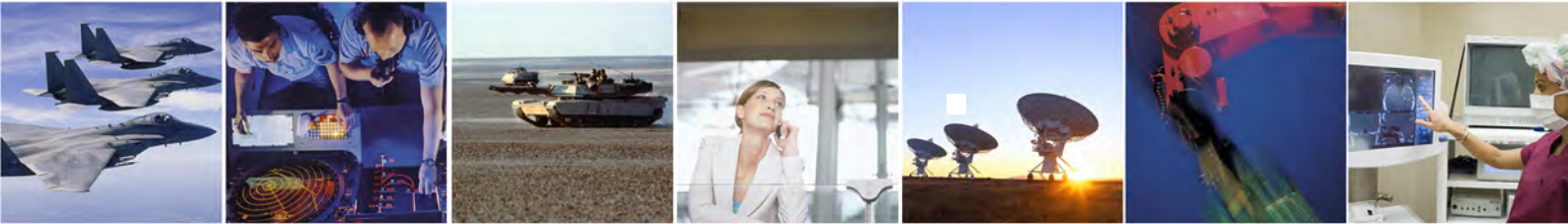
- Input voltage:-36VDC to -72VDC
- Input power channels (A+B), wired-or-diodes and 4 x fuses
- DIMM144-socket for Pigeon Point Shelf Manager Module Board
- Shelf Manager controlled Cooling algorithm
- Regulating the fan speed in wide range
- 11 x Tacho monitor signal inputs for fan monitoring
- 12 digital thermal sensors connected by I2C bus to backplane
- Onboard temperature sensors
- TELCO LEDs (Power Good / Critical / Minor / Major Alarm)
- TELCO Alarm Contacts (isolated, D-SUB 15 male)
- Hot Swap Button
- Ethernet Channel Switch from the backplane to the front panel RJ45 by front panel Switch
- LED indicators on front panel for PPShMC-Power-Status, Power OK, Fan Failure
- Redundancy with second PPShMC. Automatic switchover to redundant PPShMC in case of hot swap or failure

### Fan Unit

- Hot swap replaceable
- 92 x 92 x 38 mm high performance fans with 4 fans per unit
- Each fan fused and monitored



## New Generation of Management



## New Generation of Shelf Managers



### Overview

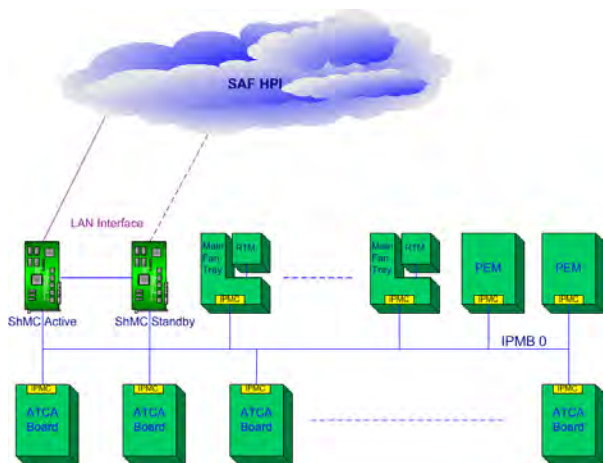
All system intelligence is concentrated on the new generation of AdvancedTCA<sup>®</sup> Controller, which may be assembled as a simple stand-alone-fan-controller or which can be upgraded to a full high-end AdvancedTCA<sup>®</sup> -Shelf Management Controller Unit including Pigeon Point ShMC with IPMI capabilities, intelligent cooling algorithm, TELCO Alarm contacts and with shelf management links over 100MB/s Ethernet connection. Depending on board assembly level momentary there are existing two different versions AdvancedTCA<sup>®</sup> controllers with different stages of intelligence.

- Simple Shelf Manager (SSM)
- Pigeon Point Shelf Manager Controller (PPShMC)

## Ordering Information

### Advanced unit comprising Shelf Assembly

- Two Front /Rear Fan Tray or Rear fans
- One Air filter
- Two PEM's or AC PSU
- Two Controllers (two options)
  - SSM - Simple Shelf Manager
  - PPShMC - Pigeon Point Shelf Management



### Sample: CO2-3U-F2-PPShMC2-P0-PSU

CO2-3U	Fan Tray	Controller	PEM	AC PSU
AdvancedTCA CO2-2U = DC, 2slot 2U CO2-3U = AC/DC, 2slot 3U CO6-5U = DC, 6slot 5U CO5-5U = AC/DC, 5slot, 5U CO6-6U = AC/DC, 6slot, 6U CO6-7U = DC, 6slot, 7U Front to Rear cooling	F1= One Fan- Tray front & rear F2= Two Fan- Trays front & rear FR= Rear Fans only for CO6-7U	SSM1 = One Simple Shelf Manager SSM2 = Two Simple Shelf Manager PPShMC1 = One PPS ShMC Controller PPShMC2 = Two PPS ShMC Controller	P0 = No PEM in AC version P1 = One Rear PEM P2 = Two Rear PEM FP1 = One Rear Fused PEM FP2 = Two Rear Fused PEM	None = No PSU in DC Version AC1 = One 850W PSU AC2= Two 850W PSU AC3 = Three 850W PSU AC4 = Four 850W PSU