

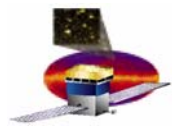
# GLAST Large Area Telescope:

## I&T Integration Kickoff Meeting EGSE Hardware

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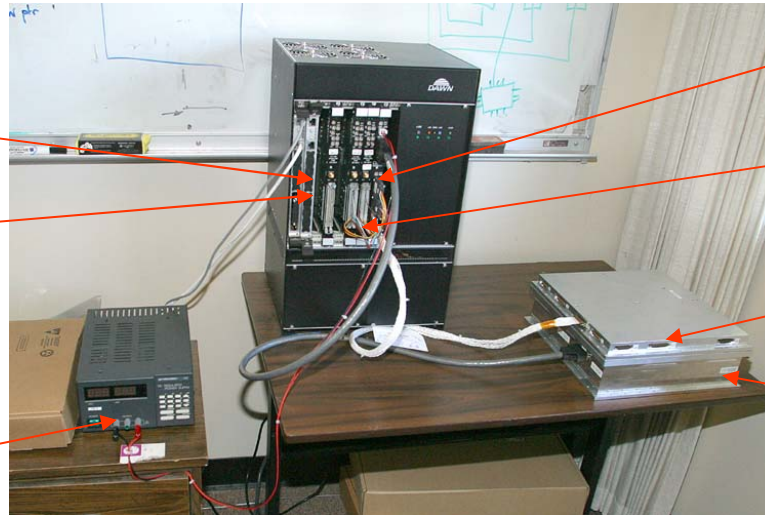


# Single Tower EGSE

Power-PC Processor

Flight Software

28-V Power Supply



LCB: LAT Communication Module

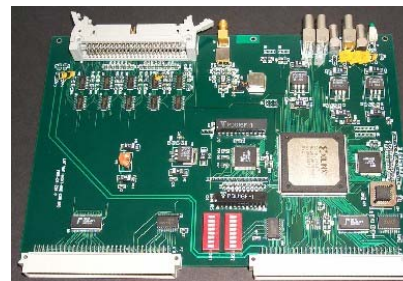
Transition-card: Trigger Module

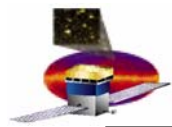
TEM DAQ Assembly

Tower Power Supply Assembly

(1.5V/2.5V/3.3V/  
0-100V/0-150V)

- Processor: Motorola Power-PC
- Flight Software
- PMCIA LAT Communication Board for
  - LAT Communication
- Transition Board
  - Trigger
- TEM DAQ Assembly
- TEM Power-Supply Assembly
- 28-V Supply
- LAT-TD-00861





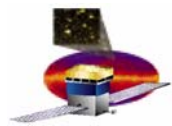
# Test Stand Definitions

Number						Contents
1	2a	2b	2c	3x	4x	
X	X	X	X			PC
X	X	X	X			VME crate
X	X	X	X			SBC
X	X	X	X			LCB
X	X		X			X board
X	*	*				TEM
X	*	*				TEMPS
		X	X			GASU (EGSE or flight)
				X		Various combinations of EGSE SIU, EPU and external test crate
					X	SIIS, Flight SIU and EPU, external test crate

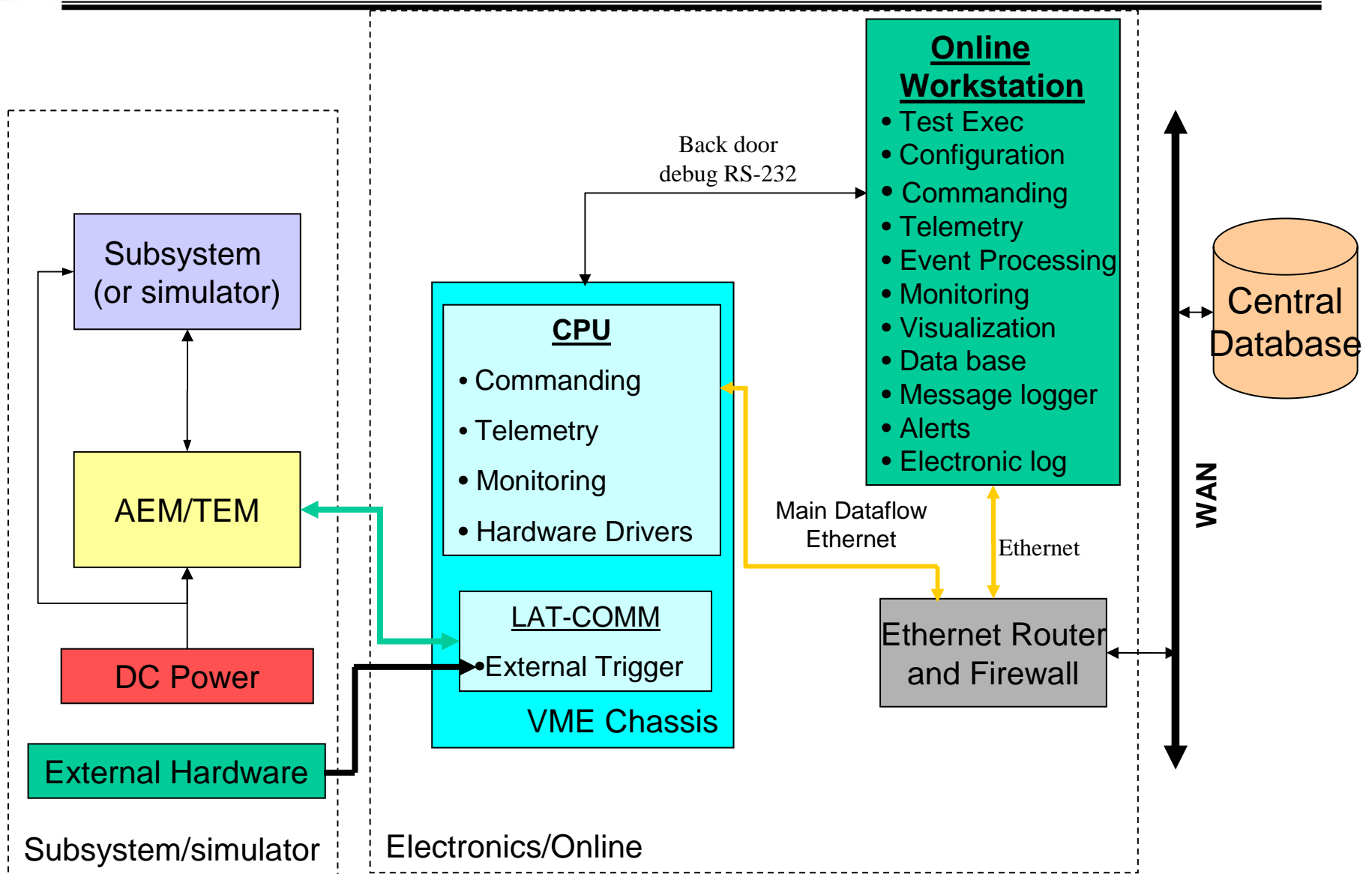
\*Flight TEM/TEMPS installed in test article

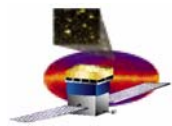
External crate in configs 3 and 4 has a lot of capability, but firm test requirements needing those capabilities are not defined. The crate can:

- 1-Run subsystem scripts
- 2-Run flight software
- 3-With the addition of a 1553 interface, can replace the SIU
- 4-Can “snoop” on traffic to gather intermediate data for off line analysis

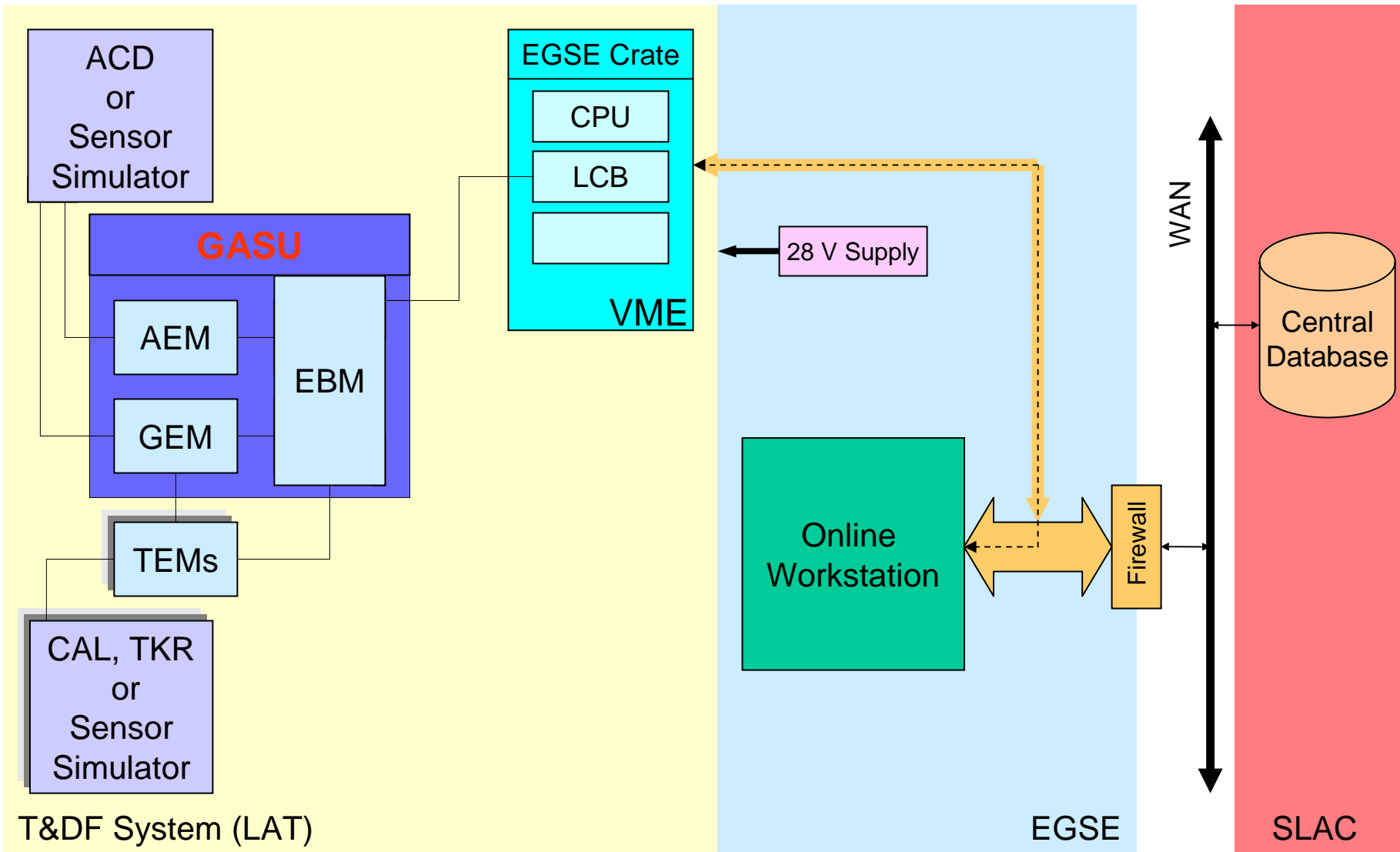


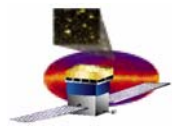
# Single Tower EGSE Configuration (TS-1 / 2a)



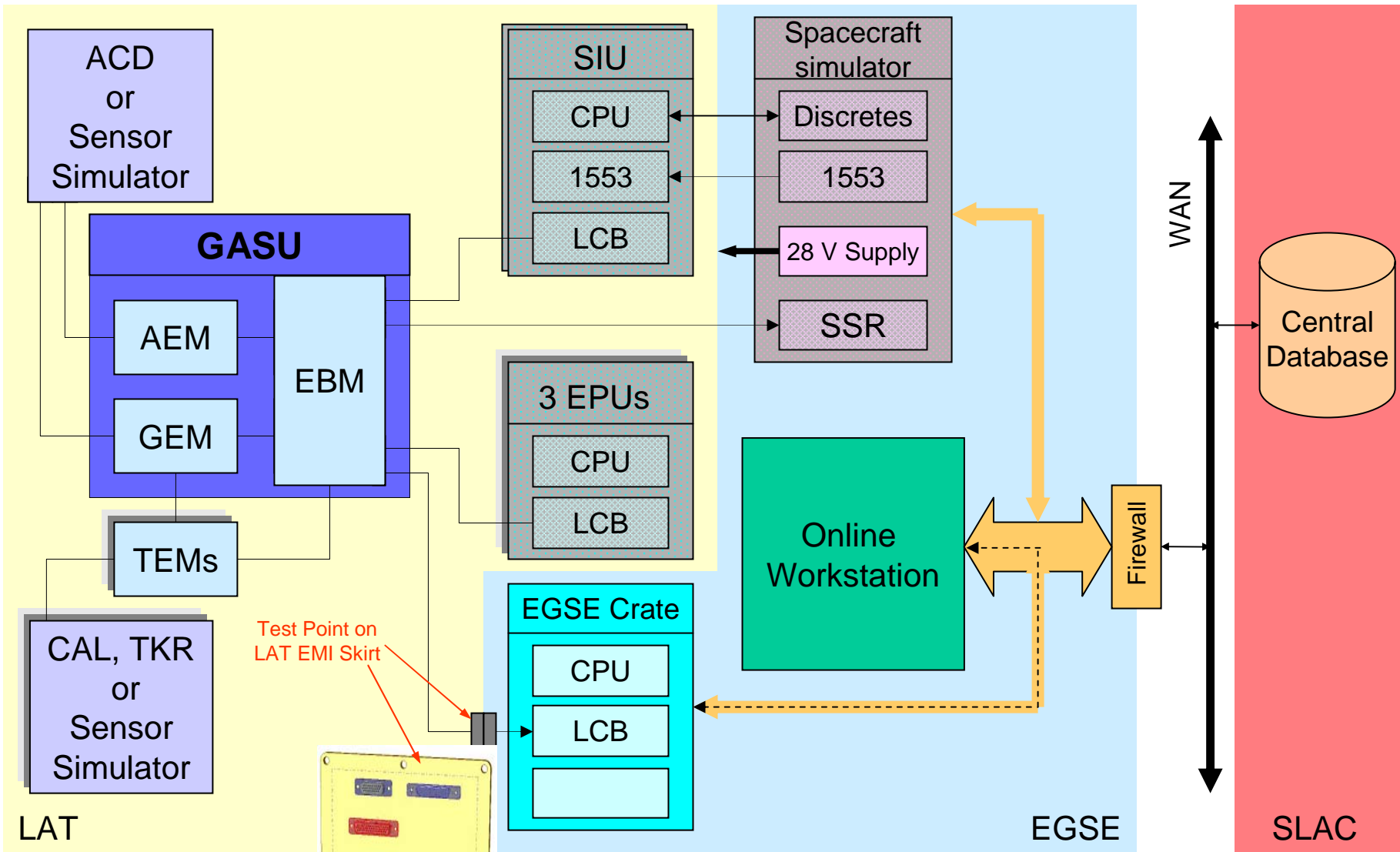


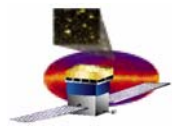
# Multi-Tower EGSE (TS-2b)



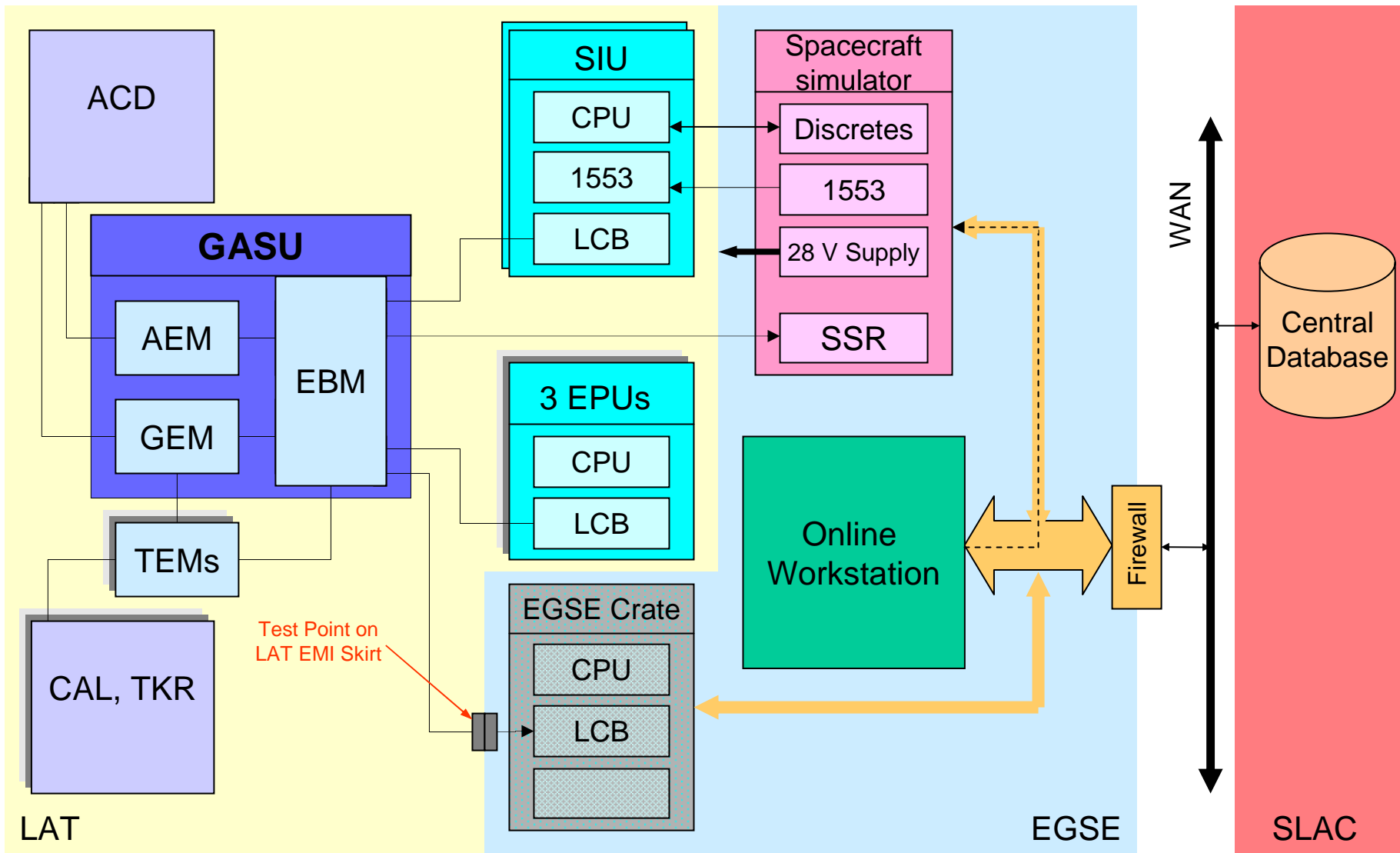


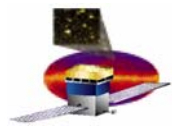
# LAT Assembly Configuration (TS-3x)



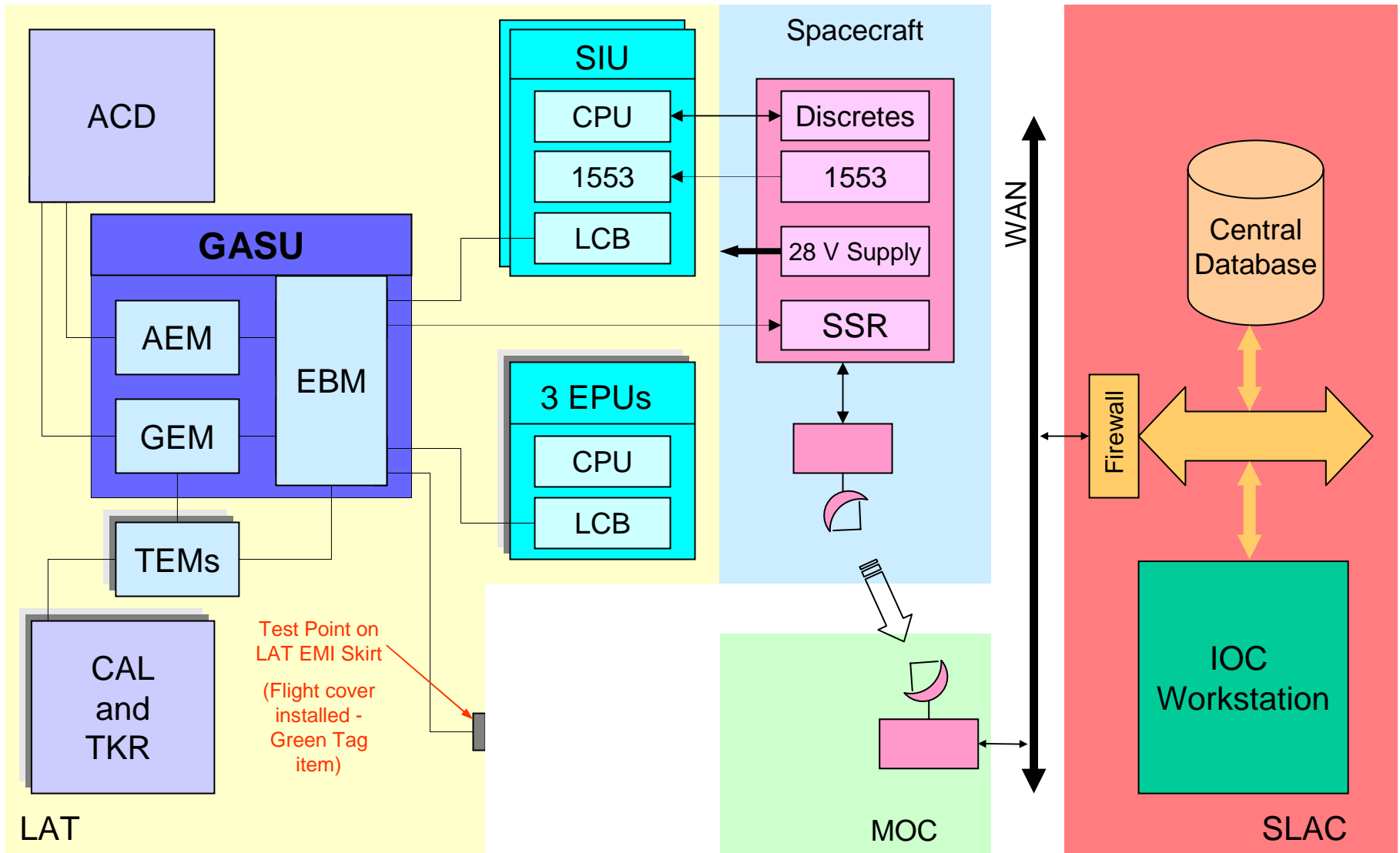


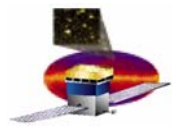
# Complete Flight Unit Configuration (TS-4x)





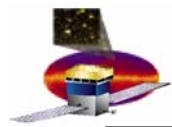
# Flight Unit On-Orbit Configuration





















# Test Stand vs Test

Test description	Stand No.	Power	EGSE s/w	FSW
Tracker or Cal receiving test	1	Bench	>=LATTE 2	EM1(register drivers + event support + ...)
TKR installation in EM single bay	1	Bench	>=LATTE 2	EM1(register drivers + event support + ...)
ACD receiving test	2c	Bench ?	TBD	TBD
Cal/TEM/TEMPS integration	2a	Bench	LATTE 2+	EM1' (adds monitoring, housekeeping, config support)
Tower integration in EM Single Bay and in grid	2 a	Bench	LATTE 2+	EM1'
2+ towers in grid through GASU and PDU installation, can be used up to launch for low level tests including ACD	2b	EM or flight PDU	LATTE 3	EM2 (PDU support, power up, queuing support, CCSDS packets)
Tests EPU and SIU after installation, including before all 16 towers are integrated	3x	EM or flight PDU	LATTE 3	TBD (EM2+, FSW?)
Full up LAT testing	4x	Flight PDU	TBD	Flight Software



# EGSE Need Milestones

AV	Activity ID	ND	Activity Description	AV: Early Finish	Float	Baseline Finish	Early Finish	FY04		
								Q1	Q2	Q3
4.1.7 Electronics										
4.1.9 I&T										
7	1M7941130	9	EGSE TEM/TEM PS/CTS w/ FE Elec #1-Elec to I&T 	01/20/04	-42	12/08/03	02/17/04	▼		▽
7	1M7941150	9	EGSE TEM/TEM PS/CTS w/ FE Elec #2-Elec to I&T 	02/12/04	-41	12/22/03	03/01/04	▼		▽
7	1M7941160	9	EGSE TEM/TEM PS/CTS w/ FE Elec #3-Elec to I&T 	02/20/04	-41	01/07/04	03/08/04	▼		▽
7	1M7941170	9	EGSE TEM/TEM PS/CTS/GASU FE 	02/27/04	-41	01/14/04	03/15/04	▼		▽
7	1M7941180	9	EGSE Development Hrdw/FSW 1st Delivr-Elec 	02/27/04	-36	01/22/04	03/15/04	▼		▽
7	1M7941190	9	EGSE TEM/TEM PS/CTS #1 for Bldg 33-Elec to I&T 	03/12/04	-41	01/29/04	03/29/04		▼	▽
7	1M7941420	9	EGSE TEM/TEM PS/CTS #2 for Bldg 33-Elec to I&T 	03/19/04	-41	02/05/04	04/05/04		▼	▽
7	1M7941430	9	EGSE TEM/TEM PS/CTS w/ GASU for B33-Elec to 	03/19/04	-41	02/05/04	04/05/04		▼	▽

	This item includes an <b>EM-2 TEM</b> , a <b>TEM Power Supply</b> , a <b>Crate Test System</b> with <b>LCB</b> and <b>Front-end Electronics (shared)</b> . It is to be used by Ric Claus for development of Online software.
	This item includes an <b>EM-2 TEM</b> , a <b>TEM Power Supply</b> , a <b>Crate Test System</b> with <b>LCB</b> and <b>Front-end Electronics (shared)</b> . It is to be used by Selim Tuvi for development of Online software.
	This item includes an <b>EM-2 TEM</b> , a <b>TEM Power Supply</b> , a <b>Crate Test System</b> with <b>LCB</b> and <b>Front-end electronics (shared)</b> . It is to be used by Jim Panetta for development of Online software.
	This item includes a <b>Crate Test System</b> , an <b>EM GASU</b> and <b>Front-end Electronics (shared)</b> . It is to be used by Ric Claus for development of Online software.
	This item includes an <b>Early Release of Flight Software</b> and <b>Hardware interfaces</b> . It is to be used by Ric Claus for development of Online software for full LAT testing through SIU.
	This item includes an <b>EM-2 TEM</b> , a <b>TEM Power Supply</b> , a <b>Crate Test System</b> with <b>LCB</b> . It is to be used in the building 33 room 103 Integration Test Facility.
	This item includes an <b>EM-2 TEM</b> , a <b>TEM Power Supply</b> , a <b>Crate Test System</b> with <b>LCB</b> . It is to be used in the building 33 room 103 Integration Test Facility.
	This item includes a <b>Crate Test System</b> with <b>LCB</b> , <b>EM GASU</b> and <b>EM PDU</b> . It is to be used in the building 33 room 104 Integration Test Facility for single and multi-tower tests during integration.