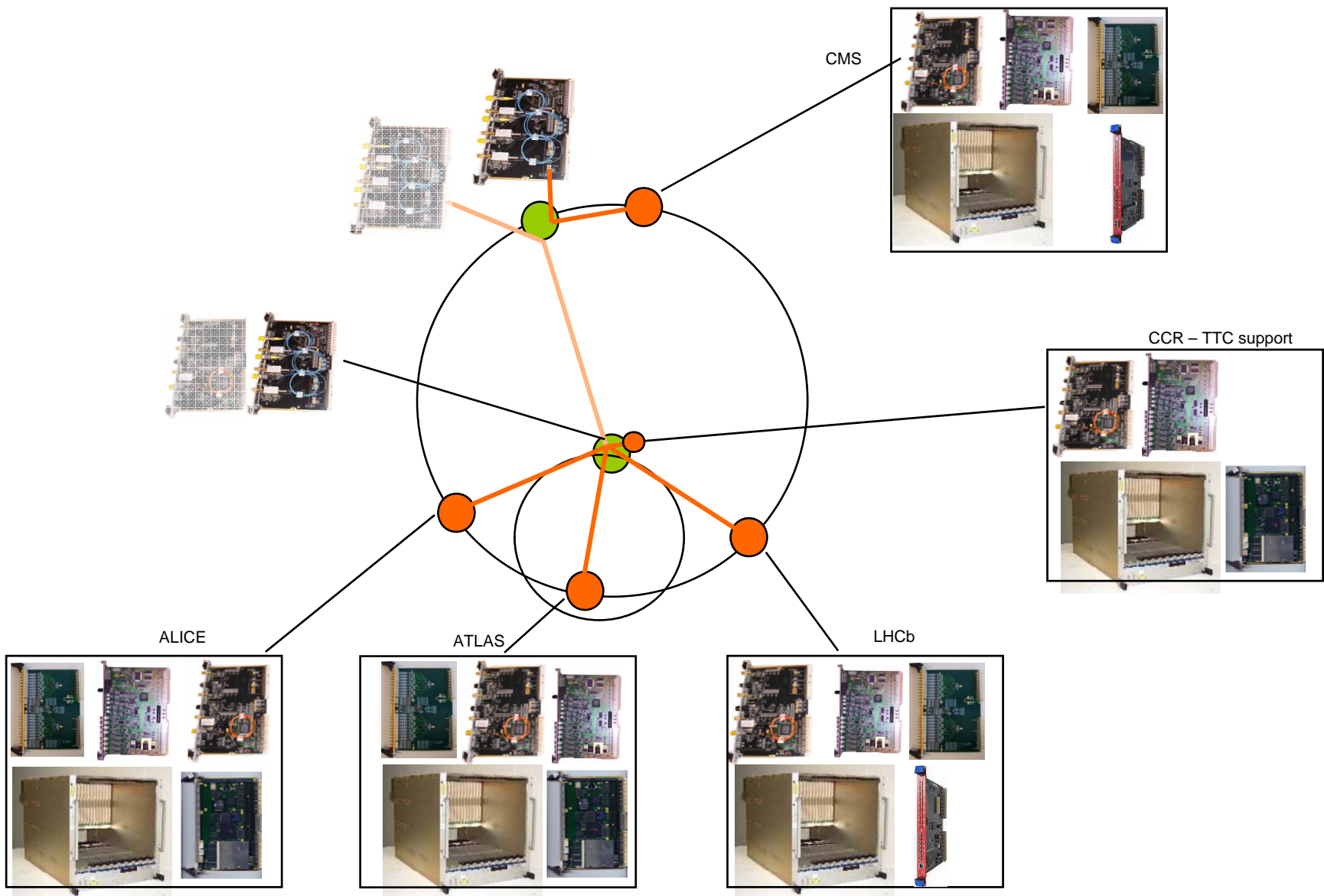


# TTC System Status

Dec 2007

- **System overview**
- Production Status
- Fibres Installation
- Software and Firmware
- Future Plans
- Support

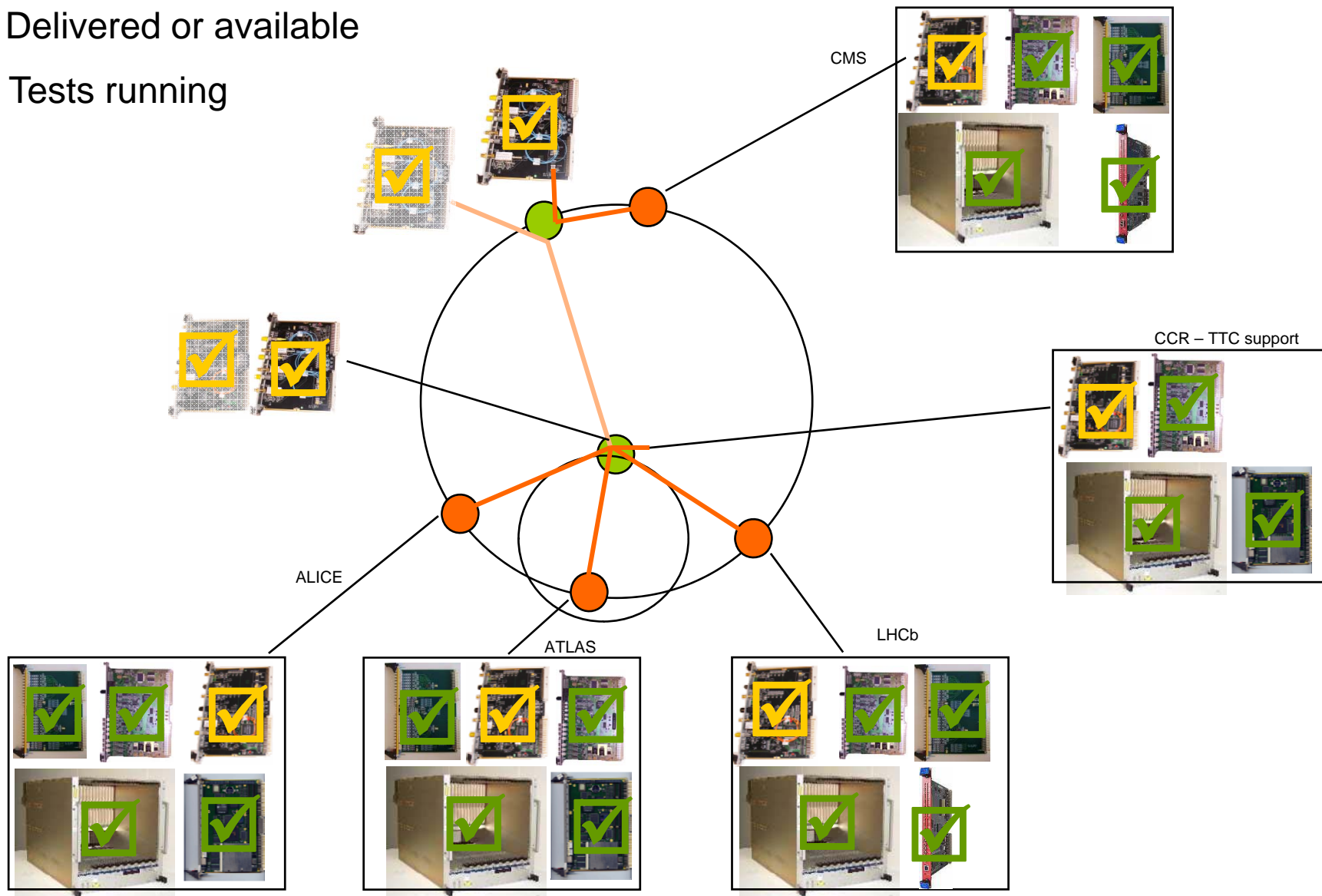
# TTC UPGRADE [overview]




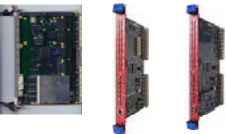




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# PODUCTION STATUS [overview]

- ✓ Delivered or available
- ✓ Tests running



# PRODUCTION\_STATUS

		Distributed	Spares	Total	Status	Support
	<b>Crate + fantray + power supply</b>	5	1 (pool item except for ALICE)	6	Distributed or available	LHC crates standard support (ESE/BE)
	<b>Crate processor</b>	1 VP315 (ALICE) 3 VP110 (ATLAS + SUPPORT) 1 A2818 + V2718 (CMS) 1 V1718 (LHCb)	POOL items	6	Distributed or available	Pool item
	<b>RF_Tx</b>	Not to be delivered to experiments	6	10 for the TTC (much more in total)	Tests weeks 49 and 50	AB/RF
	<b>RF_Rx</b>	10 to be distributed on week 2 (2008) with the SMA2LEMO cables	15	25	Optical modules to be plugged, fpga to be programmed, full board tests scheduled weeks 49 and 50	AB/RF
	<b>RF2TTC</b>	2 ALICE 2 ATLAS 2 CMS 2 LHCb	12	20	Distributed	PH/ESE/BE
	<b>FANOUT</b>	4 ALICE (Norb/Clk) 2 ATLAS (Clk/Norb) 6 CMS (3 Clk/Clk, 3 Porb/Porb) 2 LHCb (Clk/Norb)	6	20	Distributed	PH/ESE/BE

## Notes:

- o Production of RF\_Tx, RF\_Rx, RF2TTC and FANOUT already paid by the experiments (TIDs made in July)
- o Production costs available on
  - [http://ttc-upgrade.web.cern.ch/ttc-upgrade/New\\_system/RF2TTC\\_project\\_budget.pdf](http://ttc-upgrade.web.cern.ch/ttc-upgrade/New_system/RF2TTC_project_budget.pdf)

- System overview
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## ■ Software & Firmware

- o Feedback from the users will be welcome to help improving software and firmware
  - Are you happy with the software? Improvements required?
- o Contact:
  - Markus JOOS for software needs & remarks
  - Sophie BARON for comments & bugs on firmware (RF2TTC)
    - Thanks already for the usefull remarks from Atlas, CMS and LHCb
    - Last firmware version, including modifs required by the users : 29/10/2007

## ■ Next step:

- o Publication of the RF\_Rx frequency on the DIP, for AB/RF to support the modules

- System overview
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# Future Plans

## ■ December:

- Weeks 49-51:
  - Final cabling of optical fibres
  - Production tests and configuration of the RF\_Tx and RF\_Rx
- Week 51:
  - Transmission tests with fake signals all over the network

## ■ January:

- Weeks 2 and 3: final fibres measurement with OTDR by TS/EL
- Week 2: RF\_Rx modules delivery
- Full system test
- Components purchase to ensure long term maintenance
- DIP publication setup

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# SYSTEM SUPPORT

*In case of troubles.....*

	First tests (module exchange with a spare if available)	Piquet	Support (working hours technical help)	Maintenance
Crate (bin, fantray, power supply)	Exp	X	PH/ESE/BE	POOL
Crate controller	Exp	X	PH/ESE/BE	POOL
Transmission quality (RF_Tx)	AB/RF	AB/RF	X	AB/RF
RF_Rx	Exp	AB/RF	PH/ESE/BE, AB/RF	AB/RF
RF2TTC	Exp	X	PH/ESE/BE	PH/ESE/BE
Fanout	Exp	X	PH/ESE/BE	PH/ESE/BE
Special components (6dB attenuators, SMA to Lemo adaptors)			PH/ESE/BE	

# DOCUMENTATION

Project web page:

<http://ttc-upgrade.web.cern.ch/ttc-upgrade/Default.htm>

System test report:

[http://ttc-upgrade.web.cern.ch/ttc-upgrade/New\\_system/TTCupgrade\\_System\\_Test\\_report.pdf](http://ttc-upgrade.web.cern.ch/ttc-upgrade/New_system/TTCupgrade_System_Test_report.pdf)

## RF\_Rx (&Tx):

The following information is available from the web site:

[http://ttc-upgrade.web.cern.ch/ttc-upgrade/New\\_system/RF\\_Rx\\_D.htm](http://ttc-upgrade.web.cern.ch/ttc-upgrade/New_system/RF_Rx_D.htm)

- OCP-STX and SRX modules [datasheet](#)
- TRR-1B43-000 [datasheet](#)
- [First evaluation](#) of the SDH/SONET and TRR transmitters and receivers
- [Final test](#) of the Version1 modules
- EDMS Schematics and Layout of the RF\_Tx\_D: [EDA-01380](#)
- EDMS Schematics and Layout of the RF\_Rx\_D: [EDA-01382](#)
- RF\_Tx\_D [User Manual](#)
- RF\_Rx\_D [User Manual](#)
- [CVS repository](#) for RF\_Tx\_D and RF\_Rx\_D graphical control panels (tcl&tk panels)
- Money spent for the [RF\\_Tx\\_D](#) and for the [RF\\_Rx\\_D](#):

## RF2TTC:

The following information is available from the web site:

[http://ttc-upgrade.web.cern.ch/ttc-upgrade/New\\_system/RF2TTC.htm](http://ttc-upgrade.web.cern.ch/ttc-upgrade/New_system/RF2TTC.htm)

- Design Review: [TTC project page](#) on the Indico Server
- RF2TTC [User Manual](#) RF2TTC [test results](#)
- Schematics and Layout of the RF2TTC: [EDA-01357](#)
- [CVS repository](#) for RF2TTC control software
- Analysis of the board layout with SpecctraQuest, made by Alexandra Dana Oltean Karlsson, to understand the differences between the BCref and the other Clock paths (40ps rms jitter instead of 26): [board analysis, vias extraction](#)
- [VHDL code](#) of the FPGA.
- [Money spent](#) of the RF2TTC