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**Systronic**  
**Att. Mr P Pernot**  
**6, avenue de l'atlantique**  
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**91955 Les Ulis Cedex**  
**France**

Our ref. QT/2014/252/SH

Noordwijk, 01/08/2014

VISA: T Ghidini (pp TEC-QT)  
CC: W Veith, M Nikulainen, J-L Lortal (CNES)

**Subject: Qualification Status of PCB manufacturer Systronic**

Dear Mr Pernot,

Systronic submitted to ESA samples for qualification renewal in 2013 and 2014. The evaluation has been reported for TMM10i in QT7369, for Duroid RT5880 in QT7370, for rigid polyimide in QT7427, for HTg epoxy rigid in QT7844, for HTg epoxy rigid-flex in QT7845, for double sided flex in QT7857 and for polyimide rigid-flex in QT7889. The outcome of the evaluations is documented in QT/2014/230/SH and a final conclusion on the acceptability is given in QT/2014/243/SH.

The samples in HTg epoxy include a delta qualification for the use of the new material PCL 370HR. Systronic provided delta qualification reports SY744/13v-1 and SY743/13, which have been approved by ESA. Systronic is currently performing IST testing on the rigid-flex epoxy technology and the qualification is pending until successful results are available.

A technical audit has been performed in 2013 as recorded in QT/2013/578/SH. A follow up meeting has been organised in July 2014 to review the closure of open actions and renewal of qualification, as recorded in QT/2014/244/SH. Systronic has documented increased requirements for outgoing inspection in the general section of the PIDs of each technology, which have been reviewed and approved by CNES and ESA.

Systronic is considered qualified in accordance with ECSS-Q-ST-70-10C for the manufacture of printed circuit boards as follows:

Rigid sequential polyimide	as per PID 6 v8	until 1-9-2015
Rigid-flex sequential polyimide	as per PID 5 v8	until 1-9-2015
Rigid non-sequential HTg epoxy	as per PID 1 v8	until 1-9-2015
Flex double sided polyimide	as per PID 3 v8	until 1-7-2016
Rigid double sided Duroid RT5880	as per PID 7 v8	until 1-7-2015
Rigid double sided TMM10i	as per PID 7 v8	until 1-7-2015

Best regards,  
Stan Heltzel  
Materials Technology Section TEC-QTM