Group 2 Discussion
CubeSat Interface
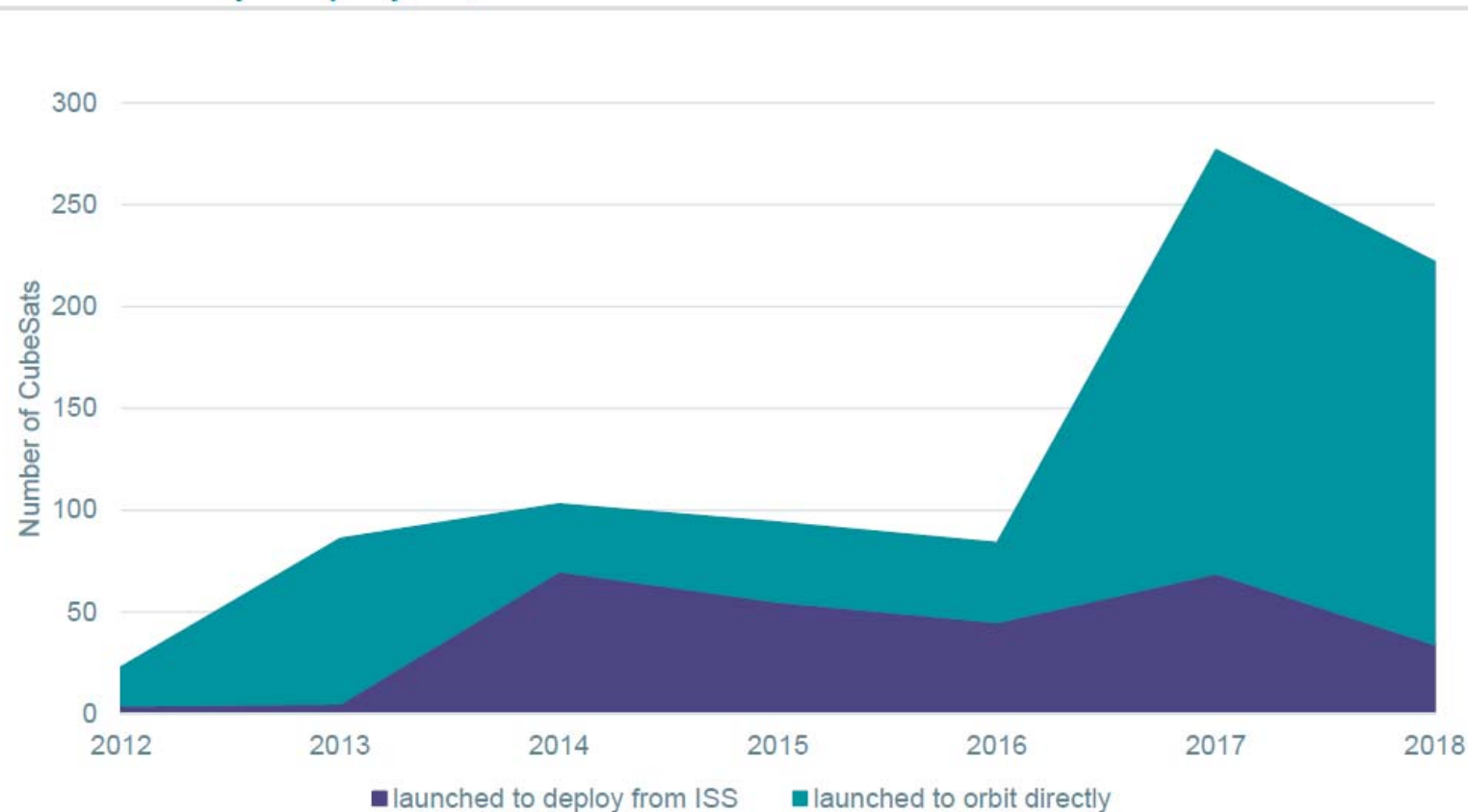
Marloun Sejera

Laboratory of Spacecraft Environment Interaction Engineering

Kyushu Institute of Technology, Kitakyushu, Japan

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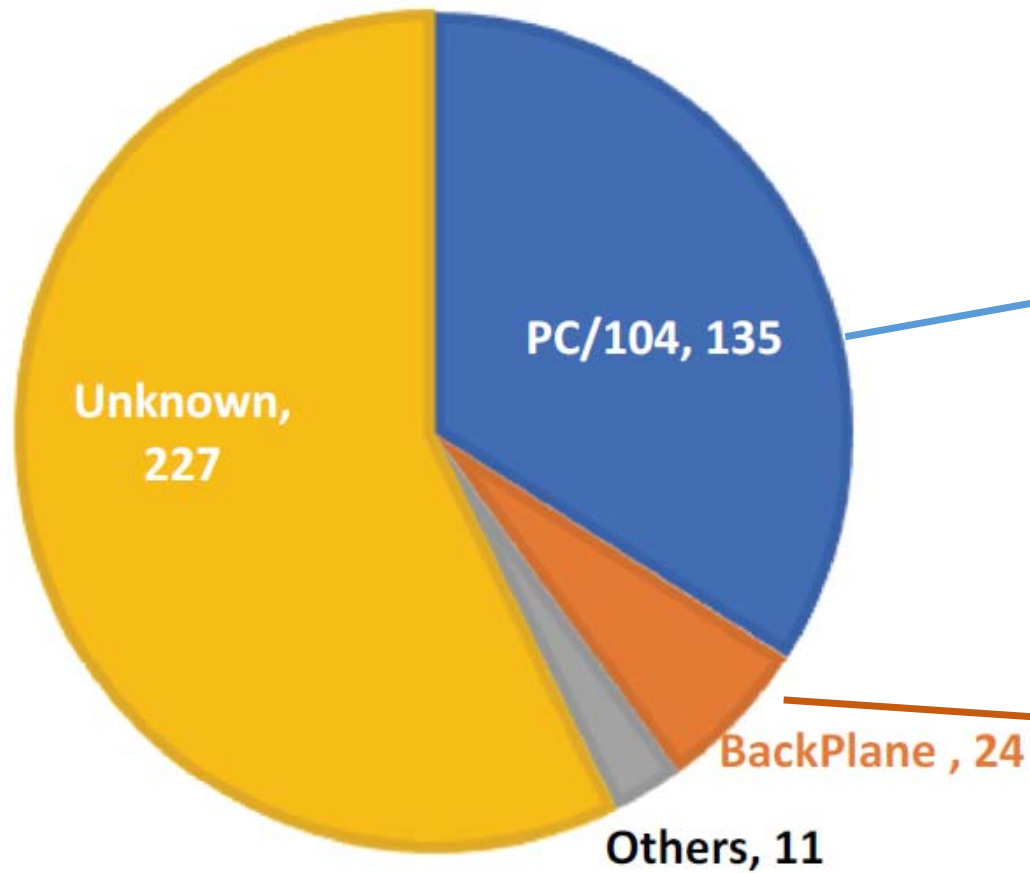7th UNISEC Global Meeting
University of Tokyo, Japan

Source: Smallsats by the Numbers 2019, Bryce Space and Technology
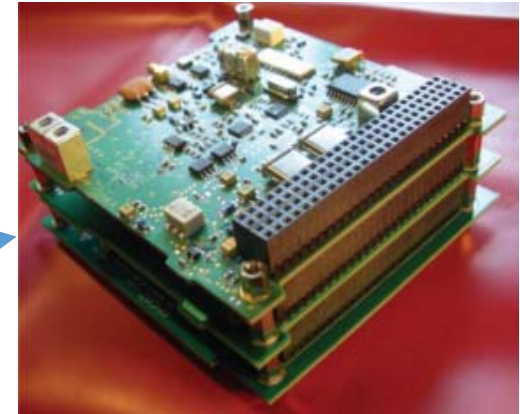
[source]

PC/104, 135

Unknown, 227

BackPlane , 24

Others, 11

Interface of 397 CubeSats launched since 2003, excluding Spire and Planet

Source: La SEINE, Kyushu Institute of Technology

[source]

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❑ Integration of boards from multiple suppliers may have compatibility issues

❑ Customers tend to buy boards from single supplier

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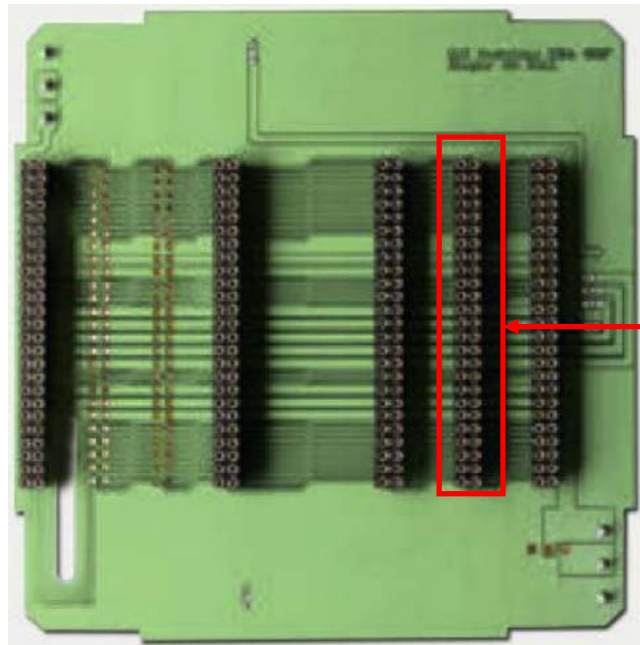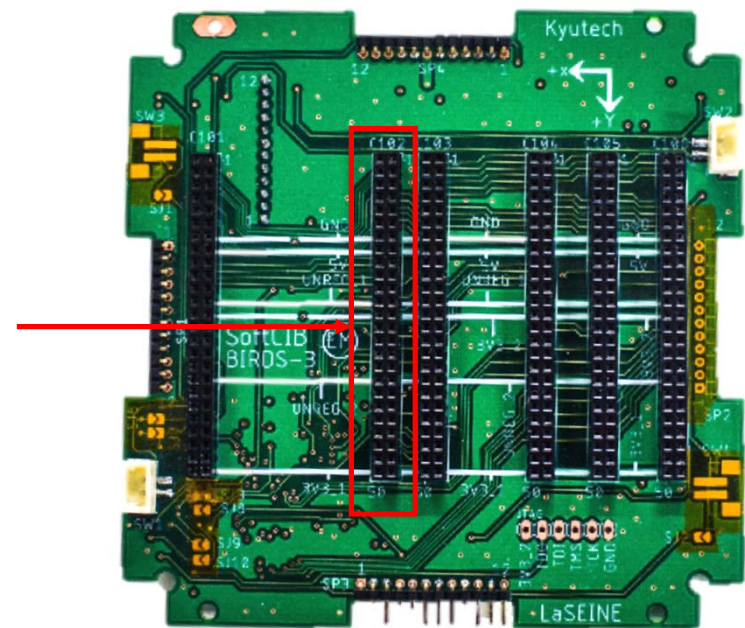
CubeSat Interface: Backplane approach

❑ Mission and subsystem boards are attached on a backplane using 50 pin connectors
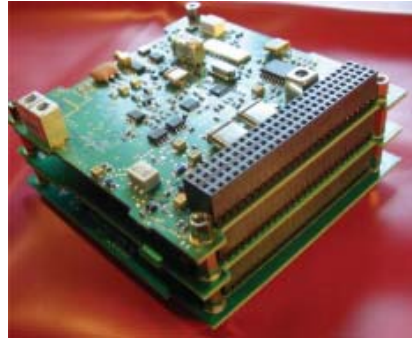
50-pin connector

UWE-3, University of Wurzburug

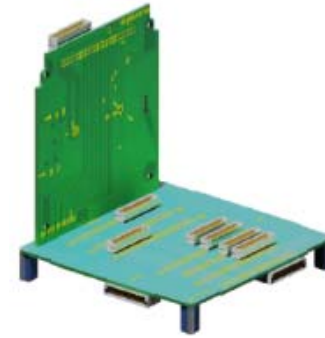*BIRDS-3, Kyushu Institute of Technology*

CubeSat Interface Trade-offs

PC/104	Backplane
Difficult to disassemble	Easy to assemble/disassemble
Too much flexible with 104 pins	Not too much flexible with 50 pins
Widely used	Comparably new approach

CubeSat Interface Group Discussion

❑ Share the experience of interface compatibility and incompatibility from CubeSat developers' point of view

❑ Discuss about the benefits and harms of the standards

❑ Share ideas about improving the interface architecture

❑ Discuss the scope of standard